

**DIRECTORATE OF EDUCATION**  
**Govt. of NCT, Delhi**

**SUPPORT MATERIAL**  
**2025-2026**

**Class : XII**

**HOME SCIENCE**

Under the Guidance of

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### MESSAGE

The Directorate of Education remains steadfast in its vision to achieve excellence in the academic domain and its commitment to develop meaningful, engaging, and child-friendly learning content.

Each year, the Directorate carefully reviews and updates the Support Material to ensure alignment with the latest CBSE guidelines and emerging academic developments.

The Support Material provides comprehensive academic support through well-structured practice questions and exercises that strengthen conceptual understanding and exam readiness and aims to nurture students' critical thinking, analytical abilities, and problem-solving skills. Through such sustained efforts, the Directorate of Education continues to guide students towards academic excellence and holistic growth.

This Support Material is intended to bridge classroom learning and examination preparation, enabling students to consolidate knowledge through systematic practice. It has been thoughtfully designed for students, with the belief that its effective use will strengthen their understanding and support them in achieving their learning goals with confidence.

I appreciate the dedication and collaborative effort of all those involved in the development of this material and extends my best wishes to all students—may this Support Material serve as an essential academic aid, enhancing students' confidence and preparedness for examinations.

*Best wishes.*

  
(Pandurang K. Pole)

**VEDITHA REDDY, IAS**  
Director, Education & Sports



सत्यमेव जयते

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**MESSAGE**

DE-5/228/Exam/Message/S.M/2018/  
402  
dated - 09/05/25

Education is the cornerstone of a progressive society, and providing students with the right learning resources is essential for their academic and personal growth. Keeping this in mind, the Directorate of Education, GNCT of Delhi, develops comprehensive Support Material every year for various subjects of Classes IX to XII.

The support material serves as an additional study resource to supplement textbooks by offering clear and easy-to-understand explanation of complex topics. Our dedicated team of expert faculty members has meticulously reviewed and updated this material, aligning it with the latest CBSE syllabus, question paper pattern and assessment guidelines. Our effort is to simplify difficult concepts and make them more accessible to students, helping them save time and effort with ready references for effective preparation.

As Ruskin Bond beautifully said, "Education must inspire the spirit of inquiry, Creativity and Joy" True learning goes beyond memorisation-it encourages curiosity, fosters creativity, and makes the learning process meaningful and enjoyable.

In alignment with the vision of NEP 2020, the CBSE framework now places emphases on competency-based assessments for 50% of the evaluation, highlighting the need for students to develop critical thinking and problem-solving skills. The Support Material is designed to help students analyse concepts deeply, think innovatively, and apply their knowledge affectively, ensuring they are well-prepared not only for exams but also for real-life challenges.

I appreciate the dedicated efforts of the entire team of subject experts in developing this valuable learning resource. I am confident that both teachers and students will make the best use of these material to enhance learning and academic success.

Wishing all students great success in their exam and a bright, fulfilling future ahead.

  
(VEDITHA REDDY, IAS)

**Dr. RITA SHARMA**  
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D.O. No. **DE.S/228/Exam/Memo/SM/**  
**2019/570**  
Dated: .. **02/07/2025** .....

### MESSAGE

**"Children are not things to be molded, but are people to be unfolded." -**  
Jess Lair

In line with this insightful quote, the Directorate of Education, Delhi, has always made persistent efforts to nurture and unfold the inherent potential within each student. This support material is a testimony to this commitment.

The support material serves as a comprehensive tool to facilitate a deeper understanding of the curriculum. It is crafted to help students not only grasp essential concepts but also apply them effectively in their examinations. We believe that the thoughtful and intelligent utilization of these resources will significantly enhance the learning experience and academic performance of our students.

Our expert faculty members have dedicated themselves to the support material to reflect the latest CBSE guidelines and changes. This continuous effort aims to empower students with innovative approaches, fostering their problem-solving skills and critical thinking abilities.

I extend my heartfelt congratulations to the entire team for their invaluable contribution to creating a highly beneficial and practical support material. Their commitment to excellence ensures that our students are well-prepared to meet the challenges of the CBSE examinations and beyond.

Wishing you all success and fulfilment in your educational journey.

**(Dr. Rita Sharma)**



**DIRECTORATE OF EDUCATION**  
**Govt. of NCT, Delhi**

**SUPPORT MATERIAL**  
**2025-2026**

**HOME SCIENCE**

**Class : XII**

**NOT FOR SALE**

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# भारत का संविधान

## भाग 4क

### नागरिकों के मूल कर्तव्य

#### अनुच्छेद 51 क

**मूल कर्तव्य** - भारत के प्रत्येक नागरिक का यह कर्तव्य होगा कि वह -

- (क) संविधान का पालन करे और उसके आदर्शों, संस्थाओं, राष्ट्रध्वज और राष्ट्रगान का आदर करे;
- (ख) स्वतंत्रता के लिए हमारे राष्ट्रीय आंदोलन को प्रेरित करने वाले उच्च आदर्शों को हृदय में संजोए रखे और उनका पालन करे;
- (ग) भारत की संप्रभुता, एकता और अखंडता की रक्षा करे और उसे अक्षुण्ण बनाए रखे;
- (घ) देश की रक्षा करे और आह्वान किए जाने पर राष्ट्र की सेवा करे;
- (ङ) भारत के सभी लोगों में समरसता और समान भ्रातृत्व की भावना का निर्माण करे जो धर्म, भाषा और प्रदेश या वर्ग पर आधारित सभी भेदभावों से परे हो, ऐसी प्रथाओं का त्याग करे जो महिलाओं के सम्मान के विरुद्ध हों;
- (च) हमारी सामासिक संस्कृति की गौरवशाली परंपरा का महत्त्व समझे और उसका परिरक्षण करे;
- (छ) प्राकृतिक पर्यावरण की, जिसके अंतर्गत वन, झील, नदी और वन्य जीव हैं, रक्षा करे और उसका संवर्धन करे तथा प्राणिमात्र के प्रति दयाभाव रखे;
- (ज) वैज्ञानिक दृष्टिकोण, मानववाद और ज्ञानार्जन तथा सुधार की भावना का विकास करे;
- (झ) सार्वजनिक संपत्ति को सुरक्षित रखे और हिंसा से दूर रहे;
- (ञ) व्यक्तिगत और सामूहिक गतिविधियों के सभी क्षेत्रों में उत्कर्ष की ओर बढ़ने का सतत् प्रयास करे, जिससे राष्ट्र निरंतर बढ़ते हुए प्रयत्न और उपलब्धि की नई ऊँचाइयों को छू सके; और
- (ट) यदि माता-पिता या संरक्षक हैं, छह वर्ष से चौदह वर्ष तक की आयु वाले अपने, यथास्थिति, बालक या प्रतिपाल्य को शिक्षा के अवसर प्रदान करे।



# Constitution of India

Part IV A (Article 51 A)

## Fundamental Duties

It shall be the duty of every citizen of India —

- (a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;
- (b) to cherish and follow the noble ideals which inspired our national struggle for freedom;
- (c) to uphold and protect the sovereignty, unity and integrity of India;
- (d) to defend the country and render national service when called upon to do so;
- (e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;
- (f) to value and preserve the rich heritage of our composite culture;
- (g) to protect and improve the natural environment including forests, lakes, rivers, wildlife and to have compassion for living creatures;
- (h) to develop the scientific temper, humanism and the spirit of inquiry and reform;
- (i) to safeguard public property and to abjure violence;
- (j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement;
- \* (k) who is a parent or guardian, to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years.

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**Note:** The Article 51A containing Fundamental Duties was inserted by the Constitution (42nd Amendment) Act, 1976 (with effect from 3 January 1977).

\* (k) was inserted by the Constitution (86th Amendment) Act, 2002 (with effect from 1 April 2010).



## भारत का संविधान उद्देशिका

हम, भारत के लोग, भारत को एक <sup>1</sup>[संपूर्ण प्रभुत्व-संपन्न समाजवादी पंथनिरपेक्ष लोकतंत्रात्मक गणराज्य] बनाने के लिए, तथा उसके समस्त नागरिकों को :

सामाजिक, आर्थिक और राजनैतिक न्याय,

विचार, अभिव्यक्ति, विश्वास, धर्म

और उपासना की स्वतंत्रता,

प्रतिष्ठा और अवसर की समता

प्राप्त कराने के लिए,

तथा उन सब में

व्यक्ति की गरिमा और <sup>2</sup>[राष्ट्र की एकता

और अखंडता] सुनिश्चित करने वाली बंधुता

बढ़ाने के लिए

दृढसंकल्प होकर अपनी इस संविधान सभा में आज तारीख 26 नवंबर, 1949 ई. को एतद्वारा इस संविधान को अंगीकृत, अधिनियमित और आत्मार्पित करते हैं।

1. संविधान (बयालीसवां संशोधन) अधिनियम, 1976 की धारा 2 द्वारा (3.1.1977 से) "प्रभुत्व-संपन्न लोकतंत्रात्मक गणराज्य" के स्थान पर प्रतिस्थापित।
2. संविधान (बयालीसवां संशोधन) अधिनियम, 1976 की धारा 2 द्वारा (3.1.1977 से) "राष्ट्र की एकता" के स्थान पर प्रतिस्थापित।

# **THE CONSTITUTION OF INDIA**

## **PREAMBLE**

**WE, THE PEOPLE OF INDIA**, having solemnly resolved to constitute India into a <sup>1</sup>**[SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC]** and to secure to all its citizens :

**JUSTICE**, social, economic and political;

**LIBERTY** of thought, expression, belief, faith and worship;

**EQUALITY** of status and of opportunity; and to promote among them all

**FRATERNITY** assuring the dignity of the individual and the <sup>2</sup>[unity and integrity of the Nation];

**IN OUR CONSTITUENT ASSEMBLY** this twenty-sixth day of November, 1949 do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

1. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
2. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Unity of the Nation" (w.e.f. 3.1.1977)

**Session 2025-2026**  
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**Class XII**  
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**CBSE SYLLABUS**  
**HOME SCIENCE (CODE No.064)**  
**(Class-XII)**  
**(2025-2026)**

**PREFACE**

The course in Home Science encompasses five areas namely, Foods and Nutrition, Human Development and Family Studies, Fabric and Apparel, Resource Management and Communication and Extension. All these domains have their specific content in focus that contributes to the study of the individual and the family in Indian social cultural context.

The purpose of Home Science is the creation of an environment and outlook to enable learner to live a richer and more purposeful life, become future ready and develop 21st century life skills for work, livelihood and careers. All the domains within the home science discipline provide ample scope for professional avenues of higher education and career opportunities. They range from professions catering to various health and service institutions/ agencies, educational organizations, industry and business houses of textiles, garments, food industry, teaching learning materials, ergonomically appropriate equipment and work situations. The subject integrates the application of various sciences and humanities to improve Human Environment, Family Nutrition, Management of Resources and Child Development.

In Class XI, the "Self and family" and the "Home" are focal points for understanding the dynamics for individual lives and social interactions.

In class XII, the emphasis is on "Work and careers" through the life span.

## **LEARNING OBJECTIVES**

The Home Science curriculum at senior secondary level has been framed to enable the learners to:

1. develop an understanding of the self and one's role and responsibilities as a productive individual and as a member of family, community and society.
2. integrate learning across diverse domains and undertake a critical analysis of issues and concerns specific to family, community and society.
3. appreciate the discipline of Home Science for professional careers.
4. acquaint learners with the basic knowledge specific to five domains namely, Foods and nutrition, Human Development and Family studies, Fabric and Apparel, Resource Management and Communication and Extension.
5. develop functional skills in the five domains for career and employment.
6. equip learners for enrichment and higher studies.

## **LEARNING OUTCOMES**

After undertaking the course students will be able to:

1. function as a productive and responsible individual in relation to self, family, community and society.
2. apply the basics of human development with specific reference to self, family and community.
3. utilize the skills of judicious management of various resources.
4. be sensitized to fabric and apparel, their selection and care.
5. inculcate healthy food habits and lifestyle to enable prevention and management of diseases.
6. become alert and aware consumer.
7. appreciate the potential of entrepreneurship and other varied professional opportunities to make informed career choices.

# HOME SCIENCE (2025-2026)

## CLASS XII

### INTRODUCTION

In class XII, the emphasis is on "Work and careers" through the life span. Within the curriculum the significance and scope of each domain (Foods and Nutrition, Human Development and Family Studies, Fabric and Apparel, Resource Management and Communication and Extension), the multiple thrust areas emerging within them have been emphasized. The units spell out the basic concepts, requisite knowledge and skills in each thrust areas and delineate the career avenues and the preparation required for them in order to make informed career choices.

### Course Structure

**Time-3 Hours**

**Practical: 30 Marks**

### Theory and Practical

**Theory: 70 marks**

Unit No	Units	Marks	No. of Periods
1	Work, Livelihood and Career	05	10
2	Nutrition, Food Science and Technology	23	33
3	Human Development and Family Studies	10	24
4	Fabric and Apparel	17	28
5	Resource Management	10	24
6	Communication and Extension	05	07
	<b>THEORY</b>	<b>70</b>	<b>126</b>
	<b>PRACTICAL</b>	<b>30</b>	<b>28</b>
	<b>GRAND TOTAL</b>	<b>100</b>	<b>154</b>

## **CLASS XII**

### **UNIT-I: WORK, LIVELIHOOD AND CAREER**

Ch. Work, livelihood and Career

### **UNIT II: NUTRITION, FOOD SCIENCE AND TECHNOLOGY**

Ch. Clinical Nutrition and Dietetics

Ch. Public Nutrition and Health

Ch. Food Processing and Technology

Ch. Food Quality and Food Safety

### **UNIT II: HUMAN DEVELOPMENT AND FAMILY STUDIES**

Ch. Early Childhood Care and Education

Ch. Management of Support Services, Institutions and Programmes for Children, Youth and Elderly

### **UNIT IV: FABRIC AND APPAREL**

Ch. Design for Fabric and Apparel

Ch. Fashion Design and Merchandising

Ch. Care and Maintenance of Fabrics in Institutions

### **UNIT V: RESOURCE MANAGEMENT**

Ch. Hospitality Management

Ch. Consumer Education and Protection

### **UNIT VI: COMMUNICATION AND EXTENSION**

Ch, Development Communication and Journalism

Prescribed NCERT textbook: Human Ecology and Family Sciences(For Class XII): Part I and Part II

# **CLASS XII HOME SCIENCE REFERENCE POINTS**

## **UNIT-I WORK, LIVELIHOOD AND CAREER**

### **Chapter: Work, Livelihood and Career**

- Introduction
  - Work and Meaningful Work
  - Work, Careers and Livelihood
- Traditional occupations in India
  - Agriculture
  - Handicrafts
  - Indian cuisine
  - Visual arts
- Work, Age and Gender
  - Gender issues in relation to work
  - Issues and concerns related to women and work
    - KGBV (Kasturba Gandhi Balika Vidyalaya)
    - Beti bachao, Beti Padhao Yojana
- Attitudes and approaches to work and life skills for livelihood
  - Attitudes and approaches to work
  - Lifeskills for livelihood
  - Essential soft skills at workplace
- Ergonomics
  - Definition and need for ergonomics
  - Benefits of Ergonomics
- Entrepreneurship
  - Definition and characteristics

## **UNIT-II NUTRITION, FOOD SCIENCE AND TECHNOLOGY**

### **Chapter: Clinical Nutrition and Dietetics**

- Introduction
  - Nutrition
  - Clinical Nutrition
- Significance
- Basic concepts
  - Diet therapy
- Types of diets: Regular Diet and Modified diets
- Changes in consistency
- Feeding routes
- Prevention of chronic diseases
- Preparing for career
- Scope

### **Chapter: Public Nutrition and Health**

- Introduction
- Significance
- Basic concept
  - Public health nutrition
  - Nutritional Problems of India
    - Protein Energy Malnutrition
    - Micronutrient deficiencies
      - Iron deficiency Anaemia
      - Vitamin A deficiency
      - Iodine deficiency disorder
- Strategies/Intervention to tackle Nutritional problems
  - Diet or food based strategies
  - Nutrient based strategies
- Nutrition programmes operating in India
  - ICDS
  - Nutrient Deficiency Control Programmes
  - Food Supplementation Programmes
  - Food Security Programme
- Health Care
- Scope

## **Chapter: Food Processing and Technology**

- Introduction
- Significance
- Basic Concepts
  - Food Science
  - Food Processing
  - Food Technology
  - Food Manufacturing
- Development of food processing and technology
- Importance of Food processing and Preservation
- Classification of food on the basis of extent and type of processing
- Preparing for a career
- Scope

## **Chapter: Food Quality and Food Safety**

- Introduction
  - Significance
  - Basic Concepts
    - Food safety (Toxicity & Hazard)
    - Hazards (Physical, chemical and biological)
    - Food infection
    - Food poisoning
    - Food quality
  - Food standards regulation in India-FSSA 2006
  - International Organization and agreements in the area of Food Standards, Quality, Research and Trade
    - Codex Alimentarius Commission
    - International Organization for Standardisation
    - World Trade Organization
  - Food Safety Management Systems
-

- ▶ Good manufacturing practices (GMP)
- ▶ Good handling practices (GHP)
- ▶ Hazard Analysis Critical Control Points (HACCP)
- Scope

### **UNIT III HUMAN DEVELOPMENT AND FAMILY STUDIES**

#### **Chapter: Early Childhood Care and Education**

- Significance
- Basic Concepts
- Preparing for a career
- Scope

#### **Chapter: Management of support services, institutions and programmes for children, youth and elderly**

- Significance
- Basic Concepts
- Why are children vulnerable ?
- Institutions, programmes and initiatives for children
  - ▶ ICDS
  - ▶ SOS Children's Village
  - ▶ Children's Homes run by the Government
  - ▶ Adoption
- Why are Youth vulnerable?
- Youth programmes in India
- Why are the elderly vulnerable?
- Some programmes for the elderly
- Preparing for a career
- Scope

## **UNIT IV FABRIC AND APPAREL**

### **Chapter: Design for Fabric and Apparel**

- Introduction
- Basic concepts (Design: Structural & Applied)
- Elements of design
  - Colour
  - Texture
  - Line
  - Shapes or form
- Principles of Design
  - Proportion
  - Balance
  - Emphasis
  - Rhythm
  - Harmony
- Preparing for career
- Scope

### **Chapter: Fashion Design and Merchandising**

- Introduction
- Significance
- Basic Concepts
  - Fashion terminology- Fashion, fads, style, classic
- Fashion Development
  - France-The centre of fashion
  - Fashion Evolution
- Fashion Merchandising
- Fashion Retail Organization
- Preparing for a career
- Scope

## **Chapter: Care and maintenance of fabrics in Institution**

- Introduction
- Basic concepts
  - Washing equipment
  - Drying equipment
  - Ironing/pressing equipment
- Institutions
- Preparing for a career
- Scope

## **UNIT-V RESOURCE MANAGEMENT**

### **Chapter: Hospitality Management**

- Introduction
- Significance
- Basic concepts
- Departments involved in hospitality management of an organization
- Scope

### **Chapter: Consumer Education and Protection**

- Introduction
- Significance of consumer education and protection
- Basic concepts
  - Consumer product
  - Consumer behaviour
  - Consumer forum
  - Consumer footfalls
  - Consumer problems
  - Consumer rights
  - Standardized marks (ISI, Wool Mark, Hall Mark, Silk Mark)

- ▶ Protection Councils
- ▶ Consumer Responsibilities
- Scope

## **UNIT-VI COMMUNICATION AND EXTENSION**

### **Chapter: Development Communication and Journalism**

- Introduction
- Significance
- Basic concepts
  - ▶ Development
  - ▶ Development Journalism
  - ▶ Development Communication
- Methods of communication
  - ▶ Campaign
  - ▶ Radio and Television
  - ▶ Print media
  - ▶ Information and communication technologies
- Knowledge and skills required for a career in this field
- Scope and career avenues in Development Communication

# **PRACTICALS**

## **UNIT-II NUTRITION, FOOD SCIENCE AND TECHNOLOGY**

1. Modification of normal diet to soft diet for elderly person.
2. Development and preparation of supplementary foods for nutrition programme.
3. Planning a menu for a school canteen or mid-day meal in school for a week.
4. Design, prepare and evaluate a processed food product.
5. Qualitative tests for food adulteration in: pure ghee, tea leaves, whole black pepper, turmeric powder, milk, asafoetida.

## **UNIT III HUMAN DEVELOPMENT AND FAMILY STUDIES**

6. Preparation and use of any one teaching aid to communicate socially relevant messages for children/ adolescents /adults in the community.

OR

Preparation of any one toy for children (age appropriate) using locally available and indigenous material

## **UNIT IV FABRIC AND APPAREL**

7. Preparation of any one article using applied textile design techniques; tie and dye/batik/block printing.
8. Remove different types of stains from white cotton cloth -Ball pen, curry, grease, ink, lipstick, tea and coffee.

## **UNIT-V RESOURCE MANAGEMENT**

9. Evaluate any one advertisement for any job position.
10. Develop a leaflet/pamphlet for Consumer Education and Protection on any one of the following-
  - a) Consumer Protection Act (CPA)
  - b) Consumer responsibilities
  - c) Consumer organization
  - d) Consumer problems

## **PROJECT**

**Any one of the following project may be undertaken and evaluated-**

1. Study of an integrated community based, nutrition/health programme being implemented in own area, with reference to-
  - a) Programme objectives
  - b) Focal Group/Beneficiaries
  - c) Modalities of implementation
2. Visit to the neighbouring areas and interview two adolescents and two adults regarding their perception of persons with special needs.
3. Profile any two person (child/adult) with special needs to find out their diet, clothing, activities, physical and psychological needs.
4. Planning any five messages for nutrition, health and life skills using different modes of communication for different focal groups.
5. Market survey any five processed foods with their packaging and label information.

## SCHEME FOR PRACTICAL EXAMINATION

**Total = 30 Marks**

1	Project	<b>5 Marks</b>
2	Modification of any one family meal for elderly person. Preparing any one of the modified dish. OR Development and preparation of any one supplementary food for pre-schooler (2-6 years) nutrition programme. OR Planning a menu for school canteen and preparing any one nutritious dish.	<b>5 Marks</b>
3	Identify adulterant using chemical test in any one of the following- pure ghee, tea leaves, whole black pepper, turmeric powder, milk, asafoetida.	<b>2 Marks</b>
4	Prepare a sample using applied textile design techniques tie and dye/batik/block printing.	<b>4 Marks</b>
5	Remove any one of the stain from white cotton cloth -Ball pen, curry, grease, ink, lipstick, tea, coffee.	<b>2 Marks</b>
6	Develop a leaflet/pamphlet for Consumer Education and Protection on any one of the following- a) Consumer Protection Act (CPA) b) Consumer responsibilities c) Consumer organization d) Consumer problems	<b>5 Marks</b>
7	File	<b>5 Marks</b>
8	Viva	<b>2 Marks</b>

**QUESTION PAPER DESIGN 2025-2026**  
**HOME SCIENCE (CODE NO.064)**  
**CLASS-XI & XII**

**TIME: 3 HOURS**

**MAX. MARKS: 70**

<b>S.NO.</b>	<b>TYPOLGY OF QUESTIONS</b>	<b>TOTAL MARKS</b>	<b>% WEIGHTAGE</b>
1	Knowledge and understanding based, identify, define or recite interpret, compare, contrast, explain, paraphrase information	28	40%
2	Application - or knowledge/ concepts based questions (Use abstract information in concrete situation, to apply knowledge to new situations. Use given content to interpret a situation, provide an example , or solve a problem)	21	30%
3	Formation, analysis, Evaluation and creativity based question (Appraise, judge, and /or justify the value or worth of a decision or outcome , or to predict outcomes) Classify, compare, contrast, or differentiate between different pieces to intergrate unique information from variety of sources)	21	30%
	<b>Total</b>	<b>70</b>	<b>100</b>

**NOTE:** Internal Choice of 30% will be given

Easy-20%

Average-60%

Difficult-20%



# **1. Work, Livelihood and Career**

## **Points to Remember**

**1. Work refers to all those essential activities that are done for a purpose or out of necessity. All human beings work and create their identity in the society.**

### **2. Concept of Work**

Work may be viewed as

- i. a job and a means of making a living,
- ii. a means of developing self-esteem and dignity,
- iii. a source of pleasure and mental satisfaction,
- iv. a symbol of status, power and control,
- v. a means for self-development and self-actualization,
- vi. a part of spiritual practice and religion and a task or duty,
- vii. a source of financial benefit,
- viii. an opportunity for expressing one's unique talents and creativity,

### **3. Factors affecting work**

- i. Education
- ii. Health
- iii. Age and gender
- iv. Accessibility of opportunity
- v. Globalization
- vi. Geographic conditions
- vii. Financial benefits
- viii. Family background

### **4. Meaningful work**

- i. Work which is useful to society or to others, is done responsibly and is enjoyable to the worker is called the meaningful work.
- ii. It contributes to personal growth, instills confidence and self-worth and may eventually lead to actualization of full potential.
- iii. It provides opportunities to contribute to the improvement of one's own life conditions and that of society.

## 5. Work, livelihood and Career

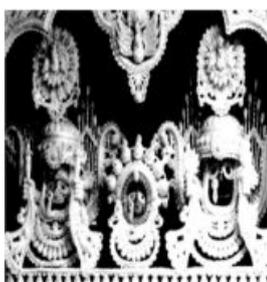
### Work

Work is a set of activities with an intended set of outcomes which includes employment and entrepreneurship, consulting, volunteerism, contract, social work for community welfare and other professional.

### Career

- i. Career denotes the means and occupation by which an individual fulfils his basic needs.

### Examples of Indian Traditional Handicrafts and Visual Arts



Shola Craft  
(Odisha)



Channapatna  
dolls (Karnataka)



Warli Painting  
(Maharashtra)



Puppetry Art  
(Rajasthan)

- ii. To achieve success in career, a person constantly learns

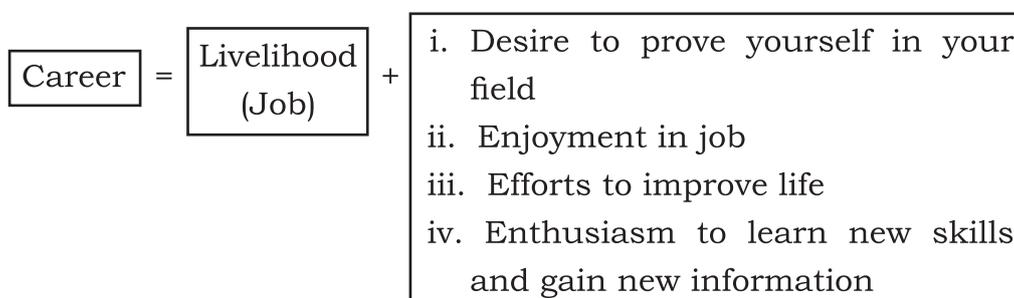
new skills, obtains new information, and is always ready to prove himself in his chosen field.

- iii. Career is a life management concept, in which development continues throughout life.

#### Livelihood

- i. Livelihood refers to job, occupation and other means of work through which one earns money.
- ii. It meets the basic needs of a person and his family.

### 6. Difference between career and livelihood



### 7. Factors to be considered for selecting a career

- Special talents, traits and interests of the person
- Selected occupation to give the person a sense of being useful
- Work should be stimulating and challenging for the person
- Ethos and environment of the work place

### 8. Perspectives of work done for earning money

- Work as a job and livelihood: Job satisfaction is gained by the money earned.
- Work as a career: Achievement of position and advancement in job satisfies a person.
- Work done for one's satisfaction (calling): Completion of work itself satisfies a person.

### 9. Traditional occupations of India

Traditional occupations are the occupations practiced by

successive generations and are rooted in customs and practices of a community. There are many such occupations in India

i. Agriculture

- Almost 70% of Indian population live in rural areas and is dependent on farming for livelihood.
- In most parts of the country, some farmers produce 'cash crops' for sale in urban markets.
- Cash crops such as tea, coffee, cardamom and rubber are of great importance as they bring in foreign exchange.
- India is the largest producer of cashewnut, coconut, milk, ginger, turmeric and black pepper in the world.

ii. Fishing

Fishing has been another important traditional occupation of India because of the country's very long coastline.

iii. Handicrafts

Handicrafts is also one of the most important traditional occupation of India. Many Indian arts and crafts are very popular in the international market. Some examples are:

- Shola craft of Odisha
- Channapatna dolls of Karnataka
- Warli painting of Maharashtra
- Puppetry craft of Rajasthan
- Coconut craft of Kerala
- Bamboo craft of Assam

iv. Weaving and embroidery



Coconut Craft (Kerala)



Bamboo Craft (Assam)



Paper Mache



Kashidakari (Embroidery)

India is famous for different types of weaving. Weaving is an important cottage industry of India.

- Each state has its own typical fabrics, embroidery stitches and costumes which are suitable for the region's specific climate and life style.

v. Indian cuisine

- Indian Cuisine has emerged as a source of livelihood for innumerable persons, ranging from street food vendors to speciality restaurants and theme pavilions in 5 star hotels.
- Many Indian traditional foods, spice mixes and masalas are in demand in other countries.

vi. Visual art

- In India, artists and artisans were supported by large Hindu temples and the rulers of various States.
- In different places of worship, a great variety of regional styles of architecture can be seen such as images skillfully carved in stone or cast in bronze or silver or in Terracotta or wood or colourfully painted.

vii. Other traditional occupations

- Garland/ornaments making
- Working as a priest
- Salt making
- Mining
- Brick and tile making
- Hunting and trapping birds and animals

**10. Reasons for downfall of traditional occupations**

- i. Illiteracy
- ii. Economic backwardness
- iii. Inadequate or inefficient finance and marketing services
- iv. Depletion of forest based resources
- v. Slow progress in implementing Land Reforms
- vi. Environmental degradation
- vii. Decreasing aesthetic appreciation for fine arts

**11. Need for revival/improvement of the traditional occupations**

- i. To sustain our indigenous knowledge and skills
- ii. For foreign currency and income generation
- iii. To enhance employment potential of the rural folk
- iv. To conserve the variety in our traditional cultural heritage.

**12. Ways for improvement in these occupations**

- i. Establishment of training facilities
- ii. Design innovations
- iii. Use of Eco friendly raw materials
- iv. Preservation and refinement strategies
- v. New packaging
- vi. Protection of intellectual property right (IPR)
- vii. Conservation of traditional knowledge.

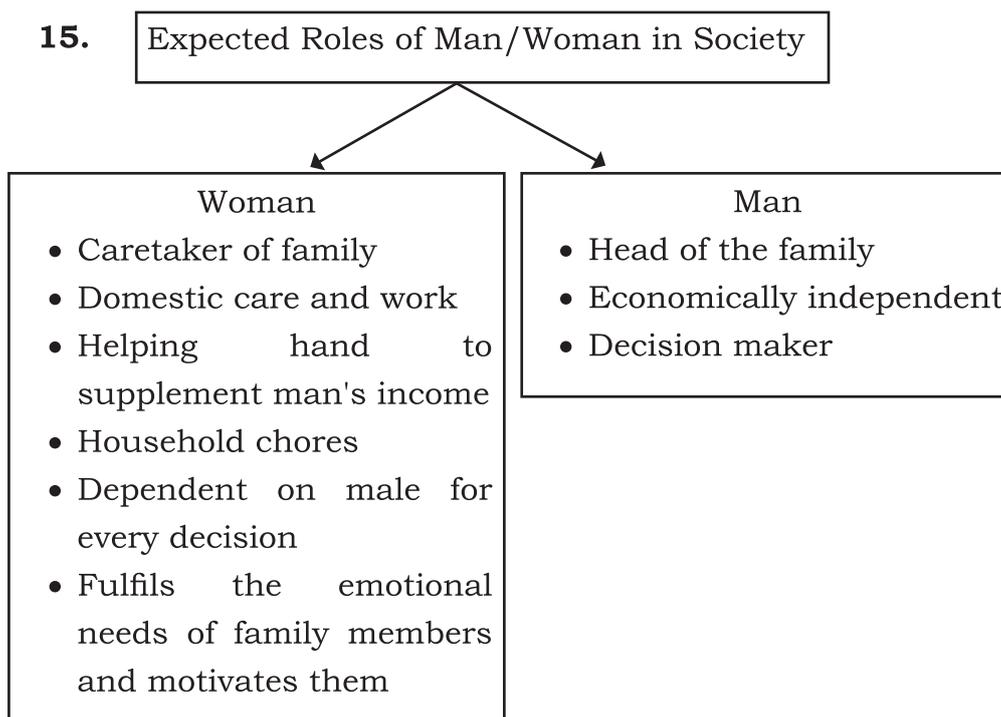
### **13. Work, Age and Gender**

- i. The perspective of individuals towards age and gender affect the personal and professional lives of the members of any workforce.
- ii. The lives of the workers is also affected from the perspective of people, society and the country towards age and gender.
- iii. The health and development of children and women is at stake when they are forced into labour which is not suitable for their age.

### **14. Gender issues in relation to work**

- i. Human beings are differentiated into two sexes that is men and women based on biological and genetic factors. Lately, Indian Supreme Court has recognised transgender people as a third gender.
- ii. Sex refers to the biological categorisation based on genetics and reproductive organs and gender is based on social identity.
- iii. In every society the social and cultural practices determine how various genders are expected to behave and the type of work they do.
- iv. The gender role expected by the society become stereotyped and thus becomes the role identity of male and females.
- v. Despite the active participation in earning and contributing to family resources, the women are denied to take important decisions in family.
- vi. The need of an hour is to educate and empower women and give them their rightful voice and place in society.
- vii. The domestic work done by women needs to be valued as an economic contribution and productive activity.
- viii. With passage of time the conventional roles and behaviours are changing. Women have started participating in each sector of the economy, many of them occupying senior

positions. This has placed a double burden on women. Besides their job they are also expected to perform most or all of their household chores and be the primary caregivers.



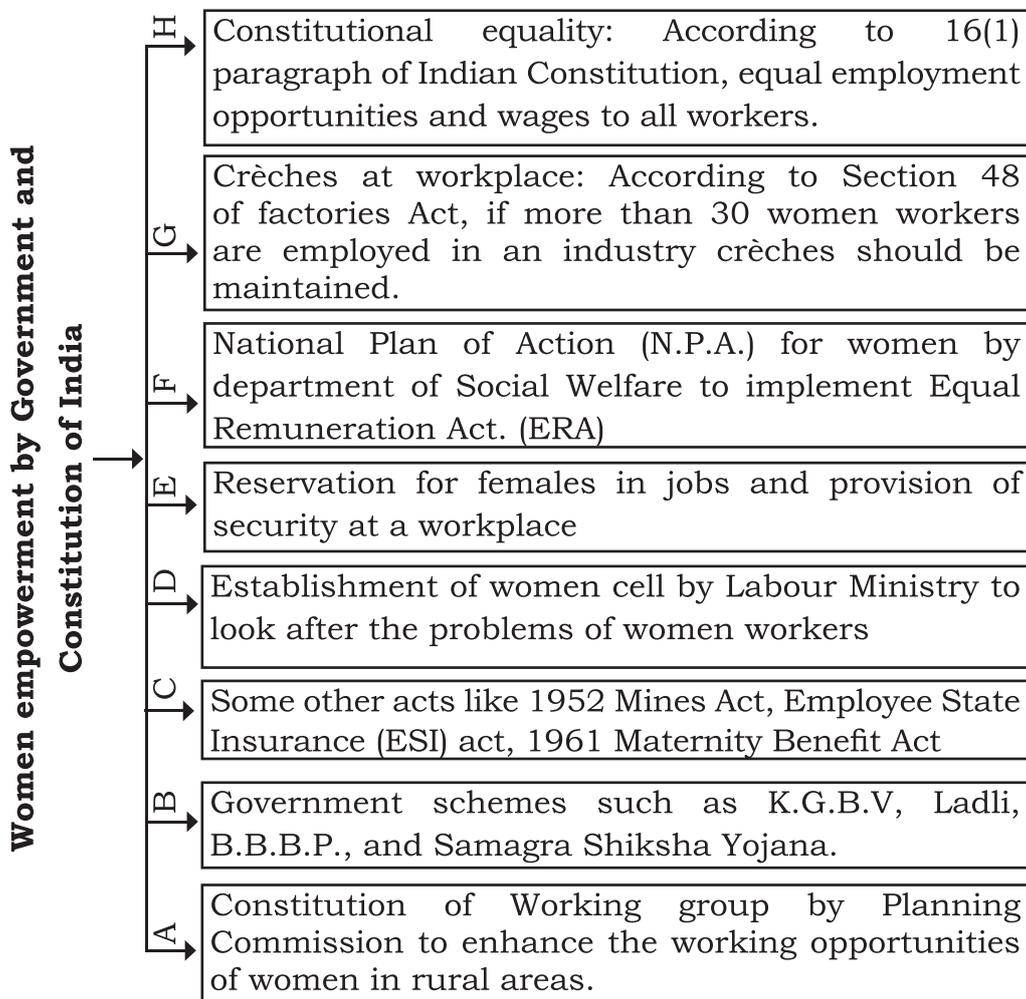
#### **16. Issues Related to Women and work**

- (i) Less opportunities of participation by women in the labour market
- (ii) Women's income considered supplementary and secondary
- (iii) Gender discrimination with respect to prestigious positions
- (iv) Stress and adverse effects on health
- (v) Security and safety at workplace
- (vi) Maternity benefits and social support for child care

### 17 A. Women empowerment: By society and family

- i. Education
- ii. Involvement in family decisions
- iii. Increase opportunities in high jobs
- iv. Value domestic work as economic contribution and treating housewives as a part of human resource
- v. Burden of family and household chores to be shared by all the members

### 17 B. Women empowerment: By Government and Constitution of India:



## **18. Examples of women empowerment**

- Kiran Mazumdar Shaw (a biotechnologist) the chairperson and managing director of "Biocon India Limited" is an eminent women entrepreneur. She started her professional career as a Trainee brewer in 'Carlton and United beverages' and in 1978 formed her own company 'Biocon India Limited'. She received many prestigious awards and in 1989 she was honoured with Padma Shri and in 2005 with Padma Bhushan award.
- Organised efforts for empowerment of women  
Shri Mahila Griha Udyog ' Lijjat papad' is an organisation of, by and for women. Its objective is to provide dignified employment to women. The society was started with seven members in 1959 and today this society gives self-employment to thousands of women all over India with the sales turnover of many crores. It was also awarded 'Best village industry' and its products include khakhra, masala wadi, detergent powder, chapati, cake and many more products.

## **19. Kasturba Gandhi Balika Vidyalaya (K.G.B.V.)**

- i. It was launched in August 2004 under SSA. (Sarva Shiksha Abhiyan, now Samagra Shiksha)
- ii. It helps in implementing Right to Education Act (R.T.E.)
- iii. • The girls enrolled in KGBV study the bridge course for preparing them for the entry level.
  - The entry level in KGBV is class VI and this scheme has now been extended till class XII
- iv. Beneficiaries—
  - Girls belonging to scheduled castes, scheduled tribes, other backward classes and minorities.
  - Girls belonging to below poverty line families in educationally backward blocks.
  - Dropout girls from rural and remote areas
- v. Objectives—
  - To provide a safe educational environment for girls of backward classes and tribes.
  - To educate dropout girls belonging to below poverty line families.
  - To improve girls literacy rate.
  - To help in implementing RTE Act of Government of India

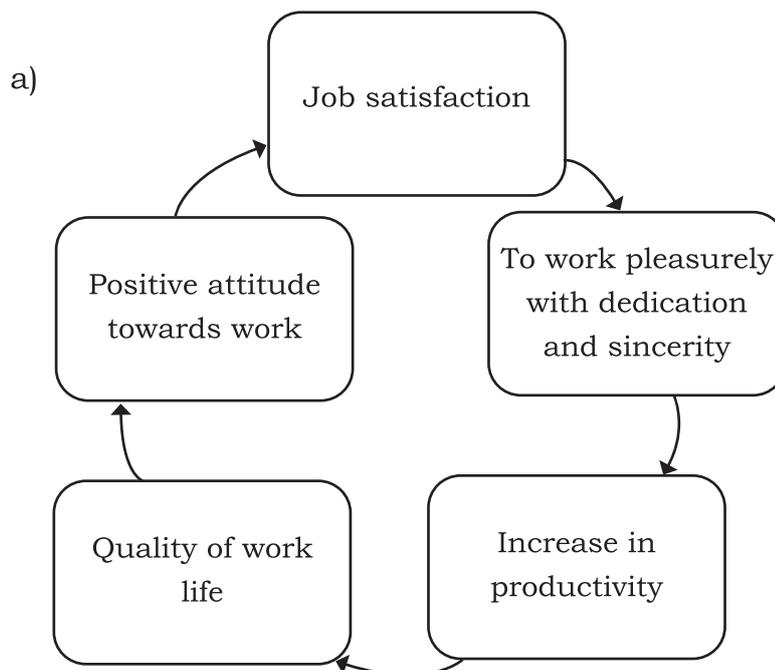
## 20. Beti Bachao Beti Padhao Yojana (B.B.B.P.)

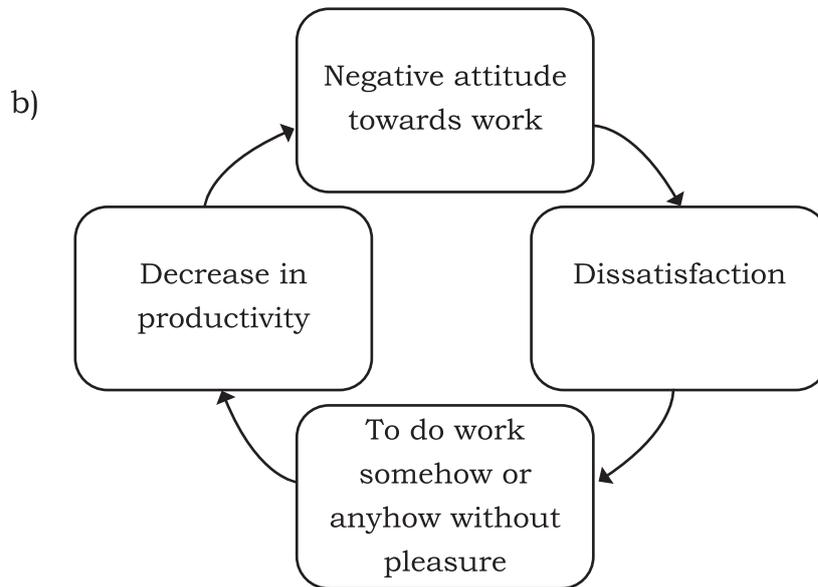
- i. It was launched on 22nd January 2015 by Prime Minister of India, Sh Narendra Modi, at Panipat.
- ii. It was started by a joint initiative of three ministries
  - Ministry of Women and Child Development (M.W.C.D.)
  - Ministry of Health and Family Welfare (M.H.F.W.)
  - Ministry of Human Resource Development( M.H.R.D.)
- iii. Objectives
  - To eliminate gender biased sex selection that is prevent female foeticide.
  - To ensure safety, identity and security of girl child.
  - To ensure that every girl child gets quality education.
  - To ensure participation of girl child in every field of life along with education.
  - To improve child sex ratio.
  - To promote the development of Holistic environment for girl empowerment.
  - To break the gender stereotypes of Indian society



## 21. Attitudes and approaches to Work, Life skills and Quality of Work life.

- i. Attitude towards work means one's perception about his work situation.
- ii. Individual's experience of job satisfaction and dissatisfaction is considerably influenced by their attitude and perception about his work situation.
- iii. When a person perceives his or her 'work' as a source of energy fulfilment and learning; job satisfaction is ensured.
- iv. A person's work routine and his attitude towards the work affects the quality of work life

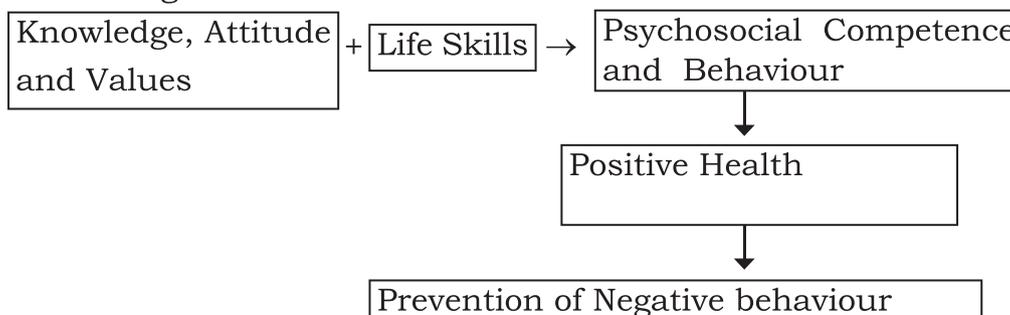




## 22. Life skills for livelihood

- i. Life skills are the abilities that enable individuals to deal effectively with the demands and challenges of everyday life.
- ii. These are important because they are applied across the lifespan.
- iii. They help to cope up with the adverse situations of life.
- iv. They contribute in promoting health and development of people.
- v. These are also needed for effective functioning of community and society.
- vi. Life skills are acquired through experimental learning or experiences

- vii. Appropriate and adequate knowledge, attitudes and values enable one to develop healthy life skills and prevent negative health behaviour.



### **23. Ten core sets of skills identified by experts**

- i. Self-awareness
- ii. Communication
- iii. Decision making
- iv. Creative thinking
- v. Coping with emotions
- vi. Empathy
- vii. Interpersonal relationship
- viii. Problem solving
- ix. Critical thinking
- x. Coping with stress

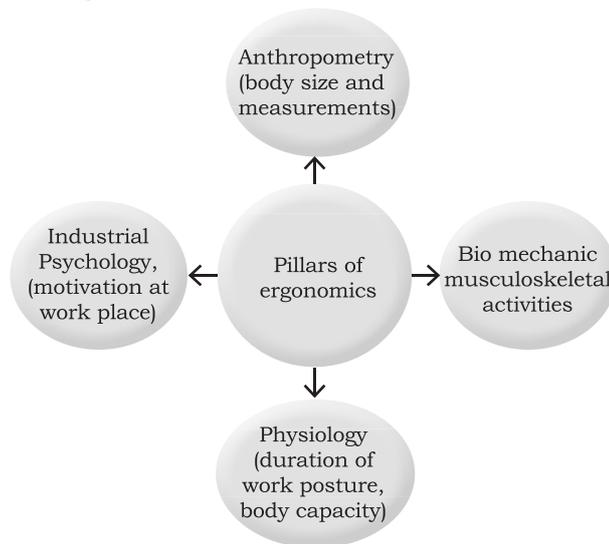
### **24. Essential Soft skills at workplace**

- i. Working productively: Sufficient knowledge, skills and expertise, experience, enthusiasm, zeal and dynamism help to increase the production
- ii. Learning effectively
  - learning to use tools and strategies related to one's field
  - Updating oneself to keep pace with advances and development
  - Always ready to learn new skills to acquire information within the field and motivation to work hard.
- iii. Clear communication
- iv. Working cooperatively

- v. Thinking critically and creatively
  - Being innovative and creative
  - Analytical thinking and Critical evaluation
- vi. Concentration and alertness

**25. Ergonomics/Human Factors Engineering**

- i. Ergonomics is derived from two Greek words ergon (work) and nomics (natural laws)
- ii. It may also be called Human Factors Engineering
- iii. It is adjustment of "Human and Machine"
- iv. Ergonomics is that branch of Engineering Sciences which involves application of biological science to achieve optimum mutual adjustment of human work with tools, machines and workstations for optimal human efficiency and wellbeing.
- v. Objectives of Ergonomics
  - (a) to design workstation and machines according to the needs of workers
  - (b) to improve efficiency and increase produce activity
- vi. Pillars of Ergonomics



- vii. Benefits of ergonomics
- Increases productivity
  - Reduces errors / mistakes
  - Reduces risk of accidents and injuries
  - Increases work efficiency
  - Helps to decrease stress of the workforce
  - Helps to improve the morale of the workforce
  - Increases job satisfaction

**Ergonomics:** An effective productivity tool that addresses matters related to

- workplace/work station design
- task design/design of work methods
- equipment design
- facilities
- environment

## **26. Entrepreneurship**

- Entrepreneurship is the act of creating a new and innovative enterprise/ product or service.
- An entrepreneur is a person who converts any novel Idea (a product or a service) into reality and establishes an Enterprise.
- An entrepreneur is innovative, creative, organised and risk taker.
- Entrepreneurs use their acumen to establish resources and/ or finances and aim to make a livelihood.
- Entrepreneurs establish new organisation or revitalize the existing ones.
- Characteristics of an Entrepreneur
  - Willingness to work hard
  - Knowledge and skills for planning and implementation.
  - Skills of management of finances, materials, personnel and time.
  - Courage to take calculated risks.
  - Ability and preparedness to handle many tasks simultaneously
  - Having good communication skills.

- Ability to deal with tough issues and find the solutions,
  - Ability to cope with setback challenges and failures.
  - Being realistic and not expecting easy solutions.
  - Being flexible.
- vii. Examples of some entrepreneurs are Mr Narayan Murthy, J.R.D. Tata, Dhirubhai Ambani, Kiran Mazumdar Shaw

### **27. Social entrepreneurship**

- i. Social entrepreneurship focuses on doing social good.
- ii. Social entrepreneurs work for the benefit of the underserved, neglected, disadvantaged group of individuals.
- iii. Social entrepreneurs create basic social changes and sustainable improvements
- iv. Their field of work are Education, Healthcare, Economic development, Environment, Arts or any other social field.
- v. The success of social entrepreneurship is ascertained by the social benefits and impact.

### **Full form of Abbreviations**

- i. I.P.R. Intellectual Property Right
- ii. E.R.A. Equal Remuneration Act
- iii. N.P.A. National Plan of Action
- iv. R.T.E. Right to Education Act
- v. S.S.A. Sarv Shiksha Abhiyan/ Samagra Shiksha
- vi. B.B. B.P. Beti Bachao Beti Padhao
- vii. K.G.B.V Kasturba Gandhi Balika Vidyalaya

### **OBJECTIVE TYPE QUESTIONS (1 MARK)**

#### **A Multiple Choice Questions**

1. Which scheme has been launched under SSA or Samagra Shiksha for the girls living in adverse conditions and/or the drop out girls belonging to below poverty line families?
  - a. K.G.B.V.
  - b. B.B.B.P.
  - c. N.P.A.
  - c. M.D.M.

**Ans a K.G.B.V.**

2. An activity that is performed for a purpose or out of necessity is
- a. Livelihood
  - b. Work
  - c. Career
  - d. Life skills

**Ans b Work**

3. \_\_\_\_\_ refers to biological categorization based on genetics and reproductive organs.
- a. Gender
  - b. Sex
  - c. Male
  - d. Female

**Ans b Sex**

4. According to Section 48 of the Factories Act
- a. The creches should be maintained in a factory or industry if more than 30 women are employed in it.
  - b. Men and women have Right to get equal wages for the same work.
  - c. Equality of opportunity for both male and female for appointment to any office is guaranteed.
  - d. Security of all employees working in a factory is to be maintained

**Ans a The creches should be maintained in a factory or industry if more than 30 women are employed in it**

5. Nitya owns a garment company and takes risky decisions in her work every day. Nitya is an/a ..... (CBSE Sample Paper-2022)
- (a) Entrepreneur
  - (b) Wage employed person
  - (c) Labourer
  - (d) Unskilled worker

**Ans a Entrepreneur**

6. Article \_\_\_\_\_ of the Constitution of India guarantees equality of opportunities for all citizens in any office.
- (a) 16(1)
  - (b) 21
  - (c) 25
  - (d) 370

**Ans a 16(1)**

7. Abilities that enable people to behave in healthy ways, particularly in situations that challenge them are known as \_\_\_\_ .

(CBSE Sample Paper 2023-24)

- (a) Attitudes (b) Life skills  
(c) values (d) Physical labour

**Ans.** (b) Life Skills

8. Following are the popular traditional handicrafts of India Which option is incorrect ? (CBSE Sample Paper 2022)

- (a) Coconut craft-Kerela (b) Warli Painting - Maharashtra  
(c) Shola craft-Karnataka (d) Bamboo craft-Assam

**Ans c Shola craft-Karnataka**

9. Ergonomics is the adjustment of human and machine which involves application of human biological sciences combined with engineering science to achieve optimum mutual adjustment of human work, with the benefit being measured in terms of human efficiency and well being. It is important for

(CBSE Sample Paper 2023-24)

- (i) Improving job effectiveness  
(ii) Improve social interaction of workers  
(iii) Reducing productivity  
(iv) Improving economic infrastructure of the country

Choose the correct option from the following:

- (a) (i) and (ii) (b) (ii) and (iii)  
(c) (i) and (iv) (d) (iii) and (iv)

**Ans a (i) and (ii)**

10. She is the chairperson and managing director of Biocon India Ltd. She started her career as a trainee brewer in Carlson and United Beverages. In 2005, she was honoured with Padma bhushan. Identify the personality. (CBSE Sample Paper 2022)

- a. Ms. Kiran Mazumdar Shaw  
b. Ms. Kusum Mazumdar Shaw  
c. Ms Kiran Mazumdar Shah  
d. Ms Kalyani Mazumdar Shaw

**Ans.** a. Ms. Kiran Mazumdar Shaw

11. The factories Act 1948 makes sure that there is facility of \_\_\_\_\_ on the work premises. (CBSE Sample Paper 2022)

- a. Canteen
- b. Shade
- c. Creche
- d. First aid

**Ans. c. Creche**

**(b) Match the following**

- |                     |                |
|---------------------|----------------|
| A Shola craft       | i Kerala       |
| B Channapatna dolls | ii Karnataka   |
| C Warli painting    | iii Odisha     |
| D Coconut craft     | iv Maharashtra |

**Pick the correct option**

- a. A iii B ii C iv D i
- b. A ii B ii C i D iv
- c. A i B ii C iv D i
- d. A iii B ii C i D iv

**Ans a) A iii B ii C iv D i**

**B (ii) Match the following**

- |                                   |   |
|-----------------------------------|---|
| A Adjustment of Human and Machine | i. Life skills                                |
| B A medium for one's creation     | ii. Work                                      |
| C Clear communication             | iii. Organized effort of empowerment of women |
| D Griha Udyog Lijjat papad        | iv. Ergonomics                                |
| E Kiran Mazumdar Shaw             | v. An eminent woman entrepreneur              |

**Pick the correct option**

- a) A i B iii C ii D iv E v
- b) A iv B ii C i D iii E v
- c) A iv B ii C i D v E iii
- d) A ii B i C iv D v E iii

**Ans. b) A iv B ii C i D iii E v**

**C Very short answer questions (1 mark)**

1. What do you understand by meaningful work? (NCERT)

**Ans** Meaningful work refers to all such activities which contribute to personal growth, instills confidence and self-worth and which are beneficial for the society.

2. Write any two objectives of Beti Bachao Beti Padhao Yojana.

**Ans i) To stop gender biased sex selection that is female foeticide  
ii) To ensure that every girl child gets quality education.**

3. State any two benefits of ergonomics.

**Ans i) Increase in productivity  
ii) Decrease in errors**

4. Give one word for 'New ideas being effectively and successfully put to use'.

**Ans Innovation**

5. State any two issues related to women in modern India

**Ans i) Double burden of family and job, resulting in stress and health issues.  
ii) Maternity benefits and social support for child care.**

**D Case study based questions (4 × 1 marks)**

Economic development is a strong desire of every person. Entrepreneurship plays an important role in the fulfillment of this desire. Entrepreneurship fills the person with such virtues that he proves himself as a master of the industrial world and also becomes a part of the economic development of his country. An entrepreneur turns new ideas into reality. He draws resources with his sharp intelligence and sets an aim for his life. The founder of Paytm Company Mr. Vijay Shekhar Sharma is an example of an entrepreneur. He knew that in future, transactions would be done digitally.

1. In the context of Entrepreneurship choose the correct pair

- (a) Kiran Mazumdar Shaw : A Social entrepreneur
- (b) Dhirubhai Ambani : An eminent leader
- (c) Narayan Murti : A successful entrepreneur
- (c) Draupadi Murmu : Women Entrepreneur

**Ans.** (c) Narayan Murti : A successful entrepreneur

2. Match the concepts given in list I with their descriptions in list II

List I Concept	List II Description
A. Ergonomic	i. Decision making
B. Life Skill	ii. Adjustment of human and machine
C. Job Satisfaction	iii. Motivation at workplace
D. Industrial psychology	iv. Positive attitude towards work

Choose the correct option from the following:

- (a) A i B ii C iii D iv                      (b) A ii B i C iv D iii  
(c) A i B iii C iv D ii                      (c) A iii B iv C i D ii

**Ans.** (b) A ii B i C iv D iii

3. Given below are two statements labelled as Assertion (A) and Reason (R)  
Assertion (A) : Social entrepreneurs work for the benefit of the underserved, neglected disadvantaged group of individuals.

Reason (R) : The aim of social entrepreneurs is to increase productivity.

Choose the most appropriate answer from the options given below :

- (a) Both A and R are true and R is the correct explanation of A.  
(b) Both A and R are true but R is not the correct explanation of A.  
(c) A is true but R is false.  
(d) A is false but R is true.

**Ans.** (c) A is true but R is false.

4. Given below are two statements labelled as Assertion (A) and Reason (R).  
Assertion (A) : A successful entrepreneur should have courage to take risk.

Reason (R) : Innovations are always challenging and risky.

Choose the most appropriate answer from the options given below :

- (a) Both A and R are true and R is the correct explanation of A.  
(b) Both A and R are true but R is not the correct explanation of A.  
(c) A is true but R is false.  
(d) A is false but R is true.

**Ans.** (a) Both A and R are true and R is the correct explanation of A.

**Short answer questions (2 marks)**

1. Write any four ways which help to understand the work. (NCERT)

**Ans i) A job and livelihood for most of the people**

**ii) A means for self-creativity**

**iii) A symbol of status power and control**

**iv) A source of pleasure and complete mental satisfaction.**

2. Enumerate any four points to be kept in mind while selecting a career.

**Ans i) Special talents, traits and interests of the person**

**ii) Selected occupation to give the person a sense of being useful.**

**iii) Work should be stimulating and challenging for the person**

**iv) Ethos and environment of the workplace**

3. Who are home maker (housewives)/What is the contribution of a housewife in the economy of the family/ Why the domestic work done by women should be considered as financial contribution in the family?

**Ans The women whose main job is to look after the family and fulfill household responsibilities staying at home are homemakers.**

**They do the following tasks**

**i) Fulfill the needs of family**

**ii) Support and motivate the family members in all stages of their life so that they can do their work efficiently**

**iii) Perform household chores and contribute to family resources**

**iv) Judiciously use resources and save money**

**v) If their work is valued it accounts for more than many paid jobs.**

4. Write the four pillars of Ergonomics.

**Ans.** Refer to points to remember No. 25 (vi)

5. Write any two reasons for extinction of Indian traditional occupations?

**Ans. i) Gradual erosion of aesthetic appreciation of Fine Arts**

**ii) Insufficient finance and marketing services.**

6. What do you understand by the terms gender and sex ? (NCERT)

**Ans. Sex refers to the biological categorisation based on genetics and reproductive organs. Human beings are differentiated into male, female and transexual based on sex.**

**Gender is categorisation based on social identity . In every society and culture, the norms and behaviour of gender role identity of male and female are established and expected from each one of its members.**

7. Differentiate between job and career (NCERT)

**Ans. Job refers to all those activities, work or occupation which are done with the primary objective of earning money and meeting the basic needs of self and family.**

**Career denotes the means and occupation by which one earns money to fulfil one's basic needs and to achieve success, a person is always ready to learn new skills and gain new information with enthusiasm.**

8. Why are social entrepreneurs called social catalyst? Write any two characteristics of an entrepreneur.

(CBSE Sample Paper 2022-23)

**Ans. Social entrepreneurs are called social catalyst as they**

- (i) focus on social good**
- (ii) achieve large scale social benefits**
- (iii) work for underserved/neglected/disadvantaged group of people**
- (iv) help those who lack financial resources**
- (v) create/bring social changes**
- (vi) bring sustainable development/improvements**
- (vii) bring development in social fields of education/healthcare/economic/development/environment/arts**
- (viii) does not work for profit but for social benefits and impact**

**Two characteristics of an entrepreneur**

**Refer Points to remember 26(vi).**

**Short answer questions (3 marks)**

1. Despite the rich heritage of traditional occupations, in the modern context these works of art are gradually losing out to mass produced goods. Suggest any four areas where intervention are required for revival of these occupations.

(CBSE Sample Paper 2023-24)

**Ans.** Refer to Points to Remember No. 12

2. Beti bachao Beti Padhao Scheme is a joint initiative of which three ministries?

**Ans i Ministry of Women and Child Development**

**ii Ministry of Health and Family Welfare**

**iii Ministry of Human Resource Development**

2. How will women get recognition in the family and the society?  
(NCERT)

**Ans i The mindset has to be modern.**

**ii The domestic work done by women need to be valued as an economic contribution.**

**iii All family members to be involved and be responsible for household work**

**iv Increase in literacy rate of women**

**v The attitude and approach of society has to be changed**

**vi Posting women on high and prestigious posts.**

**Long answer questions (4 marks)**

1. What are the government initiatives in favour of women? (NCERT)

**Ans.** Refer to 'Points to Remember' No. 17B

2. What is the full form of K.G.B.V. Scheme? When was it started? Write its beneficiaries and objectives.

**Ans.** Refer to 'Points to Remember' No. 19

**Long answer questions (5 marks)**

1. What are life skills? Write their contribution in success of an entrepreneur. Enumerate any 6 life skills.

**Ans Life skills are abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life.**

**Need of Life skills for an entrepreneur**

- i. Life skills help an entrepreneur to deal effectively with challenging or adverse situations faced during establishment of an enterprise.

- ii. They help to prevent negative behaviour.

**For 6 life skills:** Refer to Points to Remember No. 23

2. Rohit is a manager in a factory. Explain in detail what soft skills he needs to develop for progress in his field.

**Ans. Essential Soft Skill he should develop are—Refer to ‘Points to Remember’ No. 24**

3. How will women get recognition in the family and society?  
(NCERT)

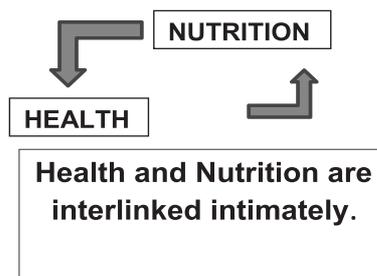
**Ans Refers to ‘Points to remember’ No 17 (A)**

## 2. Clinical Nutrition and Dietetics

### Points to Remember

#### 1. Nutrition:

- i. Nutrition is the science of food, nutrients and other substances as well as their digestion, absorption and utilization by the body. Nutrition is also concerned with the social, psychological and economic aspects of food and eating.
- ii. Optimum Nutrition/Good Nutrition/Adequate Nutrition is important -
  - For providing immunity
  - Protection from infection
  - To promote recovery from a variety of illnesses
  - Managing chronic diseases
- iii. Effect of Inadequate Nutrition/Poor Nutrition
  - Maintaining immune defences thus makes existing problems worse
  - Difficulty in Healing wounds
  - Delay in utilising medications
  - Difficulty in smooth functioning of various organs causes additional health problems
- iv. Diet, good nutrition and a healthy lifestyle can control and delay the age of onset of chronic diseases



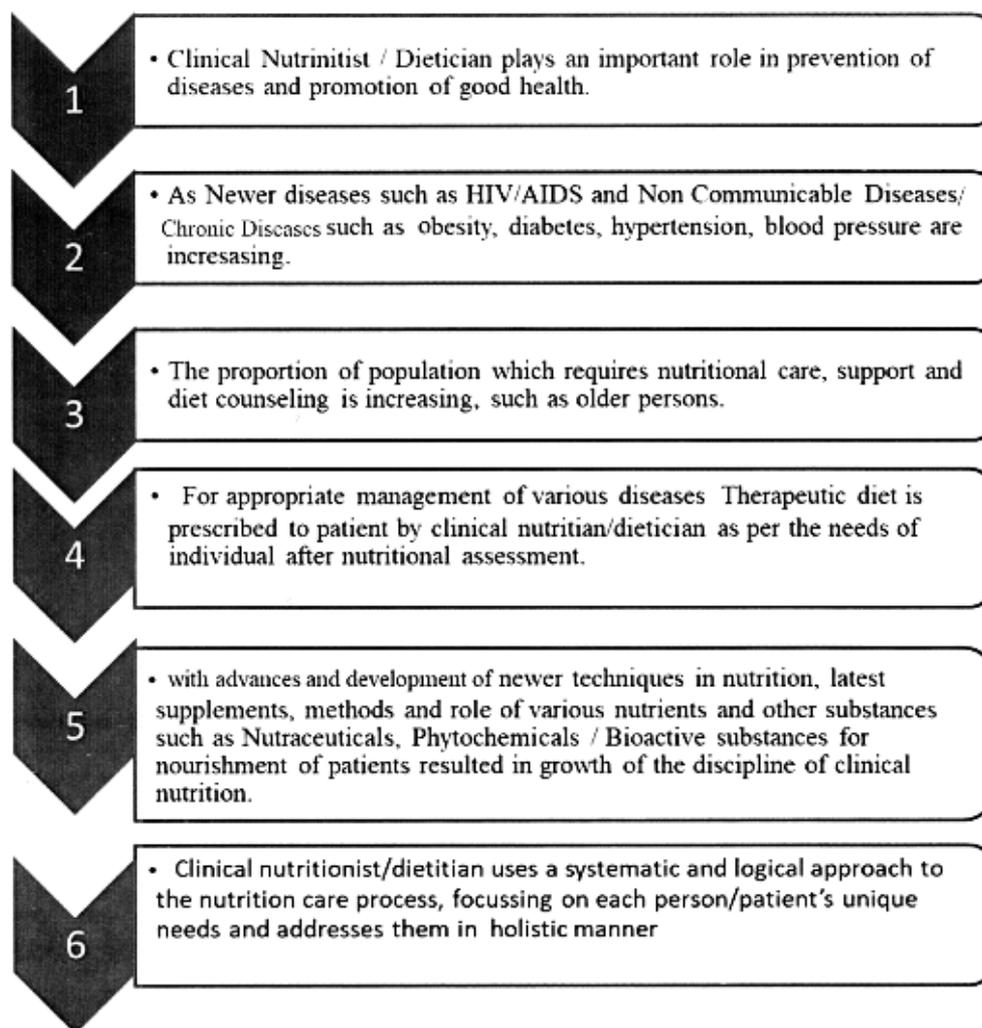
#### 2. Clinical Nutrition:

The specialised area of nutrition which deals with nutrition during illness is 'Clinical Nutrition'. In recent times, this field is called Medical Nutrition Therapy.

### 3. Dietetics

- i. This is the science that explains how food and nutrition affect human health.
- ii. Dietician assesses, diagnoses and treats nutritional problems. These licensed professionals provide optimal nutritional care and health care.

### 4. Significance of Clinical Nutrition and Dietetics



## **5. Advances in the field of clinical nutrition:**

According to the FSSAI, foods for special dietary uses or functional foods or nutraceuticals or health supplements means foods which are specially processed or formulated to satisfy particular dietary requirements which exist because of a particular physical or physiological condition or specific diseases and disorders, and which are presented as such, wherein the composition of these foodstuffs must differ significantly from the composition of ordinary foods of comparable nature,

This may contain one or more of the following ingredients, namely:

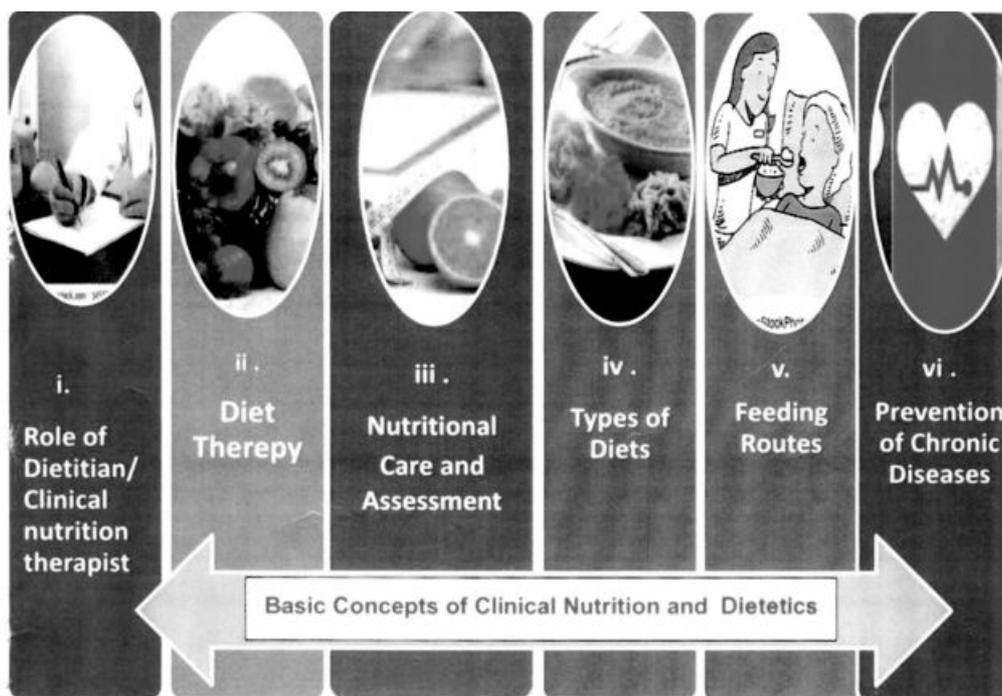
- i. Plants or botanicals or their parts in powder form**
- ii. Minerals or vitamins or compounds of proteins or amino acids**
- iii. substances of animal origin**
- iv. Complementary foods that increase total dietary intake**

**Medical foods:** Available on Doctor's prescription. Specially formulated for persons with specific needs. e.g. ORS, Lactose free milk etc.

**Phytochemicals/ Bioactive compounds** are non-nutrient constituents present in foods that have physiological or biological activity and influence health.

**Antioxidants** like **Beta-carotene /carotenoid**

## 6. Basic Concepts of Clinical Nutrition and Dietetics



### 6 (i) a. Role of Clinical Nutritionist/Dietitian

- i. Assessment of nutritional status of the patient, analysing nutritional needs, advising, and converting technical information written by the doctor into dietary guidelines.
- ii. Making diet plans to meet the nutritional needs of patients.
- iii. Modifying the diet in various disease conditions.
- iv. Create diet plans for players, persons working in space, submarines, defence service, industries.
- v. Promote health and well-being of patients admitted to hospital or in outpatient clinics as well as in institutional settings.
- vi. Management of diet services in institutions like old age homes, schools, orphanages etc.
- vii. Promoting health to prevent complications and improve quality of life for patients with long-term illnesses.

**6(i) b. Some factors that Dietitian consider while modifying diets for patients:**

- i. The pattern of food, the frequency of receiving different types of food, the diagnosis of the disease and the prescription given by doctor.
- ii. Health conditions and physical condition including the ability to eat, chew, swallow digest and absorb the frequency of food intake of various types, feeling of appetite and the like and dislike of the person.
- iii. Feeling of hunger, physical activities and lifestyle, occupation, cultural, ethnic practices, socio-economic background, and religious belief.
- iv. Nutritional stress
- v. Psychological stress
- vi. Dietary and other food items

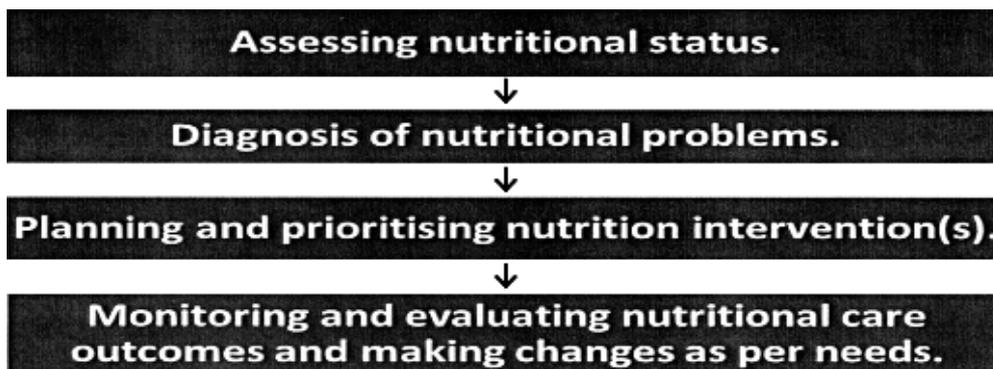
**6(ii) Diet Therapy**

Diet therapy is a branch of dietetics concerned with the use of food for therapeutic purpose. It is concerned with nutritional requirements of patients suffering from different diseases and prescribing the right type of diet for them.

The objectives of Diet therapy are —

- i. Plan a diet keeping in mind the patient's food habits
- ii. Modification of the existing diet to improve and keep the condition of the disease under control.
- iii. Correction of nutritional deficiencies.
- iv. Prevention of short-term and long-term complications in case of chronic diseases.
- v. Education and counselling of the patient to follow the prescribed diet

**6(iii) a. Nutritional Care: Nutritional care during illness is an organised group of activities which involves**



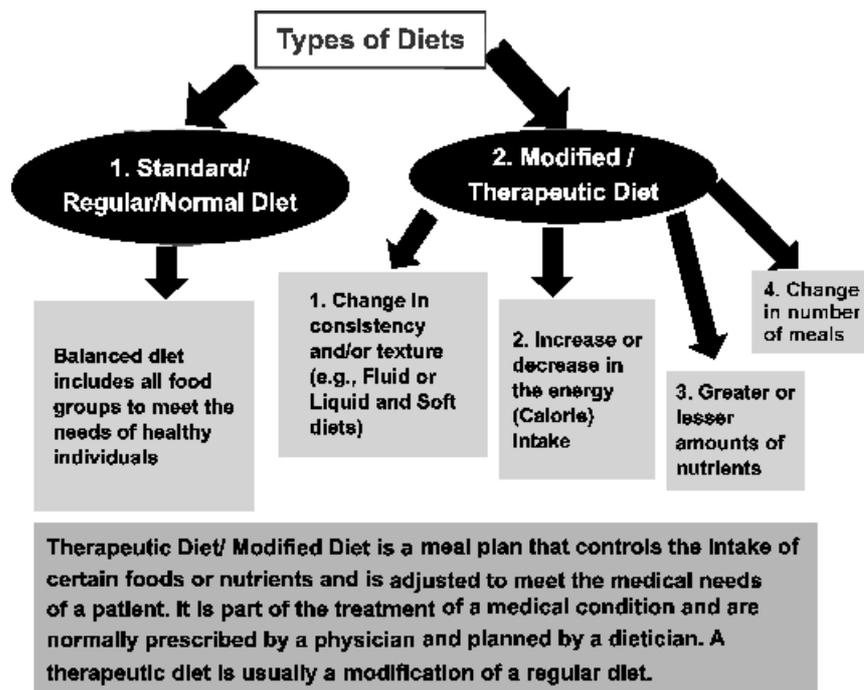
**6(iii) b. Nutrition Assessment-**

Assessment based on the following information on the nutritional status and nutritional needs of the patient-

(in A B C D order)

- Anthropometric measurements
  - i. Height, weight and other physical measurements
- Biochemical Assessment
  - ii. Relating the information on biochemical testing (blood, stool, etc.) and physical measurements with the above and the physician's diagnosis
- Clinical Assessment
  - iii. To get detailed information about the health, diet, personal and medical history of the patient.
- Disease Identification
  - iv. Interpreting all of the above to identify potential nutritional deficiencies and risk of future deficiencies.

## 6 (iv) Types of Diets:

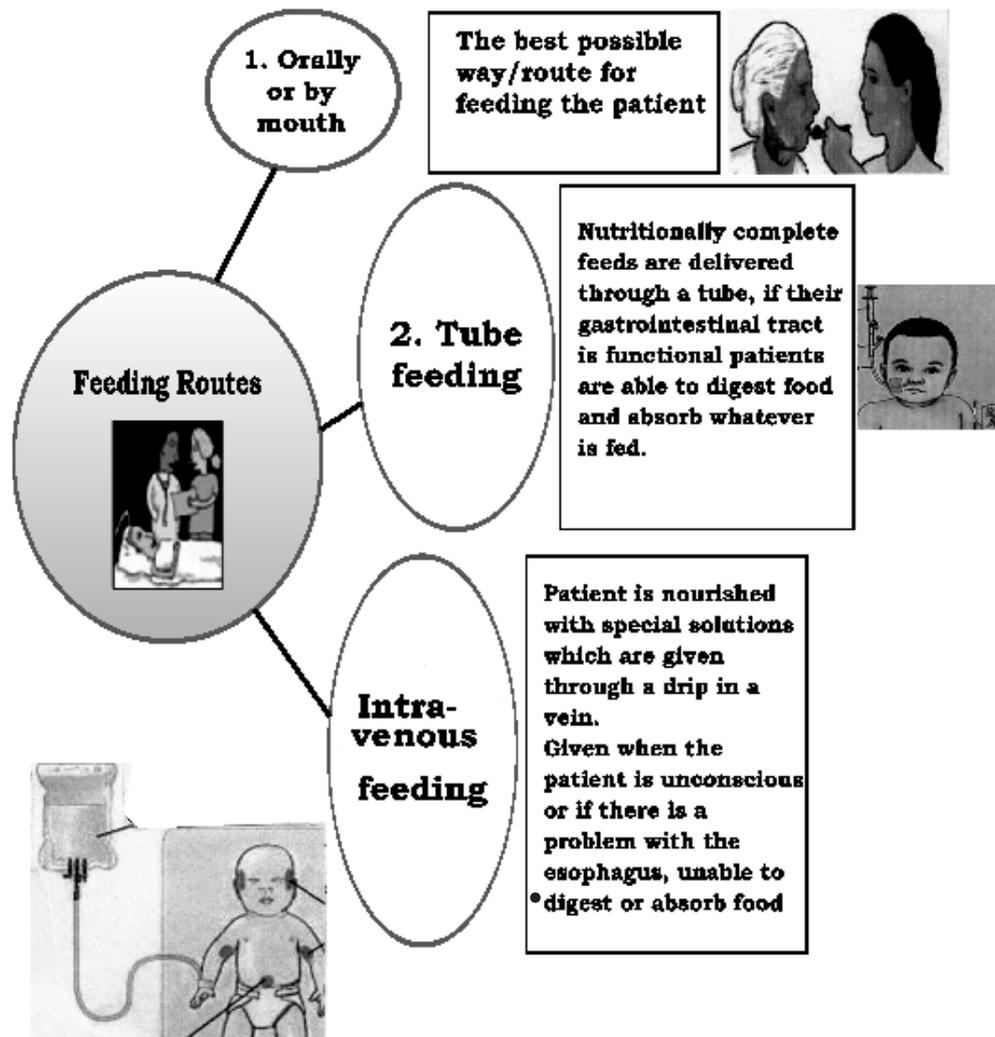


## 6(iv) Types and examples of Modified Diets -

1.Change in consistency and/or texture	
<p>(i) <b>Liquid diets:</b> Liquid diets are primarily fluid in consistency at room temperature. Also known as full fluid diets, these include foods which are free from fibre and are nutritionally adequate. Examples-Coconut water, fruit juice, soup, milk, buttermilk, milkshakes etc. Advantage-</p> <ul style="list-style-type: none"> <li>• Nutrients are easily absorbed if the gastrointestinal tract is functioning normally.</li> <li>• Such a diet is advised for persons who are unable to chew or swallow normally. e.g., post operative patients.</li> </ul>	 <p>Liquid diet Fruit, Vegetable Juice</p>
<p>(ii) <b>Clear Liquid diet-</b> It is a variation of Liquid diet. It is even more thin in consistency. Examples-clear soups or juices (without pulp), very light tea, etc. Advantage-Clear liquid diet is prescribed just after surgery. Limitation- It does not fully meet the nutritional requirements of the person completely.</p>	 <p>Clear liquid diet- Clear /Strained Soup</p>

(iii)	<p><b>Soft diets</b> provide semi-solid foods that are lightly seasoned, do not contain much fibrous or gas forming foods. Such diets are easy to chew and digest.</p> <p>Examples-Khichdi, Dalia Sago kheer, etc.</p> <p>Advantage-</p> <ul style="list-style-type: none"> <li>• Foods included should minimise the risk of indigestion, abdominal distention, nausea, cramping or any other gastrointestinal problems.</li> <li>• It is soft in consistency and includes only simple, easily digestible food with no harsh fibre, high fat or spicy foods. Such diets are given when rest to the digestive system is recommended.</li> </ul>	 <p><b>Soft Diet</b> Dalia/khichdi/ Sabudana/Kheer</p>
(iv)	<p><b>Mechanical soft diet-</b> When normal adults in the older age group have chewing problems, certain modifications are made to the diet.</p> <p>This is not a therapeutic modification, rather only a change or modification in the method of cooking.</p> <p>Examples- soft, mashed, crushed, and pureed foods, fruits and vegetables which are easy to chew.</p>	 <p><b>Mechanical soft diet</b> pureed foods, mashed fruits and vegetables.</p>
<b>2. Increase or decrease in the energy (Calorie) intake</b>		
i.	<p>Increase in energy /Calorie intake. Example-Diet given in Fever.</p>	
ii.	<p>Decrease in the energy /Calorie intake. Example-Diet given in obesity.</p>	
<b>3. Greater or lesser amounts of one or more nutrients</b>		
<p><b>Examples</b></p> <ol style="list-style-type: none"> <li>1. Increase in protein intake in case of surgery</li> <li>2. Lower protein intake in case of kidney failure</li> <li>3. High or low intake of fibre</li> <li>4. Lower fat intake in Jaundice</li> <li>5. Restriction in sodium intake in High blood pressure</li> <li>6. Restriction in fluid intake,</li> <li>7. Restricted intake of certain foods as these may be rich in a non-nutritive dietary constituent e.g., Spinach, because spinach is rich in oxalates.</li> </ol>		
<p>4. Change in the number of meals, or modification in intervals of feeding or special plan for patients when route of feeding is altered.</p>		

## 6 (v) Feeding Routes:



### **6(vi) Prevention of chronic diseases**

- Proper diet, good nutrition and healthy lifestyle can delay the control and onset of chronic diseases.
- The food we consume are high in fat and sugar and low in fibres and other important constituents.
- There have been various changes in the lifestyle of urban Indians. processed foods with high sodium content has increased and physical activity has decreased. The number of chronic diseases such as obesity, diabetes, heart disease, hypertension, high blood pressure and cancer are increasing because of reduced intake of fibre as well as several vitamins and minerals.
- Clinical nutrition practitioner helps in preventing chronic diseases and enhancing better health care in the community by proper dietary counselling. They can give proper guidance to prevent such problems from arising in different groups of the society like schools, colleges, other institutions. Examples of chronic diseases-obesity, cancer, diabetes, heart disease, HIV/AIDS. AIDS and hypertension etc.

### **7 Preparing for a Career in Clinical Nutrition and Dietetics**



**Sound Knowledge and Thorough Understanding of the following**

- Subject Nutrition, Food Science and basic Sciences like chemistry, biology, Physics, physiology, Biochemistry, Food Microbiology
- Physiological changes in disease condition
- Changes in RDAs/ nutrients requirement
- Traditional and ethnic cuisines
- Basic accounts, Record keeping, Psychology.



The following skills are required:

- Assessing nutritional status of patients using clinical & biochemical criteria
- Diet planning customised to requirements of individual patients
- Communication skills for diet counselling.
- Adapting to cultural milieu, food taboos
- Laboratory research and conducting experimental designs with patients to find out usefulness of various diets, drugs and nutrition supplements.

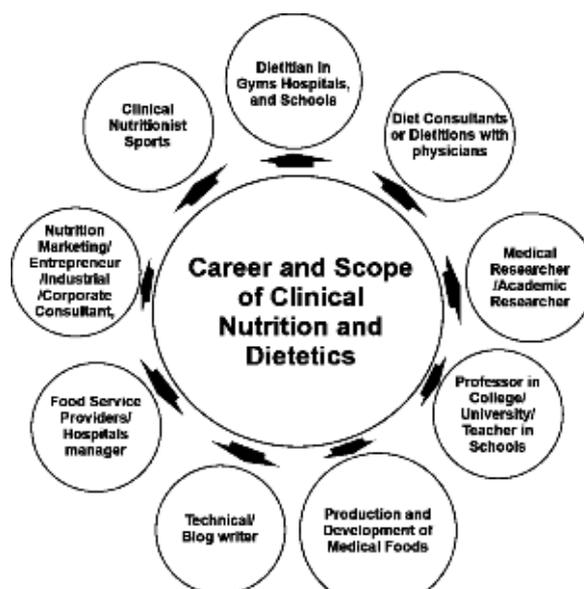
  



Essential Qualifications:

- Passed 10+2 level
- B.Sc. degree in Home Science or B.Sc. in Nutrition.
- For Dietitian  
Postgraduate Diploma in Dietetics.  
OR M.Sc. in Food Science and Nutrition or M.Sc. in Dietetics.  
with an internship to qualify as Registered Dietitian (RD)
- For Teaching, Academics and Research  
After M.sc, clear University Grants Commission's (UGC) National Eligibility Test known as UGC-NET and Pursue Ph.D.

## 8. Career options and Scope of Clinical Nutrition and Dietetics





3. While assessing nutritional status of a patient which factor is not considered by the clinical nutritionist? (CBSE Sample Paper 2022)
- (a) Anthropometric measurements
  - (b) Detailed information on diet and medication histories
  - (c) Relating the information on laboratory and physical measurements
  - (d) Diet survey

**Answer- (d) Diet survey**

4. Your sister has completed her diploma in clinical nutrition and dietetics.

Choose from the following options which are available to her to start her career? (CBSE Sample Paper 2022)

- (a) School counsellor
- (b) Research and development of Nutraceuticals
- (c) ECCE
- (d) In Agriculture Industry

**Answer- b) Research and development of Nutraceuticals**

5. After surgery of stomach your grandfather is unconscious, which mode of feeding would be preferred for him and why?

(CBSE Sample Paper 2022)

- (a) Oral feeding and easy to chew
- (b) Tube feeding and easy to digest
- (c) Intravenous feeding and to get nourishment
- (d) Nasogastric feeding and nutrition

**Answer- c) Intravenous feeding and to get nourishment**

- 6 Which of the following is not an objective of diet therapy?

(CBSE Sample Paper 2022)

- (a) Modification of existing diet
- (b) Knowledge of traditional cuisine
- (c) Prevention of complications
- (d) Correction of nutritional deficiency

**Answer-(b) Knowledge of traditional cuisine**

7. Identify the components present in natural foods or food products manufactured wherein specific ingredients have been included to confer health benefits. (CBSE Sample Paper 2022)

- (a) Nutraceuticals (b) Medical foods  
(c) Antioxidants (d) Phytochemicals

**Answer-** a) Nutraceuticals

8. Which type of diets should be prescribed by the dietician to your grandfather who is suffering from kidney and chewing problem respectively? (CBSE Sample Paper 2022)

- (a) Low protein diet and mechanical soft diet  
(b) High protein diet and mechanical soft diet  
(c) Low fibre diet and liquid diet  
(d) High fibre diet and regular diet

**Answer-** a) Low protein diet and mechanical soft diet

9. Professionals who deal with nutritional management of illness of an individual are referred to as: (CBSE Sample Paper 2022-23)

- (i) Clinical Nutritionist  
(ii) Public Health Nutritionist  
(iii) Medical Representative  
(iv) Medical Nutrition Therapist  
(v) Dietitian

Choose the correct options:

- (a) (i), (ii), (iii) (b) (i), (iii), (iv)  
(c) (i), (iii), (v) (d) (i), (iv), (v)

**Answer:** (d) (i), (iv), (v)

**B. (i) Match the following**

- |                                   |                             |
|-----------------------------------|-----------------------------|
| A. In case of diabetes            | i) Low protein rich diet    |
| B. In case of surgery             | ii) Low sodium rich diet    |
| C. In case of high blood pressure | iii) High protein rich diet |
| D. In case of kidney failure      | iv) Low carbohydrate diet.  |

Pick the correct option -

- (a) A - iii), B - iv), C - i), D - ii) (b) A - iv), B - i), C - iii), D - ii)  
(c) A - ii), B - iv), C - i), D - iii) (d) A - iv), B - iii), C - ii), D - i)

**Answer - (d) A - iv), B - iii), C - ii), D - i)**

**(ii) Match the following**

- |                        |   |
|------------------------|---|
| A. Omega-3 fatty acids | i) Antioxidant  |
| B. Cardiac Arrhythmias | ii) Scientific study of Disease emergence, distribution and control |
| C. Beta Carotene       | iii) Fish   |
| D. Epidemiology        | iv) Abnormal heart rhythm   |

**Pick the correct option -**

- (a) A - iii), B - iv), C - i), D - ii)      (b) A - iv), B - i), C - iii), D - ii)  
(c) A - ii), B - iv), C - i), D - iii)      (d) A - iv), B - iii), C - ii), D - i)

**Answer (a) A - iii), B - iv), C - i), D - ii)**

**C. Very Short Answer Questions**

1. Mrs. Arora's daughter, after obtaining the qualification of dietician, can work in which two institutions?

**Answer-** i. Dietitians with consultants/physicians in health clubs or gymnasiums

ii. Dietitians in hospitals including specialty departments.

iii. Dietitians in catering services for hospitals, schools, industrial canteens, etc. (Any other, any two)

2. Which two new diseases have emerged in the twentieth and twenty-first centuries?

**Answer -** HIV/AIDS, Swine Flu, Covid-19

(Any other, any two)

3. Name any two chronic diseases related to lifestyle.

**Answer -** Obesity, diabetes, heart disease, hypertension

(Any other, any two)

4. Give two reasons that increase the risk of high blood pressure.

**Answer -**

i. Use of high salt foods

ii. Use of processed foods with high sodium content

iii. Low use of potassium-rich fruits, vegetables, grains, and pulses

iv. Low calcium ingestion

v. Reduced physical activity and stress.

(Any other, any two)

#### D. Case Study Based Questions

*Read the passage carefully and answer the questions:*

Medical foods are those products that are specially manufactured for the specific dietary management of a disease can be used only with a doctor's prescription but are not considered as drugs.

- Some examples of Medical foods are special infant formulas, formulations for metabolic disorders, oral rehydration products or products for chronic diarrhoea, and special nutritional formulas for patients with diabetes, AIDS, kidney disease, or inborn errors in metabolism.
- Traditional Medical foods are typically in the form of liquids or powdered drink mixes.
- There are also many medical foods developed over the past few years as more and more diseases have been emerged.

1. Write the context of modified diets choose the correct pair.

- (a) Mechanical soft diet : Salad
- (b) Liquid diet : Coconut water
- (c) Soft diet : Lactose free milk
- (d) Normal diet : Pureed vegetable pulao

**Ans.** (b) Liquid diet : Coconut water

2. Match the health-related terms in List I with their appropriate description in list II.

List I (Terms)	List II (Descriptions)
i. Nutraceutical	1. Foods that are specially processed or formulated to meet a special dietary need
ii. Phytochemical	2. Non-nutrient constituents that have biological activity in the body and influence health.
iii. Medical Nutrition Therapist	3. Specialist using diet-based intervention to manage medical conditions

- iv. Registered Dietitian      4. Certified nutrition expert providing dietary advice and customized meal planning

Choose the correct option from following:

- (a) i-1, ii-2, iii-3, iv-4      (b) i-4, ii-3, iii-2, iv-1  
(c) i-2, ii-1, iii-4, iv-3      (d) i-3, ii-4, iii-1, iv-2

**Ans.** (a) i-1, ii-2, iii-3, iv-4

3. Given below are two statements labelled as Assertion (A) and Reason (R).

Assertion (A) : There have been various changes in the diets of urban Indians in the last decade.

Reason (R) : Diseases like obesity, cancer, diabetes, heart disease etc. are decreasing among urban Indians.

Select the most appropriate answer from the options given below:

- (a) Both (A) and (R) are true and (R) is the correct.  
(b) Both (A) and (R) are true, but (R) is not the correct.  
(c) (A) is true, but (R) is false.  
(d) (A) is false, but (R) is true

**Ans.** (c) (A) is true, but (R) is false.

4. Given below are two statements labelled as Assertion (A) and Reason (R).

Assertion (A) : clinical nutrition helps prevent nutritional imbalances in individuals during illness.

Reason (R) : Nutraceuticals and phytochemicals help prevent illnesses and positively influence health.

Select the most appropriate answer from the options given below:

- (a) Both (A) and (R) are true and (R) is the correct.  
(b) Both (A) and (R) are true, but (R) is not the correct.  
(c) (A) is true, but (R) is false.  
(d) (A) is false, but (R) is true

**Ans.** (b) Both (A) and (R) are true, but (R) is not the correct.

### Short Answer Questions (2 marks)

1.(a)What are the roles performed by a dietician?

(b) How does a dietitian form a team in patient care with other health care professionals? (NCERT)

**Answer** - (a) Refer to Points to Remember No.-6(I)a

(b) Dietitian is an integral part of the medical Team.

- To ensure compliance with dietary orders, he consults with the doctor and maintains constant communication with health care personnel.
- Develops a nutrition care plan according to the patient and his disease and also coordinates with other health workers in giving and implementing appropriate instructions to the patients admitted in hospital or in the Out Patient Department (OPD) .
- He also gives advice to the patients.

2. What are medical foods? Explain by giving two examples.

**Answer** - Refer to Points to Remember No.-5

3. Write any two main reasons, because of which the number of diabetes patients in the country is continuously increasing and India can become the 'Diabetes Capital' of the world?

**Answer** -Two main reasons for the continuous increase in the number of diabetic patients in the country.

- (i) Many other substances in the foods that we are using today are added, which contain more fat and / or sugar.
  - (ii) Intake of highly refined foods and less use of fibrous food
  - (iii) Excessive deficiency of vitamins and minerals in the diet
  - (iv) Increased use of animal protein in non-vegetarians
  - (v) Inappropriate lifestyle
  - (vi) Lack of physical activity or exercise
- (Any other, any two)

4. How does illness/ disease affect the nutritional status of a person?

**Answer** - Illness/ disease cause the following problems and also affect the nutritional status-

- (i) Complications of health problems due to lack of immunity defense for the body
- (ii) Difficulty in wound healing
- (iii) Delay in treatment of the disease
- (iv) Difficulty in smooth functioning of various organs causing new health problems.
- (v) Poor digestion, absorption, metabolism and excretion capacity  
(Any other, any two)

5. How are phytochemicals different from medical foods?

(CBSE Sample Paper 2022-23)

**Answer - Phytochemicals (Bioactive Compounds):** They are non-nutrient constituents present in foods that have physiological or biological activity and influence health.

**Medical Foods :** They are those products that are specially manufactured for persons with specific needs. Such foods are regulated and can be used only with a doctor's prescription for the specific dietary management of a disease or condition.

Example- Lactose free milk, Low sodium salt, etc.

**Short Answer Questions (3 marks)**

1. Which is the best way to feed the patient? Explain the difference between feeding by the tube and intravenous feeding.

**Answer -** The best possible way / route for feeding the patient is orally or by mouth.

Tube feeding	Intravenous feeding
i. Nutritionally, the entire food is fed through the tube. If the gastrointestinal tract is functioning, then what is given to the person digests and absorbs everything.	i. Nutrition is provided to the patient by special solutions, which are delivered by drip into the vein.
ii. This method is preferred over intravenous feeding.	ii. If the person is unconscious or there is a problem with his / her stomach, or it is not possible for him to chew or swallow.
(Any other, any two)	(Any other, any two)

2. Pawan uses too much fat and sugar in his diet and does not take fibrous material at all. Educate him by showing the importance of good nutrition.

**Answer** - Proper nutrition / good nutrition / adequate nutrition is important -

- (i) Provide immunity and protection from infection
  - (ii) For health benefits from various types of diseases
  - (iii) To deal with incurable diseases
  - (iv) Excessive consumption of sugar and fat along with no fiber or low consumption and lack of physical activity can cause one to suffer from diabetes soon.
  - (v) It has been found in studies that eating more fruits, vegetables, whole grains, low fat dairy products and lard meat or pulses reduces the risk of heart disease. Therefore, good, and adequate nutrition is very important. (Any other)
3. How can we prepare for a career in Clinical Nutrition and Dietetics? (NCERT)

and/or

Lata wants to adopt the career of a medical nutritionist and dietician after class twelve. In this context, you should guide her how she can prepare herself.

**Answer** -

Preparation for Career as Medical Nutritionist or Dietician -

Essential Qualifications for Dietician-

- (a) After passing 10 + 2 level, B.Sc. Home Science or B.Sc Degree in Nutrition Science.
  - (b) Post graduate Diploma in Dietetics with an internship in Dietetics, followed by a qualification as a Registered Dietitian (RD).
  - (c) One can also do M.Sc. in Food Science and Nutrition or Dietetics to get more expertise in this field.
  - (d) After completing University education, one can study further and get into research institution and do Ph.D. from the university.
4. What do you understand by Clinical Nutrition and Dietetics? (NCERT)

**Answer**- Refer to Points to Remember No.-2 and 3

5. What is the significance of the study of clinical nutrition and Dietetics? (NCERT)

**Answer-** Refer to Points to Remember No.-4

**Long Answer Questions (4 marks)**

1. What are the types of dietary modifications that a medical nutrition therapist may make? (NCERT)

**Answer-**Refer to Points to Remember No.-6(iv)

2. Rakesh has been newly appointed as a dietician in a health club. To take proper health and nutritional care of the customers who come there, review what its role will be.

**Answer-** Rakesh can consider the following factors for his clients coming to the health club (Refer to Points to Remember No.-6 (i) a and b)

3. Why do we need dietary changes to prevent chronic diseases? How are they linked with lifestyle? (NCERT)

**Answer-**Refer to Points to Remember No.-6(vi)

4. Your friend Rohan is medical nutrition therapist in a city hospital.
- (a) Indicate any four methods he will use to obtain the information on the patient's nutritional status and needs.
  - (b) Which is the best mode of feeding he will suggest for your grandfather who has undergone mouth surgery and why?
  - (c) What type of diet he will recommended for your grandfather once he recovers and why? (CBSE Sample Paper 2023-24)

**Answers -**

- (a) Refer to Points to Remember No. 6(iii) b (Nutritional Assessment)

- (b) Best mode of feeding he will suggest for your grandfather who has undergone mouth surgery-intravenous Feeding.

**Reason-**A special solution is given to support body functions when gastro intestinal tract is not functioning properly.

- (c) Type of diet recommended for grandfather once he recovers-Mechanical Diet

**Reason-**It includes soft, mashed and pureed foods are preferred which is easy to chew and digests.

### Long Answer Questions (5 marks)

1. Mr. Mehta wants to consult a clinical nutritionist to reduce his risk of high blood pressure. In this context, you should tell him about the following-  
(CBSE Paper 2021-22)  
CBSE Sample Paper (2023-24)
  - (a) What is Diet therapy?
  - (b) What are the objectives of Diet therapy?
  - (c) To get information related to his nutritional status and other nutritional requirements, how a clinical nutritionist would do his nutritional assessment?

#### Answer -

- a) Diet therapy- Refer to Points to Remember No.-6(ii)
  - b) The objectives of diet therapy- Refer to Points to Remember No.-6(ii)
  - c) Nutritional Assessment- Refer to Points to Remember No.-6(iii)b
2. Reshma has been working on the post of Chief Dietician in a reputed hospital in the city for three years. In this context, explain briefly about the following:
    - a) As a successful professional dietician, which two important skills would she be having?
    - b) How does study of clinical nutrition and dietetics enable medical nutrition professional?

#### Answer -

- Refer to Points to Remember No.-6(i) a
3. A medical study found that women who ate plenty of fruits, vegetables, whole grains, low-fat dairy products, and lard meat did live longer. Eating more fruits, vegetables and pulses reduces the risk of heart disease.  
What would you conclude about the following?
    - A) Role of diet in causing disease
    - B) Role of diet in prevention of diseases

#### Answer- A) Role of diet in causing disease-

- i. Health and nutrition are intimately connected. Poor nutrition not only causes health problems but can make current problems worse, while proper diet and good nutrition can delay the onset

and control of diseases. Foods that contain high fat and / or sugar or are made from highly refined foods or have low levels of fibrous and other important ingredients that are beneficial for health, are helpful in causing diseases.

- ii. For example, low consumption of foods containing omega-3 fatty acids in the diet may increase the risk of heart diseases such as fatal arrhythmias (abnormal heart rhythms) by upto 52%.

(Any other)

B) Role of diet in the prevention of diseases- Nutrition is necessary for the prevention and management of many disease conditions along with the protection and promotion of health.

For example, phytochemical/bioactive compounds are non-nutrient constituents present in foods that have functional or biological activity in the body and influence health. For example, antioxidants like beta-carotene, selenium, vitamin E and vitamin C, play a protective role in the body.

(Any other)

4. (a) Which four methods are used by a dietitian/clinical nutritionist to assess this nutritional status of a patient?  
(CBSE Sample Paper 2022-23)
- (b) (i) What do you understand by modified diets?  
(ii) Based on changes in consistency, what are the three types of diets? Give one example of each diet.

(CBSE Sample Paper 2022-23)

**Answer-** (a) Four methods used by a dietitian/clinical nutritionist to assess the nutritional status of a patient-

1. Obtaining detailed information on health, diet, personal and medication histories/Clinical assessment.
2. Anthropometric measurements (Height, weight, head and chest circumference)
3. Relating the information on laboratory and physical measurements with the above and the physician's diagnosis/Biochemical assessment.
4. Interpreting all of the above to identify potential nutritional deficiencies and risk of future deficiencies/  
Disease Identification

**Answer-** (b)

(i) Modified diets are those that are adjusted to meet the medical needs of a patient or special requirements of an individual

(ii) Three types of diets based on changes in consistency-

1. Clear liquid diet

- very thin consistency
- given just after surgery

Examples-Coconut water, clear soups/juices (without pulp), etc.

2. Liquid diet

- fluid in consistency at room temperature
- advised to persons who are unable to chew or swallow

Example-Soup, fruit, juice, milk, buttermilk, etc.

3. Semi-solid diet

- includes food in semi solid state
- free from spices and less fibre

Example- Thin custard, thin porridge, etc.

4. Soft diet

- lightly seasoned and less fibrous
- easy to chew and digest

Example- Khichdi, porridge, custard, dalia, etc.

5. Mechanical soft diet

- includes soft, mashed and pureed food
- advised for elderly/infants/person with problems in chewing
- easily digestible-no harsh fibre, less in oil and spices

## **3. Public Nutrition and Health**

### **Points to remember**

**1. Public Health - The concept of public health refers to the collective action taken by society to protect and promote the health of the whole population.**

**2. Reasons to eradicate malnutrition-**

We need to focus on public nutrition and health because of malnutrition.

- i. Almost 1/5th of infants born in India are low birth weight babies (having birth weight less than 2.5 kg). Low birth weight has adverse implications in adult life and may even lead to child mortality.
- ii. There is a widespread prevalence of growth retardation among preschoolers from socio - economically disadvantaged families.
- iii. Children and adults suffer from micronutrient deficiencies like iron, vitamin A, zinc, vitamin C, vitamin D, iodine folic acid and vitamin B12 deficiencies.

**3. Ill-effects of malnutrition-**

India is facing the double burden of malnutrition because of co-existence of both undernutrition and overnutrition.

If these problems are not controlled in time it will affect physical

growth, mental and cognitive development. All of these can have negative impact on productivity and quality of life. If we tackle malnutrition, India can grow economically and become a powerful nation.

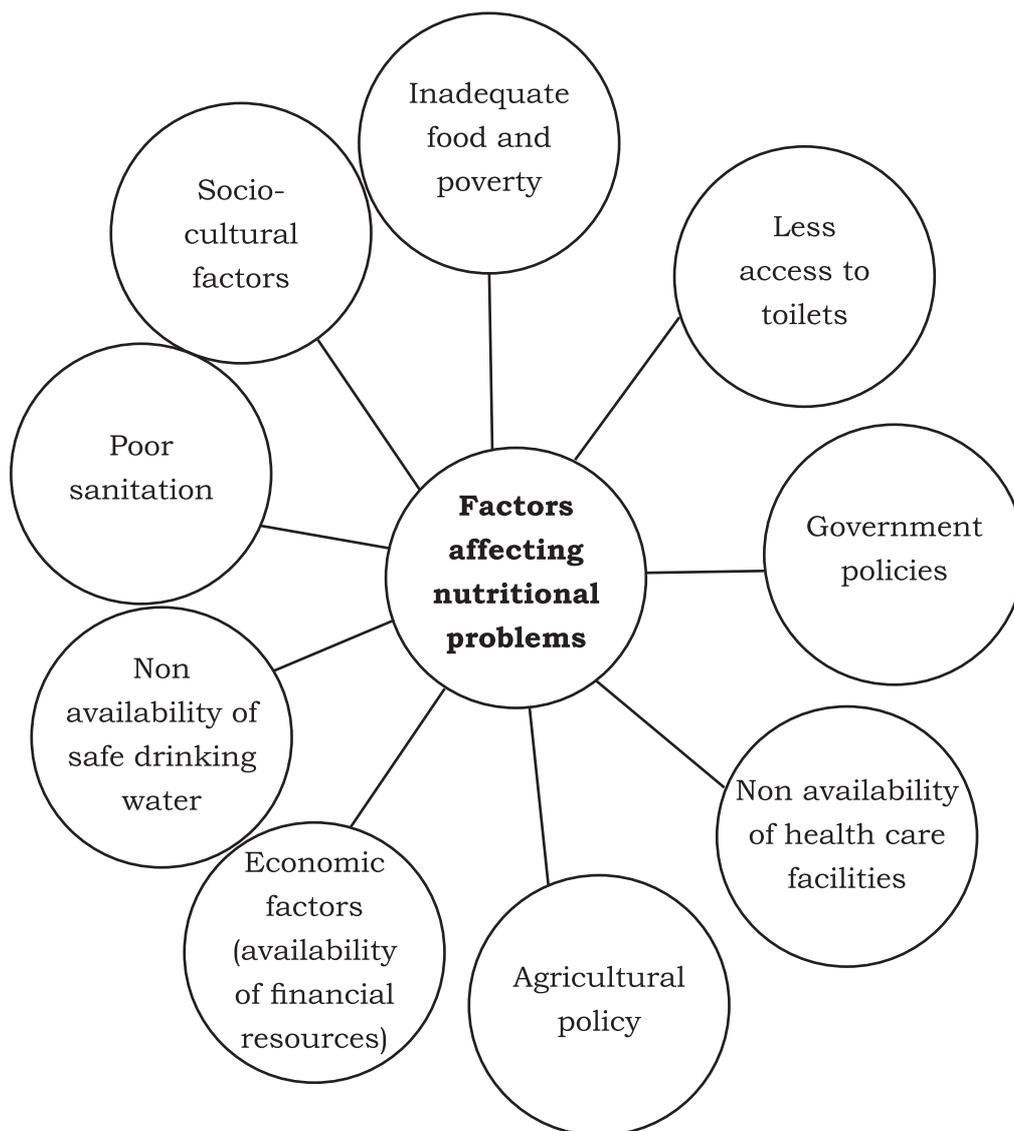
#### **4. Reasons of overnutrition in India-**

- i. Large numbers of people have altered their dietary patterns and lifestyles.
- ii. People have become more sedentary.
- iii. Relying on faster means of transportation
- iv. walk less
- v. do less amount of outdoor or physical activity.
- vi. children do not play enough outdoor games.
- vii. dietary patterns have also changed indulging in fast unhealthy foods like processed foods, fast foods, snacks, western type foods eg. burgers, pizzas.
- viii. intake of whole grains, pulses, vegetables and fruits has reduced.

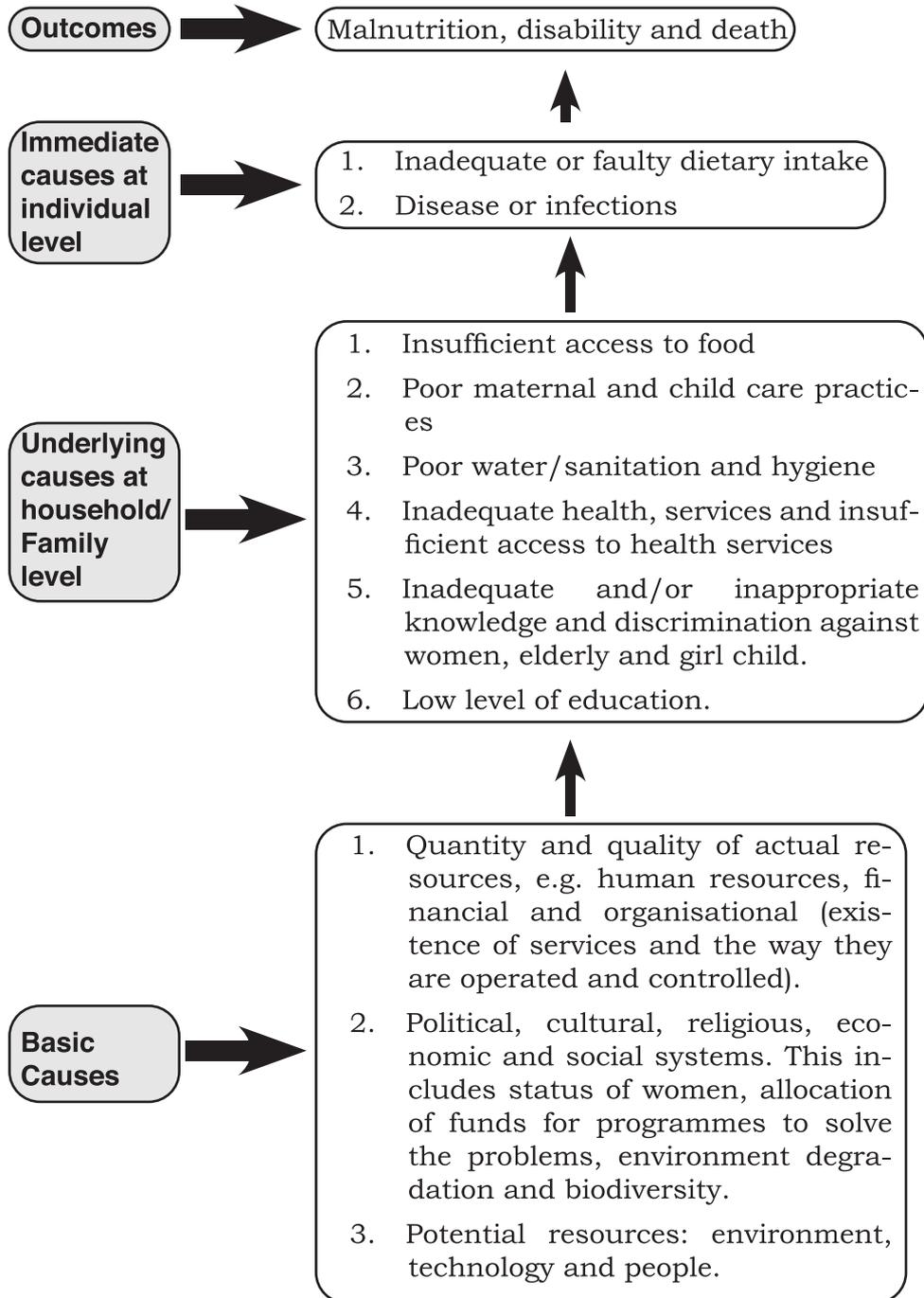
#### **5. 11-Effects of overnutrition-**

- i. Obesity
- ii. Hypertension
- iii. Diabetes
- iv. Cancer
- v. Arthritis
- vi. Affect quality of life
- vii. Adds financial burden.

**6(a). Factors affecting nutritional problems-**



6(b)





**MARASMUS**



**KWASHIORKOR**



**ANAEMIA**



**NIGHT BLINDNESS**



**GOITRE**

## 7. Nutritional Problems in India-

**A) Protein- Energy Malnutrition (PEM)**- It is caused by insufficient intake of the macronutrients (energy and protein). PEM can occur in children, elderly as well in some diseases eg. Tuberculosis, AIDS. It is assessed by evaluating the anthropometric measurements (weight, height, head and chest circumference etc.)

**Marasmus**- Severe undernutrition due to deficiency of food and energy is termed as 'marasmus'.

**Kwashiorkor**- Severe undernutrition caused by protein deficiency is termed as 'kwashiorkor'.

### **B) Micro-nutrient deficiencies**

**(i) Iron-deficiency Anaemia (IDA)** - Most common nutritional disorder in both developed and developing countries.

#### **Vulnerable groups**

- women in child bearing age.
- adolescent girls
- pregnant women
- school age children

**IDA** occurs when there is low level of haemoglobin in blood.

Haemoglobin is required for carrying oxygen in the body.

#### **Manifestations of IDA/Symptoms of Anaemia include-**

- General Pallor
- Paleness of conjunctiva of eyes
- Paleness of tongue
- Paleness of nail beds
- Soft palate
- cognitive functions (attention span, memory, concentration) are affected.

#### **(ii) Vitamin A deficiency (VAD)**

### **Role of Vitamin A**

- Maintenance of healthy epithelium
- Normal vision
- Growth
- Immunity

### **Deficiency of Vit A causes-**

- Night blindness. Most common cause of childhood blindness.
- Complete blindness if corrective measures are not taken
- less resistance to infection
- Growth may be adversely affected

**(iii) Iodine deficiency disorder (IDD)** - Iodine is required for normal, mental and physical growth and development.

### **States where IDD is common**

- Jammu and Kashmir to Arunachal Pradesh in the Himalayan belt
- Andhra Pradesh
- Karnataka
- Kerala
- Maharashtra
- Madhya Pradesh

**Iodine Deficiency Disorder-** This term refers to a spectrum of disabling conditions that affect the health of humans from fetal life through adulthood due to inadequate dietary intake of iodine.

- Deficiency of iodine results in insufficient amount of thyroid hormone which is synthesised by the thyroid gland.
- Enlarged thyroid known as 'goitre' is the most common manifestation of iodine deficiency.
- Iodine deficiency during pregnancy results in mental retardation and congenital abnormalities of the fetus.

## **8. Strategies/Intervention to tackle Nutritional Problems.**

POSHAN Abhiyaan or the PM's Overarching Scheme for Holistic

Nutrition was launched in Jhunjhunu, Rajasthan in March 2018. It targets stunting, under-nutrition, anaemia (among young children, women and adolescent girls) and low birth rate. It is meant to monitor and review the implementation of all such schemes.

The Ministry of Women and Child Development (MWCD) is implementing POSHAN Abhiyaan through robust multi-ministerial convergence mechanism and other components POSHAN ABHIYAN strives to create the synergy.

This involves two strategies-

(i) **Direct short term interventions -**

- Integrated Child Development Services (ICDS) to cover all vulnerable children in the age group of 0 - 6 years and all pregnant and lactating mothers.
- fortification of essential foods (salt fortified with iodine)
- production and popularisation of low cost nutritious food.
- control of micronutrient deficiencies among children, pregnant women and nursing mothers by supplementing these nutrients, distributing free tablets etc.

(ii) **Long term strategies**

- Improving availability of food
- Improvement in dietary patterns by ensuring availability of nutritionally rich foods
- Poverty alleviation through
  - employment generation schemes
  - public distribution system
  - implementing land reforms
  - improving health and family welfare
  - prevention of food adulteration
  - involvement of media, basic nutrition and knowledge
  - monitoring of nutrition programmes

- improvement of status of women
- education and literacy and community participation.

## 9. 2 strategies to combat public nutrition problems

- i. Diet or food based strategies** - They are preventive and comprehensive strategies that use food as a tool to overcome nutritional deficiencies.

### Advantages -

- It is sustainable and will have long - term benefits.
- They are cost effective.
- Can be adapted to different cultural and dietary traditions.
- they do not carry risk of overdose or toxicity.

### Approaches -

- Dietary diversification and modification.
- Horticulture interventions eg. home gardening
- Nutrition and health education.
- Food fortification

- ii. Nutrient based or Medicinal Approach** - In this approach nutrient supplements are given to those who are at risk of deficiency and those who have deficiency.

- It is a short term strategy
- Supplementation programmes are often expensive and problems of coverage is there
- Key target groups are different for various nutrients.

## 10. Different Interventions for tackling Malnutrition

Intervention	Appropriate for	Advantages	Challenges/ Disadvantages
<b>Medicinal or Nutrient Based</b>			
Nutrient Supplementation	Therapeutic treatment Prevention programmes for specific nutrient and specific target groups	Timely Sustainability	More costly than other measures  Narrow scope of coverage

<b>Food Based or Diet Based Strategies</b>			
Fortification [fortifying food with nutrients]	Prevention (Universal /For all)	Highly cost-effective Wide coverage Sustainable	Requires research Participation of food industry  Does not lead to awareness in the population about the importance of nutrition and nutrients  Does not lead to long-term dietary' behavioral changes
Dietary Diversification	Prevention (Universal /For all)	Highly cost-effective  Wide coverage Sustainable  Provides many micronutrients simultaneously  Improves food security	Requires change in eating behaviour  Requires economic development to be feasible  Requires change in agricultural policies

## **11. Nutrition programmes Operating in India**

**i. ICDS-** (Integrated Child Development Services) - It is an outreach programme for early childhood care and development.

### **ii. Nutrient Deficiency control programme -**

- National Prophylaxis programme for prevention of blindness due to Vitamin A deficiency
- National Nutritional Anaemia Prophylaxis Programme (NNAPP)
- National Iodine deficiency disorder control programme.

### **iii. Food Supplementaton Programmes**

- Mid - day meal programme.

#### **iv. Food Security programmes**

- Public Distribution System
- Antodaya Anna Yojana
- Annapurna Scheme
- National Food for work programme

#### **v. Self employment and wage employment schemes**

### **12. Health Care-**

It is the responsibility of the government to provide adequate health care to the citizens as health is a fundamental human right.

- Health care is not just medical care but it includes a multitude of services that should help to promote, maintain, monitor or restore health.
- In India, health care is provided at three levels -
  - i. Primary Level-** This level is the first level of contact of the individual, family or community with the health system. These services are provided through a network of primary health centres (PHCs)
  - ii. Secondary Level-** More complex health problems are resolved at the second level through district hospitals and community health centres.
  - iii. Tertiary Level-** This level deals with more complex health problems. Institutions at tertiary level are medical college hospitals, regional hospitals, specialised hospitals and AIIMS.

### **13. Scope of Community nutritionist- A community nutritionist can work in the following areas -**

- i. As part of outreach programmes undertaken by hospitals for prevention and promotion and education.
- ii. As part of ICDS, at different levels based on qualifications and expertise

- iii. At the government level as consultants, advisors or in policy making committees.
- iv. In all developmental programmes of government, voluntary organisations and international organisations like UNICEF, OXFAM, DFID, FAO, WHO, USAID, GAIN, Micronutrient Initiative, IFPRI and others.
- v. They can be involved with organisations who undertake large scale feeding programmes for various target groups such as young children, school children, adolescents, pregnant and lactating mothers, elderly, challenged individuals.
- vi. Nutritionists or school health counsellors in school health programmes.
- vii. There are avenues in teaching, research, entrepreneurship, industries with agencies involved in developing communication materials and educational packages.

#### **14. List of Voluntary Organisations and international organisations related to Community Nutrition.**

- i. UNICEF
- ii. OXFAM
- iii. DFID
- iv. FAO
- v. WHO
- vi. USAID
- vii. GAIN
- viii. Micronutrient Initiative
- ix. IFPRI

#### **15. Public Health Nutrition-**

Public Health Nutrition is the field of study that is concerned with

promotion of good health through prevention of nutrition related problems and the government policies and programmes that are aimed at solving these problems.

**16. Malnutrition-**

Malnutrition occurs when a person is not taking the right amount of nutrients according to the requirement of the body.

**17. Community-**

Community is a specific group of people who share common characteristics example-a common language, exposed to similar conditions, common lifestyle or the same health problem.

**18. Underweight-**

A person is said to be underweight when his/her body weight is less than adequate for his/her age.

**19. Stunting (short stature)-**

Stunting is said to be present when the height of a person is less than adequate for his age.

**20. Wasting-**

When weight of a person is not adequate relative to his height, it is termed wasting.

**21. Hidden Hunger-**

The term 'Hidden Hunger' is used to refer to micronutrient deficiency- iron, Vitamin- A, iodine, zinc.

**Full forms of Abbreviations**

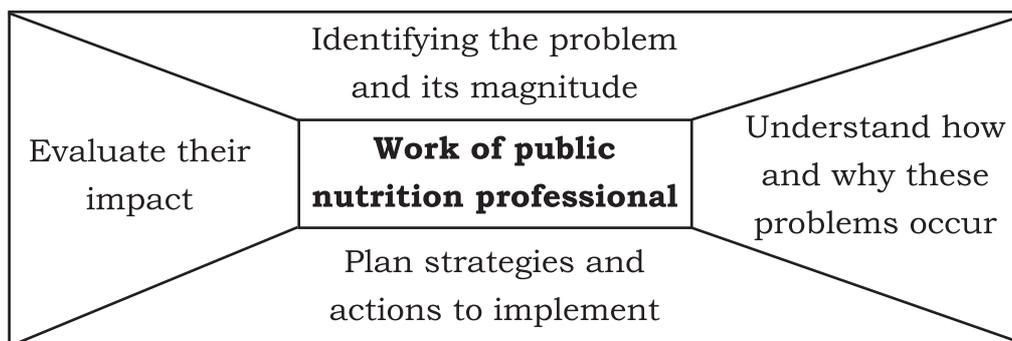
**IDA** - Iron Deficiency Anaemia

**PEM**- Protein Energy Malnutrition

**VAD** - Vitamin A Deficiency

**IDD** - Iodine deficiency disorder

**ICDS** - Integrated Child Development Services



### OBJECTIVE TYPE QUESTIONS (1 MARK)

#### (A) Multiple Choice Questions

1. Which one of these is a nutritional problem in India?
  - a. Protein Energy Malnutrition
  - b. Malaria
  - c. Tuberculosis
  - d. Cancer

**Ans. a) Protein Energy Malnutrition**

2. Name 2 factors that causes over nutrition.
  - (i) Sedentary lifestyle
  - (ii) Faulty dietary patterns
  - (iii) exercise
  - (iv) Walking

Choose the correct option from the following :

- a) (i) and (iii)
- b) (ii) and (iv)
- c) (i) and (ii)
- d) (iii) and (iv)

**Ans. c) (i) and (ii)**

3. Which of the following is a macro nutrient?
  - a. Protein
  - b. Zinc
  - c. Iron
  - d. Iodine

**Ans. a) Protein**

4. Sunita has taken job of Public Nutritionist and has been assigned job to promote good nutrition. What will she do?
  - (i) Identify the problem of poor nutrition
  - (ii) Understand the reason and plan strategies
  - (iii) Not take actions and evaluate their impact
  - (iv) Stay away from problem





4. Name 2 strategies to combat public nutrition problems.

**Ans. 1. Diet or food based**

**2. Nutrient based.**

5. What is the mission of Public Health Nutrition (CBSE Sample Paper 2022).

**Ans.** The mission of Public Health Nutrition is to prevent both undernutrition and overnutrition and to maintain optimal nutritional status of the population.

6. Since past 15 days, Seema who is 30 year old is feeling lethargic, breathlessness and fatigue on slight exertion. Identify the deficiency disease she might be suffering from (CBSE Sample Paper 2022)

**Ans.** IDA-Iron Deficiency Anaemia

7. Explain wasting (NCERT)

**Ans.** 'Refer to Points to Remember' No. 20

8. Which of the following condition results when an individual's body weight is less than adequate weight for his/her age?

(CBSE Sample Paper 2022-23)

- |                |                 |
|----------------|-----------------|
| (a) Overweight | (b) Underweight |
| (c) Wasting    | (d) Stunting    |

**Ans.** (b) Underweight

**Case Study based questions (4 × 1 mark)**

IDD is an ecological phenomenon, largely due to deficiency of iodine in the soil. Some of the states in India where IDD is common are - Jammu and Kashmir to Arunachal Pradesh in the Himalayan belt, Andhra Pradesh, Karnataka, Kerala, Maharashtra and Madhya Pradesh. The term 'Iodine Deficiency Disorders' refers to a spectrum of disabling conditions that affect the health of humans from fetal life through adulthood due to inadequate dietary intake of Iodine.

1. In the context of Iodine deficiency, choose the correct pair :

- (a) Metal retardation due to iodine deficiency : Reversible
- (b) Iodine deficiency is children : Cretinism
- (c) Thyroid hormone : Pineal gland
- (d) Deficiency of iodine is adults : Night blindness

**Ans.** (b) Iodine deficiency is children : Cretinism

2. Match the nutrition programmes given in List I with List II

List I	List II
(i) Nutrient Deficiency Control Programme	1. Mid Day Meal Programme
(ii) Food Supplementation Programme	2. National Iodine Deficiency Disorder Control Programme
(iii) Food Security Programme	3. Supplementary Nutrition
(iv) ICDS	4. Antodaya Anna Yojana
(a) (i)-2, (ii)-1, (iii)-4, (iv)-3	(b) (i)-3, (ii)-2, (iii)-4, (iv)-1
(c) (i)-4, (ii)-3, (iii)-2, (iv)-1	(d) (i)-3, (ii)-4, (iii)-1, (iv)-2

**Ans.** (a) (i), 2. (ii), (iii) 4, (iv) 3.

3. Given below are two statements labelled as Assertion (A) and Reason (R)

Assertion (A): 1DD is estimated to affect about 13 per cent of the world's population and about 30 per cent are at risk.

Reason (R) : 'Iodine Deficiency Disorder' affect the health of humans due to inadequate dietary intake of iodine.

Select the most appropriate answer from the options given below:

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)  
(b) Both (A) and (R) are true but (R) is not the correct explanation of (A)  
(c) (A) is true, but (R) is false  
(d) (A) is false but (R) is true

**Ans.** (a) Both (A) and (R) are true and (R) is the correct explanation of (A)

4. Given below are two statements labelled as Assertion (A) and Reason (R)

Assertion (A): India is said to face the double burden of malnutrition i.e. coexistence of both under nutrition and over nutrition.

Reason (R) : In India there is no need for a trained cadre of public health professionals.

Select the most appropriate answer from the options given below:

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (b) Both (A) and (R) are true but (R) is not the correct explanation of (A)
- (c) (A) is true, but (R) is false
- (d) (A) is false but (R) is true

Ans. (c) (A) is true, but (R) is false

**Short Answer Questions (2 Mark)**

1. India is said to face " the double burden of malnutrition". Why? (NCERT)

**Ans. India is facing the double burden of malnutrition because of co-existence of both undernutrition and overnutrition.**

2. Write ill effects of over nutrition problem.

**Ans. 1. Obesity                      2. High blood pressure**  
**3. Diabetes                        4. Financial burden**

3. Why Vitamin A is needed?

**Ans. Vitamin A is needed for**

- 1. Healthy epithelium          2. Normal vision**  
**3. Growth                         4. Immunity**

4. Name the institutions at tertiary level of Health care in India.

**Ans. 1. Medical college hospitals**  
**2. Regional hospitals**  
**3. Specialised hospitals**  
**4. All India Institute of Medical Sciences.**

5. Explain the terms marasmus, kwashiorkor. (NCERT)

**Ans. Refer to Points to remember no.7**

6. What is public health nutrition? (NCERT)

**Ans. Refer to Points to remember no. 15**

7. What is community? (NCERT)

**Ans. Refer to Points to remember no. 17**

8. Explain low birth weight baby. (NCERT)

**Ans. Low birth weight baby weighs less than 2.5 kg. Low birth weight have adverse effects in their life and may even lead to child mortality.**

**Short Answer Questions (3 marks)**

1. What the measures to reduce the poverty of rural and urban poor?

**Ans. (i) employment generation schemes**

**(ii) public distribution system**

**(iii) implementing land reforms**

**(iv) improving health and family welfare**

**(v) prevention of food adulteration.**

**(vi) involvement of media, basic nutrition and knowledge**

**(vii) monitoring of nutrition programmes**

**(viii) improvement of status of women**

**(ix) education and literacy and community participation.**

2. Write three benefits and three approaches of Diet or food based strategies.

**Ans. Benefits-**

**a) They are cost effective.**

**b) They do not carry risk of overdose or toxicity.**

**c) They can be adapted to different cultural and dietary traditions.**

**Approaches-**

**a) Dietary diversification and modification.**

**b) Horticulture interventions eg. home gardening.**

3. Name Nutrient Deficiency control programmes.

**Ans.** Refer to points to remember No. 11(ii)

4. What are the common nutritional problems facing India? (NCERT)

**Ans.** Refer to Points to remember no. 7

**Long Answer Questions (4 Marks)**

1. Write symptoms of Anaemia.

**Ans.** Refer to points to remember No. 7(b)i.

2. Write difference between primary and secondary level of Health Care System in India

**Ans.** Refer to points to remember No. 12.

3. What are the consequences of IDA and IDD? (NCERT)

**Ans. Refer to Point to remember No. 7 (b) (i), (iii)**

4. Discuss the various strategies that can be adopted to combat public nutrition problems. (NCERT)

**Ans. Refer to Points to remember No. 9**

5. (i) Enlist short-term interventions of POSHAN ABHIYAAN which was launched in March 2018.  
(ii) Mention any four nutritional programmes operating in our country, other than POSHAN ABHIYAN.

(CBSE Sample Paper 2022-23)

**Ans.**(i) Refer to Points to Remember No. 8(i)

(ii) Refer to Points to Remember No. 11

**Long Answer Questions (5 Marks)**

1. Briefly describe two strategies adopted by government to improve public nutrition.

**Ans.** Refer to points to remember No. 8.

2. What is the scope of public health nutrition? List some of the career choices in their area? (NCERT)

**Ans.** Refer to Points to Remember Number 13.

3. What are the responsive factors of poor nutrition or under nutrition?

**Ans. (i) Immediate causes at individual level -**

- a. Inadequate faulty dietary intake
- b. Disease

**(ii) Underlying causes at Household/Family level**

- a. Insufficient access to food.
- b. Inadequate maternal and child care practices
- c. Poor water/sanitation and hygiene
- d. Inadequate health services and insufficient access to health services.
- e. Inadequate and/or inappropriate knowledge and discrimination against women, elderly and girl child.
- f. Inadequate education.

**(iii) Basic Causes-**

- a. Quantity and quality of actual resources e.g human resources, financial and organisational (existence of services and the way they are operated and controlled).
- b. Political, cultural, religious, economic and social systems. This includes status of women, allocation of funds for programmes to solve the problems, environmental degradation and biodiversity.
- c. Potential resources, environment, technology and people.

# 4. Food Processing and Technology

## Points to Remember

### 1. Food Science

It is a distinct field involving the application of basic sciences such as chemistry and physics, culinary arts, agronomics and microbiology. Food scientists have to use the knowledge of biology, physical sciences, and engineering to study the composition of foods changes that occur at various stages from harvest through different processes and storage, causes of their spoilage and the principles underlying food processing.

### 2. Food Processing

It is the set of methods and techniques used to transform raw ingredients into finished and semi - finished products.

### 3. Food Technology

Technology is the science and application of scientific, as well as socio-economic knowledge and legal rules for production. Food technology uses knowledge of Food Science and Food Engineering to develop skills for selection, storage, preservation, processing, packaging, distribution of safe, nutritious, wholesome, desirable, affordable convenient foods.

### 4. Food manufacturing

It is the mass production of food products using principles of food technology to meet the diverse needs of the growing population.

**5. Initially, foods were processed primarily to improve digestibility, palatability and to ensure a continuous supply e.g pickles, murabbas and papads.**

6. With passage of time, improved transportation, communication and increasing industrialisation there is now increasing demand for convenient foods, fresh and more natural foods, safer and healthier foods and foods with adequate shelf life.

**7. Significance/Reasons for demand and requirement of food technology**

- i. India has progressed from an agro-deficit to an agro-surplus country creating need for storage and processing of agricultural and horticultural produce.
- ii. Changes in lifestyle. It reduces preparation time for cooking.
- iii. Increasing mobility
- iv. Globalisation
- v. Food fortification is done by adding the nutrient that is lacking in the food stuffs or condiments to ensure that minimum dietary requirements are met.
- vi. FSSAI has laid down standards for fortification of staple food like salt, wheat flour, milk and oils.
- vii. Increasing prevalence of diseases like heart disease and diabetes and concern about wellness, has made it necessary for scientists to alter the nutrient content of foods.
- viii. Consumer perceptions about food have changed.
- ix. Demand for foods free of chemicals, pesticides and preservatives is rapidly increasing.
- x. Bulky and perishable foods are converted into more useful concentrated shelf-stable and palatable foods and beverages.

**8. Development of Food Processing and Technology**

- i. In 1810, Nicolas Appert developed Canning process.
- ii. In 1864, Louis Pasteur did research on spoilage of wine.

Also he conducted research on production of alcohol, vinegar, wines, beer and souring of milk. He developed 'pasteurisation'- the process of treating milk to destroy disease producing organisms.

- iii. In the 20th century, world wars, exploration of space and the rising demand for varied products from consumers contributed to the growth of Food Technology. Also needs of working women contributed to the growth of Food technology.
- iv. Food technologists made efforts to provide both safer and fresher food using new techniques because -
  - Food preferences and choices changed.
  - People started incorporating preparations from different regions and countries
  - Desire to have seasonal foods all year round increased.

#### **9. Factors that lead to food deterioration or spoilage**

- i. Foods are subject to physical, chemical and biological deterioration.
- ii. Food deterioration is associated with spoilage, development of off-flavours, deterioration of textures, discoloration and loss of nutritional value in varying degrees, reducing aesthetic appeal and rendering it unfit for consumption.
- iii. Factors that lead to food deterioration are pests, infestation by insects, inappropriate temperatures used for processing and storage, excessive exposure to light and other radiations, oxygen and moisture.
- iv. Food is also contaminated by micro organisms (bacteria, fungus and moulds) or chemicals such as pesticides.
- v. Food can also be spoiled due to degradation by naturally present enzymes.

- vi. Also, physical and chemical changes in certain constituents of food from plant and animal sources occur soon after harvesting or slaughtering, altering the food quality.

Bacteria prefer protein rich foods e.g. meat, fish, poultry, egg, and dairy products. These are known as **High Risk Foods**. Bacteria grow at any temperature between 5-60°C. This temperature range is known as the **Danger Zone**.

#### 10. Old methods of food processing and preservation

- i. Sun drying
- ii. Controlled fermentation
- iii. Salting/ Pickling
- iv. Candying
- v. Roasting
- vi. Smoking
- vii. Baking
- viii. Using spices as preservatives

#### 11. Classification of Foods Based on Perishability

- i. Perishable foods-** Perishable foods are foods that spoil quickly within one or two days eg. milk, curds, fish and meat.
- ii. Semi perishable foods-** These foods can last for 1-2 weeks. Eg. fruits and vegetables. Root crops like onions and potatoes last for 2-4 weeks.
- iii. Non-Perishable foods-** These foods generally last for one year eg. grains like rice, wheat, pulses and dals, oilseeds.

#### 12. (a) Micro organisms that causes food spoilage are-

- i. Bacteria
- ii. Fungi
- iii. Yeast
- iv. Moulds

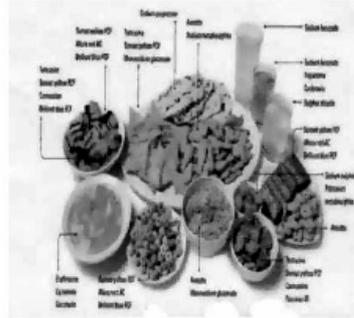
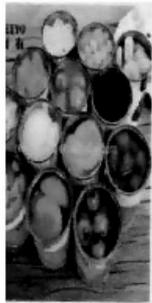
Factors influencing microbial growth are-

- i. Nutrient availability

- ii. Moisture
  - iii. pH, oxygen levels
  - iv. Presence or absence of inhibiting substances. e.g. antibiotics.
- (b) Basic concepts in food processing methods to prevent food spoilage are**
- i. Application of heat
  - ii. Removal of water moisture
  - iii. Lowering of temperature during storage.
  - iv. Reduction of pH
  - v. Controlling the availability of oxygen

**13. Classification of Processed foods-** Processed foods can be classified on the basis of extent and type of processing as follows:

- i. Minimally processed foods-** These are processed as little as possible in order to retain the quality of fresh foods. Generally the processes used are cleaning, trimming, shelling, cutting, slicing and storage at low refrigeration temperatures.
- ii. Preserved foods-** The methods of preservation used do not change the character of the product substantially eg. frozen peas and frozen vegetables, dehydrated peas, dehydrated vegetables, canned fruits and vegetables.
- iii. Manufactured foods-** In such products, the original characteristics of the raw products are lost and some basic methods of preservation are used, often using various ingredients such as salt, sugar, oil or even chemical preservatives eg. pickles, jams, marmalades, squashes, papads, wadis.
- iv. Formulated Foods-** These are products prepared by mixing and processing of individual ingredients to result in relatively shelf stable food products such as bread, biscuits, ice cream, cakes, kulfi.



**Preserved Foods**

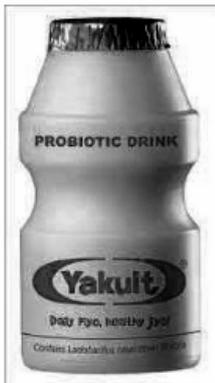


**Manufactured Foods**

**Formulated Foods**



**Food Derivatives**



**Functional Foods**

**Medical Foods**

*Types of Processed foods*

- v. Food derivatives-** In industry, components of foods may be obtained from the raw product through purification, eg. sugar from sugarcane or oil from oil seeds.
- vi. Functional foods-** These are foods that can have a beneficial effect on human health eg. probiotics, lycopene
- vii. Medical foods-** These are used in dietary management of diseases for eg. low sodium salt, lactose-free milk for persons with lactose intolerance.

#### 14. Stages of categorisation of food production

- i. Food as a material
- ii. Food Product development
- iii. Recipe development

<b>Food as a material</b>	<b>Food Product Development</b>	<b>Recipe Development</b>
<ul style="list-style-type: none"> <li>• Nature and properties of food</li> <li>• Nutritional content and its analysis</li> <li>• Cost of food stuff</li> <li>• Influence of chemical pesticides, time, moisture, temperature and additives</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of food preparation and cooking skills for large scale food production</li> <li>• Knowledge of product specifications and testing it</li> <li>• Observing and measuring Quality Control as per specifications</li> </ul>	<ul style="list-style-type: none"> <li>• Expertise in cooking skills and energy use</li> <li>• Uses of ingredients, measuring and weighing them accurately</li> <li>• Designing, analysing and adapting a basic recipe</li> </ul>

<ul style="list-style-type: none"> <li>• Assesment of the quality of raw foods and ingredients for quality production of food</li> <li>• Food Hygiene and Food Safety</li> <li>• Knowledge of Information Technology for contemporary food production</li> </ul>	<ul style="list-style-type: none"> <li>• Assesment by sensory methods [by testing and-tasting produced foods]</li> <li>• Industrial practices and manufacturing systems and their control</li> <li>• Labelling and packaging of marketable product</li> <li>• Hazard Analysis and Critical Control point. {HACCP!</li> </ul>	<ul style="list-style-type: none"> <li>• Food handling skills</li> <li>• Food production following hygiene and safety norms</li> <li>• Handling tools and equipment accurately</li> <li>• Innovations in product design and preparation according to consumer perceptions</li> <li>• Use of Information Technology for contemporary production</li> </ul>
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**15. A food technologist requires knowledge and skills about -**

- i. Food science, food chemistry, microbiology, food processing, safety/ quality assurance, good manufacturing practices and nutrition.
- ii. Analysis of raw and cooked/ manufactured foods for composition, quality and safety.
- iii. Food ingredients, their uses in food preparations and food production on a large scale.
- iv. Product specifications and food product development.
- v. Sensory evaluation and acceptability.
- vi. Industrial practices, systems control, distribution channels, consumer purchase patterns.
- vii. Food packaging, and Labeling
- viii. Ability to use information technology to support product design.
- ix. Carry out sensory evaluation.

- x. Skills in food preparation and cooking
- xi. Ability to design, analyse, follow a design brief and adapt recipes.

#### **16. Courses offered**

- i. After successful completion of 10+2 or equivalent examination, one can pursue short term certificate, craft and diploma courses at various institutes/ colleges in different states as well as at the Central Food Technological Research Institute (CFTRI).
- ii. Many universities in India and abroad offer graduate and post graduate degrees in the field. There are institutes offering post graduate courses in specialised aspects of Food Processing and Technology like National Institute of Food Technology and Entrepreneurship Management (NIFTEM) at Sonapat.

#### **17. Areas of work of food technologists -**

- i. Food industries
- ii. Quality Control departments
- iii. Hotels
- iv. Hospitals
- v. Labeling and packaging industries
- vi. Breweries/ distilleries
- vii. Soft drink industries
- viii. Dairy
- ix. Confectionery
- x. Fish and meat processing
- xi. Fruit and vegetable processing
- xii. Processing of grains
- xiii. Cereals, millets, rice and flour mills

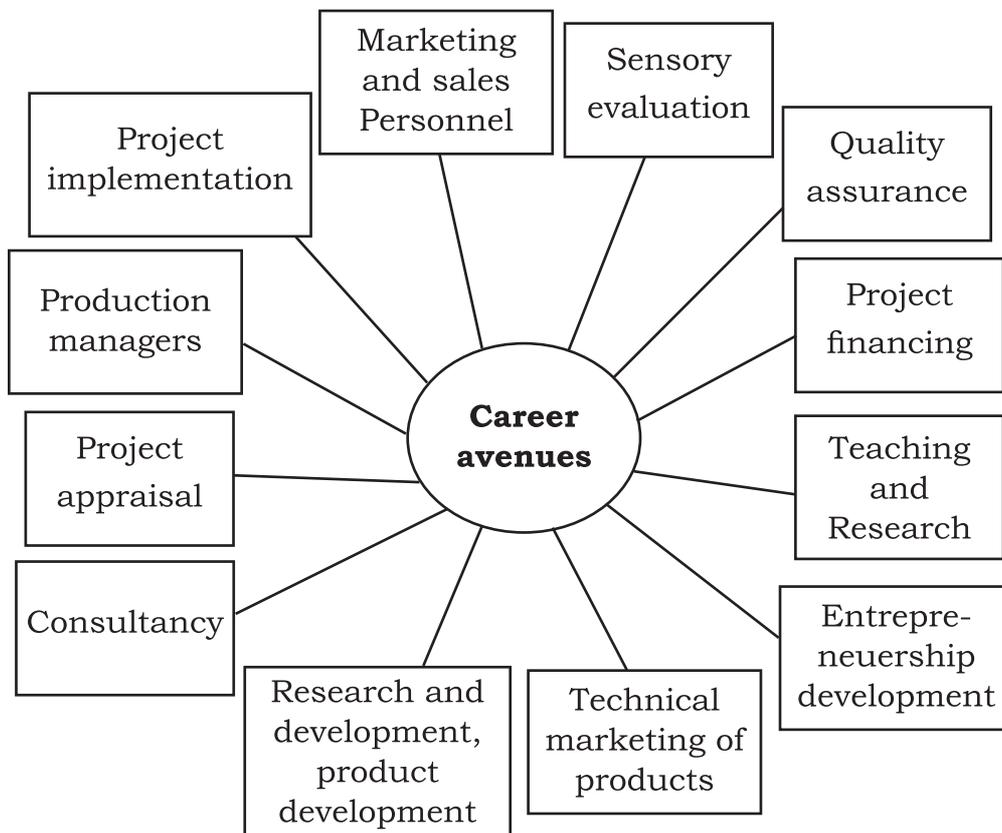
#### **18. Various departments where expertise of food technologists are used-**

- i. Purchase and storage
- ii. Processing/manufacturing

- iii. Quality monitoring and management
- iv. Safety assessment
- v. Research and development

**19. Self-Employment Avenues**

- i. Food processing in India has always been practised as household or cottage scale activity eg. sweets, papads, murrabas, pickles, fried snacks, roasted and puffed cereals were prepared.
- ii. Now with the growth in agriculture, horticulture and pisciculture, the production of raw material has improved.
- iii. Government is giving incentives and support for entrepreneurs who want to start their own enterprise by



- way of providing finances, training, infrastructure and marketing facilities.
- iv. Financial support is provided by many banks with encouragement for women entrepreneurs.
  - v. State Governments also contribute by providing space to those desirous of obtaining the same.
  - vi. A self employment venture in food technology may be highly technology-oriented and investment - intensive, or it can be a very low key technology and low investment unit eg. salted peanuts, drinking water pouches, dehydrated products, pickles.

### **OBJECTIVE TYPE QUESTIONS (1 MARK)**

#### **A. Multiple choice Questions**

1. When is food said to be spoilt? (CBSE Sample Paper 2021-22)

- (i) Poor presentation
- (ii) Change in consistency
- (iii) Change in texture and flavour
- (iv) Unhealthy meal

Choose the correct option

- |                   |                   |
|-------------------|-------------------|
| a. (i) and (ii)   | b. (ii) and (iii) |
| c. (iii) and (iv) | d. (ii) and (iv)  |

**Ans. b (ii) and (iii)**

2. Which processed food is frozen peas?

- |                      |                       |
|----------------------|-----------------------|
| a. Preserved foods.  | b. Manufactured foods |
| c. Formulated foods. | d. Medical foods.     |

**Ans. a Preserved foods**

3. Which foods spoil quickly within one or two days?

- |                         |                          |
|-------------------------|--------------------------|
| a. Perishable foods.    | b. Semi perishable foods |
| c. Non-perishable foods | d. Processed foods.      |

**Ans. a Perishable foods**

4. Which of the following food is an example of manufactured foods?
- Lactose free milk
  - Canned fruits
  - Jam, Marmalades
  - Cake

**Ans. c Jam, Marmalades**

5. Which of the following is a cause of food spoilage?
- Using spices
  - Roasting
  - Application of salt
  - Micro organisms

**Ans. (d) Microorganisms**

6. Sun drying is the oldest method of food preservation. Which principle of food preservation is involved in it? (CBSE Sample Paper 2021-22).
- Lowering of temperature
  - Reduction of PH
  - Removal of water
  - Controlling the availability of oxygen

**Ans. c Removal of water**

**B. Match the following: -**

- |                         |                           |
|-------------------------|---------------------------|
| A Perishable foods.     | (i) Fruits and vegetables |
| B Semi-perishable foods | (ii) Wheat, pulses        |
| C Root crops            | (iii) Milk                |
| D Non-Perishable foods  | (iv) Onions and potatoes  |

**Pick the correct option**

- A(iii), B(i), C(iv), D(ii)
- A(i), B(iii), C(ii), D(iv)
- A(ii), B(i), C(iv), D(iii)
- A(iv), B(iii), C (ii), D(i)

**Ans. a) A(iii), B(i), C(iv), D(ii)**

### **B. Very Short answer questions**

1. Which are the processed foods that maintain the quality of fresh foods?

**Ans. Minimally processed foods.**

2. What are medical foods?

**Ans. These are used in dietary management of diseases for eg. low sodium salt, lactose-free milk for persons with lactose intolerance.**

3. Who took the step of pasteurization in the year 1864 to ensure protection from food microbes ?

**Ans. Louis Pasteur**

### **Case Study Based Question (4 × 1 mark)**

With globalisation, Indian shares have opened up to foreign investments and technologies. As a result, many foreign companies and multinational companies are setting up their production, R and D educational and outsourcing facilities in our country. Thus there is ample scope for food technologists/ scientists in Indian as well as foreign organisations. Also, food processing industry provides good opportunity for export of products. Employment exchanges will also be strengthened and upgraded.

1. Select correct pair: CBSE Sample Paper (2023-24)
  - (a) Application of scientific knowledge is food production : Food adulteration
  - (b) Transformation of raw ingredients into finished and semi finished products : Food processing
  - (c) Mass production of food products : Food technology
  - (d) Changes that occur at various stages of food : Food Manufacturing

**Ans.** (b) Transformation of raw ingredients into finished and semi finished products : Food processing

2. Match processed foods given in List I with their examples in List II:

List I	List II
(i) Preserved food	1. Pickles
(ii) Manufactured foods	2. Canned fruits
(iii) Formulated foods	3. Lactose free milk
(iv) Medical foods	4. Cake

Choose the correct option from the following:

- (a) (i)-2, (ii)-1, (iii)-4, (iv)-3
- (b) (i)-4, (ii)-3, (iii)-2, (iv)-1
- (c) (i)-3, (ii)-4, (iii)-2, (iv)-1
- (d) (i)-2, (ii)-4, (iii)-3, (iv)-1

Ans. (a) (i)-2, (ii)-1, (iii)-4, (iv)-3

3. Given below are two statements labelled as Assertion (A) and Reason (R).

Assertion (A) : With advancement in food technology food processing industry provides good opportunity for export of products.

Reason (R) : Government is giving encouragement and support to those people who want to set up their own food processing unit.

Select the most appropriate answer from the options given below:

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (b) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
- (c) (A) is true, but (R) is false.
- (d) (A) is false, but (R) is true

Ans. (a) Both (A) and (R) are true and (R) is the correct explanation of (A)

4. Given below are two statements labelled as Assertion (A) and Reason (R)

Assertion (A) : Need for storage and processing of agricultural and horticultural produce has been created.

Reason (R) : India has progressed from an agro deficit to an agro surplus country.

Select the most appropriate answer from the options given below:

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (b) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
- (c) (A) is true, but (R) is false.
- (d) (A) is false, but (R) is true

**Ans.** (a) Both (A) and (R) are true and (R) is the correct explanation of (A)

**Short answer questions (2 marks)**

1. Give reasons that increased the demand and need for different types of products and new technology.

**Ans (i) Changes in lifestyle**

**(ii) Increasing mobility**

**(iii) Globalization**

**(iv) India has progressed from an agro-deficit to an agro-surplus country.**

2. Give examples of changing the amount of certain nutrients in the food. Also tell why is it done?

**Ans. Increasing prevalence of diseases like heart disease and diabetes has made it necessary for scientists to alter the nutrient content of foods, example -**

- i. Reducing the calorie content of processed foods in several ways such as using artificial sweeteners.
  - ii. fat from ice creams is replaced by specially treated proteins
3. What are the old methods for food preservation followed at home giving examples and their viability in present times? (NCERT)

**Ans. The oldest methods were sun drying, controlled fermentation, salting/ pickling, candying, roasting, smoking, baking and using spices as preservatives. These old methods are still used as they are simple and economical e.g. 1. Controlled fermentation for bread, beer, wine 2. Salting - for pickles 3. Sun drying - to make dried fruits.**

4. Name the micro organisms that cause food spoilage. Also write factors influencing microbial growth.

**Ans.** Refer to Points to Remember No. 12 (a)

**Short answer questions (3 marks)**

1. What are the basic concepts in food processing methods to prevent food spoilage or to extend shelf life. (NCERT)

**Ans.** Refer to Points to Remember No. 12 (b)

2. What are the functions involved in the field of food industry?

Ans. Food industry is involved in -

- i. processing / manufacture
- ii. research and development (modifying existing food products, developing new products, researching consumer markets and developing new technologies)
- iii. ensuring food safety
- iv. monitoring food quality
- v. improving quality control procedures
- vi. casting to ensure profitable production
- vii. regulatory affairs.

3. Classify foods based on perishability

Ans. Refer to points to remember No. 11

**Long answer questions (4 marks)**

1. What are the reasons for preserving food? Why has the importance of food technology increased? (NCERT)

Ans. i. Food items are processed to increase their shelf life.

- ii. With improved transportation, communication and increasing industrialisation the needs of consumers have become diverse.

- iii. Consumers expect foods that have better taste, being shelf stable, easy to package, store and transport.
  - iv. Increasing demand for foods free of chemicals, pesticides and preservatives.
  - v. Demand for foods that have natural flavour and appearance
  - vi. To meet the needs of working women.
  - vii. Due to choice of seasonal foods throughout the year.
  - viii. Due to new avenues of food security and employment.
2. Classify processed foods on the basis of extent and type of processing.

**Ans.** Refer to Points to Remember Number-13

3. What are the career avenues in the field of food processing and technology? (NCERT)

**Ans.** Refer to Points to remember No. 19

4. Which institutes are mainly associated with food technology?

**Ans.** Refer to Points to Remember Number-16

5. Give a brief account of development of food preservation to its present status. (NCERT)

**Ans.** Refer to Points to remember no.8

6. Keeping the concept of health and wellness in mind, explain with examples how food scientists are trying to enhance the food values in processed and packaged foods. (NCERT)

**Ans.** a) Food fortification is done by adding the nutrient that is lacking in the food stuffs or condiments to ensure that minimum dietary requirements are met. eg. iodised salt, folic acid added to flour, vitamin A and D added to milk and oils/fats.

b) Due to increasing prevalence of diseases like heart disease and diabetes, scientists alter the nutrient content of foods for eg. reducing the calorie content of processed foods in several ways such as using artificial sweeteners.

c) Fat from icecreams is replaced by specially treated proteins which reduced the energy value of ice cream.

d) Foods prepared are free of chemicals, pesticides, and preservatives have a longer shelf life and retain their natural flavour and appearance.

**Long answer questions (5 marks)**

1. What knowledge and skills are necessary in a food technology profession?

**Ans.** Refer to Points to Remember Number-15

2. What knowledge and skills are needed for professionals in the field of Food Processing and technology.

**Ans.** Refer to table in Points to Remember No. 14

3. Explain the following terms: (A) Food science (B) Food processing (C) Food technology (D) Food manufacturing and (E) Food spoilage. (NCERT)

**Ans.** (A) Food Science - Refer to Points to remember No. 1

(B) Food Processing - Refer to Points to remember No. 2

(C) Food Technology - Refer to Points to remember No. 3

(D) Food Manufacturing - Refer to Points to remember No. 4

(E) Food Spoilage - Food spoilage may be defined as any change that renders foods unfit for human consumption.

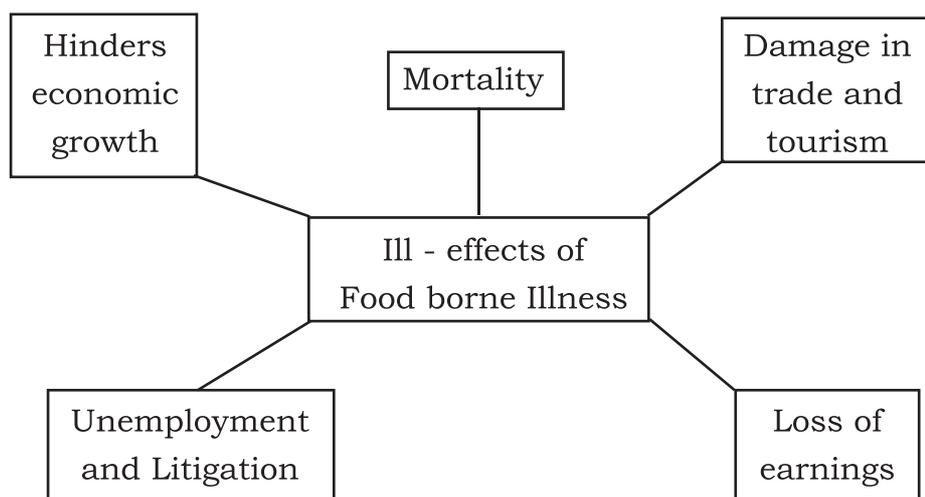
4. Explain briefly the significance of Food Technology. How has it affected the life of modern housewives specially working women? (NCERT)

**Ans.** Refer to Points to Remember No. 6 & 7

# 5. Food Quality and Food Safety

## Points to remember

1. Food is a major determinant of health, nutritional status and productivity of the population of a country.
2. The food we eat should be wholesome and safe along with being balanced.
3. Globally, food borne illness is a major problem of public health concern. In the year 2005 approx. 18 Lakh people died of diarrhoea.
4. According to National Family Health Survey, more than 9 lakh children less than five years of age suffer from acute diarrhoea.



**5. Significance – Food safety and quality are important at home level, but are critical in large scale food production and processing because**

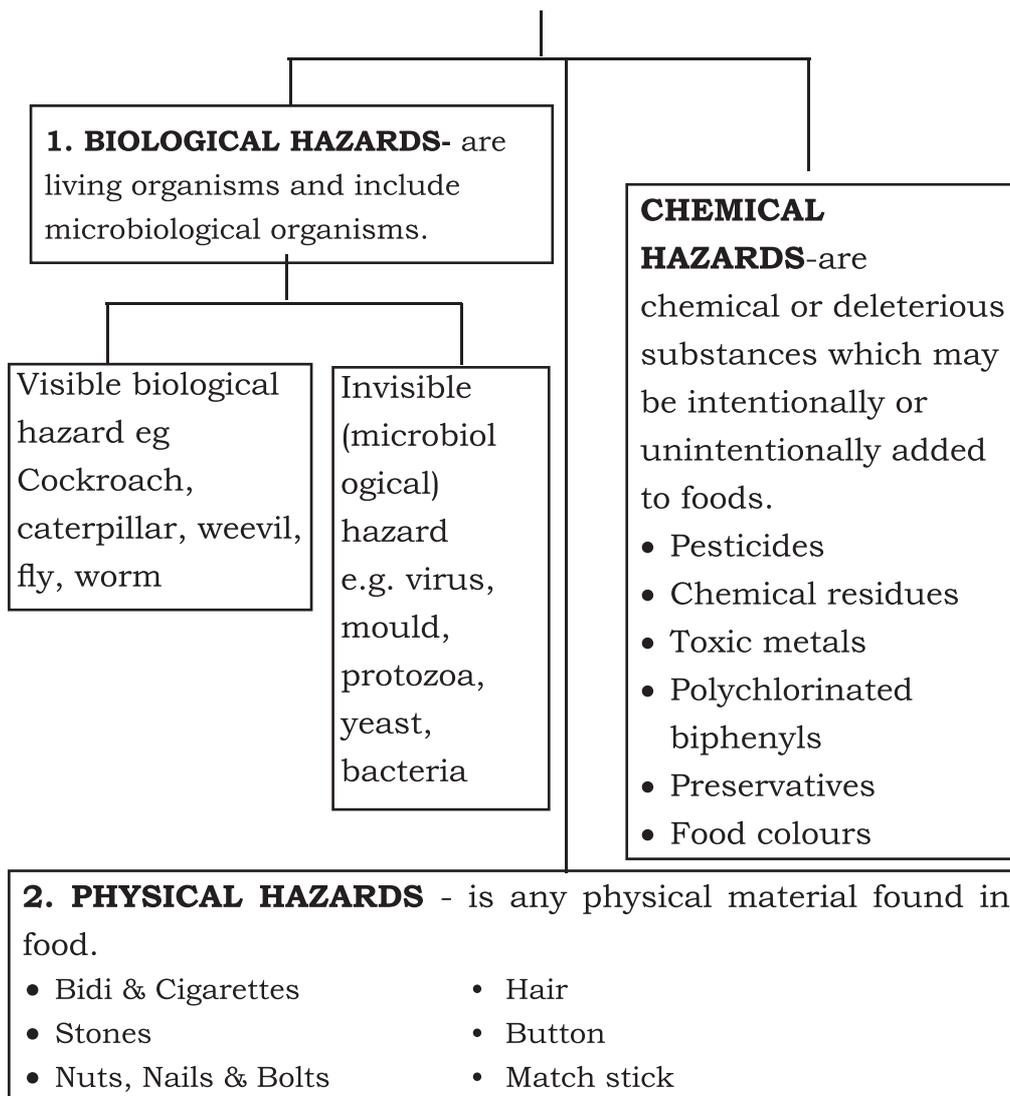
- i. With fast changing lifestyles and eating habits, more people are eating outside their homes.
- ii. Processed and packaged foods are more in trend
- iii. The demand of various types of spice powder and mixes has increased.
- iv. There is a long gap between processing and consumption of food, hence there is a risk of growth of microorganisms.
- v. There is increase in the incidence of food-borne microbial diseases at international level.
- vi. India is a signatory to the World Trade Organisation (WTO) non-tariff agreement, which has provided greater access to world markets and international trade.
- vii. Pollution in atmosphere, soil and water including use of pesticides in agriculture contaminate food.
- viii. Use of additives such as preservatives, colourants flavouring agents and other substances such as stabilizers.

**6. Food Safety-Food safety means assurance that food will not cause any harm to the consumers.**

**7. Toxicity-It is the capacity of a substance to produce harm or injury of any kind under any condition.**

**8. Hazard- Hazard is the relative probability that harm or injury will result when substance is not used in prescribed manner and quantity.**

## FOOD HAZARD



### 9. Two types of food-borne diseases from microbial pathogens are—

- (a) Food infection/Food poisoning
- (b) Food intoxication

**10. Food infection / Food Poisoning- It results from ingestion of live pathogenic organisms which multiply in the body and cause disease.**

**Characteristics of Salmonella-**

- This organism exists in the intestinal tract of animals.
- Heat destroys Salmonella
- Inadequate cooking allows some organisms to survive.
- Often Salmonella is spread through cross contamination.
- This could happen when a cook cuts raw meat/poultry on a chopping board and without cleaning, uses it for another food which does not involve any cooking such as salad.
- Salmonella can reproduce very quickly and double their number every 20 minutes.
- Symptoms of salmonella infection include diarrhoea, fever and abdominal cramps.
- **Sources: Raw meat / poultry, raw milk, eggs.**

**11. Food intoxication: Some bacteria produce harmful toxins which are present in food even if pathogen has been killed. Organisms produce toxins when the food has not been hot enough or cold enough. Toxins in food cannot be detected by smell, appearance or taste Example- Staphylococcus aureus.**

- i. Such organisms exist in air, dust, water. They are also present in the nasal passage, throat and on skin, hair of 50% of healthy individuals.
- ii. Parasites can also cause infestation e.g. worm infestation by tape worm in pork.
- iii. Food can be infested by pests and insects.

**12. Among the various hazards, biological hazards are important cause of food borne illnesses. In spite of all the**

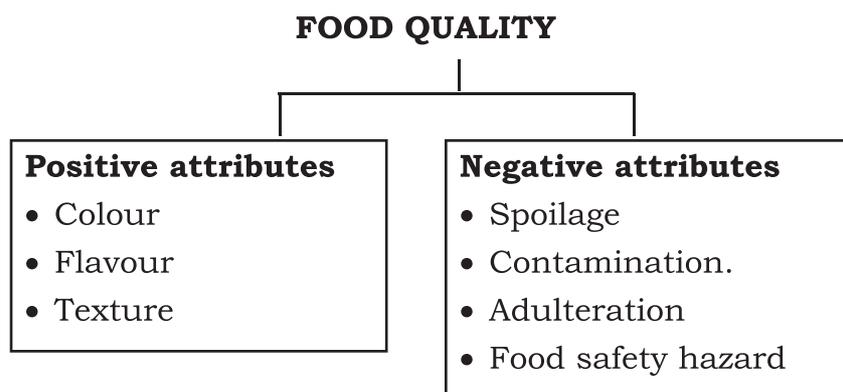
**efforts in the area of food safety, microbial food borne pathogens are still a serious concern and new pathogens continue to emerge.**

- i. Human host, animal hosts and their interactions with humans & the pathogen itself lead to emergence of new pathogens.
- ii. The environment including how food is produced processed, handled and stored leads to emergence of new pathogens.
- iii. Changes in host susceptibility due to malnutrition, age and other conditions can allow emergence of new infections in vulnerable populations.
- iv. Genetic exchange or mutations in the organisms can create new strains with potential to cause disease.
- v. Exposure to new pathogen through changes in eating habits, climate, mass production, food processing and increased globalization of the food supply can allow pathogens to emerge in new populations or new geographic areas. Examples: Norovirus, Rotavirus, Hepatitis E etc.

### **13. CONTAMINATION AND ADULTERATION**

CONTAMINATION	ADULTERATION
<p>It is the presence of harmful, or objectionable foreign substances in food such as Chemicals, micro-organisms, dilutants before/during or after processing or storage. Example-wood, stone, Non-permissible food additives, pesticide residues.</p>	<p>It is intentional or accidental addition of impure or cheap or unnecessary ingredients, to cheat, cheapen or falsify a preparation, that will alter the properties and composition and diminish the quality of food. Example-Adding water to milk &amp; extracting cream from milk</p>

- 14. FOOD QUALITY: The term food quality refers to attributes that influence a product's value to consumers. It has both negative and positive attributes.**



Safety is a preliminary attribute and precursor of quality. In order to ensure that foods are safe and of good quality, across the world various governments and international bodies have laid down food standards that manufacturers/suppliers are expected to adhere to.

- 15. Salient points to be borne in mind to ensure food safety.**
- i. Quality of raw material and water.
  - ii. Cleanliness of the premises, personnel, equipment, food preparation and storage & serving areas.
  - iii. Storage of food at appropriate temperature.
  - iv. Food hygiene
  - v. Good service practices.

**16. Food Standards-**

**Effective food standards and control systems are required to integrate quality into every aspect of food production and service, to ensure the supply of hygienic, wholesome food as well as to facilitate trade within and between nations. There are four levels of standards which are well coordinated.**



The Prevention of Food Adulteration Act 1954 (PFA, 1954) was enacted by the Government of India to prevent adulteration of food. The Act has been amended over 200 times as per need. In addition to PFA, there are other Orders or Acts that help to ensure the quality of specific foods such as:

1. Fruit and Vegetable Product Order: Specifications for fruit and vegetable products are laid down.
2. Meat Food Products Order: Processing of meat products is licensed under this order.
3. Vegetable Oil Products Order: Specifications for vanaspati, margarine and shortenings are laid down.

Many such acts have been consolidated under the Food Safety and Standards Act.

All food products manufactured in India, or imported and sold in India have to meet the requirements prescribed under the Food Safety and Standards Act.

## 17. FOOD STANDARDS REGULATIONS IN INDIA

### 1. VOLUNTARY PRODUCT CERTIFICATION: These are voluntary grading and marking schemes.

- (i) ISI Mark- ISI mark is given by BIS. The Bureau of Indian Standards (BIS) deals with standardization of various consumer goods including food products.



- (ii) AGMARK- Agmark is a voluntary scheme of certification of agricultural products (raw and processed) for safe guarding the health of consumers.



- ii. **FSSAI 2006- Since the government had several regulations and laws, food industry found it complicated. A need was therefore felt to integrate all such laws for regulating the quality of food with this in view, Indian Government has passed Food Safety and Standards Act (FSSA), 2006, to bring different pieces of legislation pertaining to food safety under one umbrella.**

### OBJECTIVES

- i. To consolidate the laws relating to food.
- ii. To lay down science based standards for food.
- iii. To regulate food manufacture, storage, distribution, sale and import.
- iv. To ensure availability of safe and wholesome food for human consumption.
- v. The Act has provisions for maintenance of hygiene conditions

in and around manufacturing premises, assessment and management of risk factors to human health in scientific manner.

### **FUNCTIONS**

Food Safety and Standards Authority of India (FSSAI) has been mandated by the Food Safety Standards Act, (FSSA) 2006 for performing the following functions:

- Framing of regulations to lay down the standards and guidelines for articles of food and system of enforcing various standards.
- Laying down mechanisms and guidelines for accreditation of certification bodies for certification of food safety management system for food businesses and accreditation of laboratories and notification of the accredited laboratories.
- To provide scientific advice and technical support to Central Government and State Governments for framing the policy and rules related to food safety and nutrition.
- Collect and collate data regarding food consumption, incidence and prevalence of biological risk, contaminants in food, residues of various contaminants in foods products, identification of emerging risks and introduction of rapid alert system.
- Creating an information network across the country so that the public, consumers, Panchayats, etc., receive rapid, reliable and objective information about food safety and issues of concern.
- Provide training programmes for persons who are involved or intend to get involved in food businesses.

- Contribute to the development of international technical standards for food, sanitary and phyto sanitary standards.
- Promote general awareness about food safety and food standards..

For more information visit: <https://fssai.gov.in>



*Food Safety and Standards Authority of India*

## **18. INTERNATIONAL ORGANISATIONS AND AGREEMENTS IN THE AREA OF FOOD STANDARDS, QUALITY RESEARCH AND TRADE**

There have been several international organisations and agreements in the present times which have played a role in enhancing food safety, quality and security, facilitating research and trade.

- i. Codex Alimentarius Commission-** CAC is an intergovernmental body formed with the objective of establishing international standards to protect the health of the consumers and facilitate food and agricultural trade.
- ii. In 2017, the membership of Codex was 187 member countries and one Member Organisation (European Community) respectively.
- iii. India is a member through the Ministry of Health and Family Welfare.

## International Organisations And Agreements In The Area Food Standards, Quality, Research And Trade



- The document published by the CAC is codex Alimentarius which means food document and it includes internationally adopted food Code of practice, Guidelines and other recommendations standards to ensure fair practices in food trade for consumers protection.

### ii. International Organisation for Standardization (ISO)

- ISO is a worldwide non-governmental federation.
- To facilitate the international exchange of goods and services.
- To develop cooperation in the spheres of intellectual, scientific, technological and economic activity.

- The work done by ISO results in international agreements which are published as International Standard.
- ISO 9000 is an international reference of quality requirements. Adoption of these standards is voluntary.

### **iii. World Trade Organisation (WTO)**

- WTO was established in 1995.
- The main objective of WTO is to help trade flow smoothly, fairly and predictably, by administering trade agreements.
- To help settling trade disputes, assisting countries in trade policy issues.
- The WTO Agreement covers goods, services and intellectual property.

## **19. Food Control System- In order to enforce adoption and implementation of standards, there is a need for a strong Food Control System. It must consist of-**

### **i. Food Inspection**

- Conformity of products to standards is verified through inspection
- This ensures that all foods are produced, handled, processed, stored and distributed in compliance with regulations and legislation.
- Government/ Municipal authorities appoint food inspectors to investigate the status of quality conformity to standards in their laboratories.

### **ii. Analytical Capability-**

- There is a need for well equipped state of the art accredited laboratories to carry out analysis of food.
- Well-trained personnel having knowledge of principles of laboratory management and physical chemical and microbiological analysis of food, test foods and food products are also required.

## **20. FOOD SAFETY MANAGEMENT SYSTEMS**

**A food hazard can enter/ come into the food at any stage of the food chain, therefore, adequate control throughout the food chain is essential. Food safety and quality can be ensured through:**

- i. Good Manufacturing Practices (GMP)
  - These are a part of quality assurance.
  - It enables to minimise or eliminate contamination and false labeling
  - It helps to refine compliance and performance by manufacturers /producers.
- ii. Good Handling Practices (GHP)
  - It indicate a comprehensive approach from the farm to the store /consumer
  - It ensures that all persons who handle food have good hygiene practices.
- iii. Hazard Analysis Critical Control Point (HACCP)
  - It identifies hazard, assessment of chances of occurrence of hazard during each step/ stage in raw material -procurement, manufacturing, distribution, usage of food products and defining measures for hazard control.

### **BENEFITS OF HACCP**

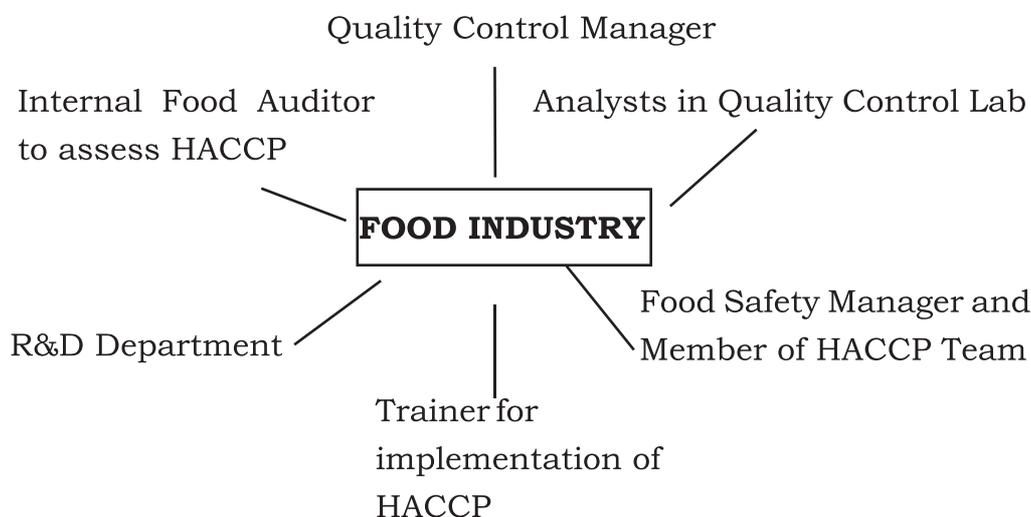
- i. It is a preventive approach to ensure food safety.
- ii. HACCP enables us to detect hazards at any stage of processing or manufacture in order to ensure a good quality product, by taking appropriate action at the stage where the problem occurs.
- iii. This is important for consumer protection and international food trade.
- iv. It assures consistently good quality products.

- v. It enables producers, processors, distributors and exporter to utilise resources efficiently and in a cost effective manner for assuring food safety.

### **21. KNOWLEDGE AND SKILLS FOR CAREER-**

- Adequate knowledge and expertise in food chemistry, food processing and preservation, Food Analysis and Quality control.
- Well versed in Food Microbiology, Food laws and sensory evaluation.

### **22. SCOPE**



### **23 CAREER AVENUES**

Career opportunities in the field of food quality and food safety.

- Quality Control Laboratories in Industry as analysts or at managerial level.
- Food testing laboratories in public and private sectors-various positions including food inspectors, food testing.
- Specialist in HACCP.
- Food Auditors.

- Quality Certification such as ISO.
- Teaching and Academics.
- Research.
- Scientific writers.
- In voluntary organisations in various capacities.
- Large food industries, flight kitchens etc.
- Self employment and entrepreneurship.

### **Full forms of Abbreviations**

1. G.H.P.	-	Good Handling Practices.
2. G.M.P.	-	Good Manufacturing Practices.
3. H.A.C.C.P.	-	Hazard Analysis Critical Control Point.
4. W.T.O.	-	World Trade Organisation.
5. P.F.A.	-	Prevention of Food Adulteration Act.
6. BIS.	-	The Bureau of Indian Standards.
7. F.S.S.A.	-	Food Safety and Standards Act.
8. F.P.O	-	Fruit Product Order.
9. C.A.C	-	Codex Alimentarius Commission.
10. I.S.O	-	International Organisation for Standardization.

### **OBJECTIVE TYPE QUESTIONS (1 MARK)**

#### **A Multiple choice questions**

- Which of the following is visible biological hazard in food?
  - Bacteria
  - Virus
  - Mould
  - Worms

**Ans. d. Worms**

- When was Codex Alimentarius Commission formed?
  - 1960
  - 1965
  - 1962
  - 1969

**Ans. b. 1965**

3. Rahul ate a sandwich which appeared good and smelled pleasant. Within few hours he complained of severe stomachache, nausea and vomiting. This could be attributed to-

(CBSE sample Paper 2022)

- a. Food adulteration
- b. Food intoxication
- c. Food infestation
- d. Food contamination

**Ans. b. Food intoxication**

4. India is a member of codex through which of the following?

- a. Ministry of food processing industries
- b. Department of agriculture and cooperation
- c. Ministry of health and family welfare
- d. Directorate general of health

**Ans. c. Ministry of health and family welfare**

5. Which of the following is not the function of HACCP?

(CBSE Sample Paper 2022)

- a. Preventive approach to ensure food safety
- b. Enables only producers to utilize resources efficiently
- c. Assures consistently good quality products
- d. Detect hazards at any stage of processing or manufacturing of food

**Ans. b. Enables only producers to utilize resources efficiently**

6. Which of the following is not a feature of Good Manufacturing Practices (GMP)? (CBSE Sample Paper 2022)

- a. Minimize false labeling
- b. Consumer protection
- c. Eliminate contamination
- d. Mislead consumer

**Ans. d. Mislead consumer**

7. In how many minutes can salmonella bacteria double their number? (CBSE Sample Paper 2022)
- Every 10 minute
  - Every 20 minute
  - Every 40 minute
  - Every 5 minute

**Ans. b. Every 20 minutes**

8. Which of the following is not the function of FSSAI. (CBSE Sample Paper 2022)
- To establish international standards to protect the health of consumers.
  - Promote general awareness about food safety and food standards.
  - To promote the development of standardization and related activities in the world.
  - Provide training programmes for persons who are involved or intend to get involved in food business.

Choose the correct option:

- |                   |                  |
|-------------------|------------------|
| a) (i) and (ii)   | b) (ii) and (iv) |
| c) (iii) and (iv) | d) (i) and (iii) |

**Ans. b) (ii) and (iv)**

**B. Match the following**

- |                          |                          |
|--------------------------|--------------------------|
| A. Salmonella            | (i) Toxicity             |
| B. Staphylococcus aureus | (ii) 1995                |
| C. WTO                   | (iii) 2006               |
| D. FSSA                  | (iv) Cross-contamination |

**Pick the correct option**

- A.(iv), B.(i), C.(ii), D.(iii)
- A.(i), B.(ii), C.(iii), D.(iv)

- c) A.(ii), B.(iii), C.(iv), D.(i)
- d) A.(iii), B.(iv), C.(i), D.(ii)

**Ans. a) A.(iv), B.(i), C.(ii), D.(iii)**

**C. Very Short Answer Questions (1 mark)**

1. Which two components should be incorporated in an effective food control system?

**Ans. (i) Food inspection. (ii) Analytical capability**

2. Neha used a chopping board to cut raw meat and used the same board for cutting salad without washing it. What is the food contamination called in such a situation?

**Ans. Cross-Contamination.**

3. Define Food Hazard.

**Ans. Food hazard in the relative probability that harm or injury will result when substance is not used in prescribed manner or quantity.**

**D. Case Study Based Question (4 × 1 Mark)**

Food safety and quality are important at the home level, but are critical in large scale food production and processing and also where food is freshly prepared and served. In the past, many foods were processed at home. Advancement in technology and processing higher per capita incomes and better purchasing power as well as increased consumer demand have led to a variety of processed foods, food for health/functional foods being manufactured. Safety of such foods needs to be assessed.

1. Which of the following is incorrect pair?
  - (a) Seeds : Physical Hazard
  - (b) Salmonella : Biological Hazard
  - (c) Probiotics : Chemical Hazard
  - (d) Hepatitis : Pathogen

**Ans. (c) Probiotics : Chemical Hazard**

2. Which of the following is responsible to eliminate false labelling of the products

- (a) GMP
- (b) GHP
- (c) HACCP
- (d) GDP

**Ans. (a) GMP**

3. Given below are two statements labelled as Assertion (A) and Reason (R).

Assertion (A) : Your mother is suffering from skin disease and doctor has advised her not to work in kitchen.

Reason (R) : Staphylococcus aureus are also present in the nasal passage, throat and on skin, hair of healthy individuals too.

Select the most appropriate answer from the options given below:

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (b) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
- (c) (A) is true, but (R) is false.
- (d) (A) is false, but (R) is true

**Ans.** (a) Both (A) and (R) are true and (R) is the correct explanation of (A)

4. Given below are two statements labelled as Assertion (A) and Reason (R).

Assertion (A) : FSSAI is responsible for framing of regulations to lay down the standards and guidelines for articles of food and system of enforcing various standards.

Reason (R) : It also lays down mechanisms and guidelines for accreditation of certification for international exchange of goods and services.

Select the most appropriate answer from the options given below:

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (b) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
- (c) (A) is true, but (R) is false.
- (d) (A) is false, but (R) is true

**Ans.** (c) (A) is true, but (R) is false.

**Short Answer Questions (2 Marks)**

1. Give reasons which have led to increase in the production of processed and functional foods.

**Ans.**

**(i) Advancement in technology and processing**

**(ii) Larger per capita come**

**(iii) Better purchasing power**

**(iv) Increase in consumer demand**

2. How many types of food-borne diseases spread from microbial pathogens ? Give examples also.

**Ans.**

**(i) Infection eg. Salmonella.**

**(ii) Poisoning eg. Staphylococcus aureus.**

3. Why do we need food standards ?

**Ans.**

**(i) Food standards are required to integrate quality into every aspect of food production and service**

**(ii) To ensure the supply of hygienic wholesome food.**

4. Which are the four levels of standards?

**Ans.**

**(i) Company Standards**

**(ii) National Standards**

**(iii) Regional Standards**

**(iv) International Standards**

5. What is Codex Alimentarius? (NCERT)

**Ans.** Refer to Point to Remember No. 18 (i)

**Short Answer Questions (3 Marks)**

1. Differentiate between Codex and ISO.

**Ans.**

<b>Codex</b>	<b>ISO</b>
<ul style="list-style-type: none"><li>• Intergovernmental body</li><li>• Used to develop national regulations</li><li>• Slow to change</li><li>• Describe the minimal acceptable practices</li></ul>	<ul style="list-style-type: none"><li>• Non governmental federation</li><li>• Voluntary</li><li>• Standards are reviewed every five years</li><li>• Describe current standard industrial practices.</li></ul>

2. How many types of food hazards are there?

**Ans.**

**Food hazards can be of three types**

- (i) Physical Hazard- It is any physical material normally not found in food, which causes illness or injury which includes wood, stone, parts of pest and hair.**
- (ii) Chemical Hazard- These are chemicals or deleterious substances which may be intentionally or unintentionally added to foods. Example- pesticides, preservatives, food colours etc.**
- (iii) Biological Hazard- These are living organisms and include microbiological organisms.**

3. Which organisations have played a key role in enhancing food safety, quality and security, and facilitating research and trade?

**Ans.**

- (i) Codex Alimentarius Commission (CAC)**
- (ii) International Organisation for Standardization (I.S.O.)**
- (iii) World Trade Organisation (W.T.O.)**

**Long Answer Questions (4 Marks)**

1. "In spite of implementation of various rules and laws, biological food borne illnesses are still a serious concern". Discuss.

**Ans.**

- (i) Human host, animal host and their interaction with humans and pathogen itself lead to emergence of new pathogens.**
- (ii) The environment including how food is produced, processed, handled and stored leads to emergence of new pathogens.**
- (iii) Genetic exchange or mutations in the organisms can create new strains with the potential to cause disease.**
- (iv) Exposure to new pathogens through changes in eating habits, climate.**

2. Explain why food safety and quality are of global concern? (NCERT)

**Ans. Food safety and quality are of global concern because:-**

- (i) Globally, food-borne illness is a major problem of public health.
- (ii) In 2005 alone, 1.8 million people are reported to have died from diarrhoeal disease.
- (iii) In India, according to National Family Health survey, more than 9 lakh children less than 5 years of age suffer from acute diarrhoea.
- (iv) Food borne illness can damage trade and tourism, lead to loss of earning, unemployment and litigation thus can hamper economic growth.

3. Discuss the significance of HACCP. (NCERT)

**Ans.** Refer to Points to Remember No. 20 (iii)

**Long Answer Questions (5 marks)**

1. Which salient points are to be borne in mind by food producers and processors to ensure food safety ?

**Ans.** Refer to Points to Remember Number-15

2. In which year The Food Safety and Standards Act was passed? What are its main objectives?

**Ans.** Refer to Points to Remember Number-17 (ii)

3. Explain the terms : (a) hazard (b) toxicity (c) contamination (d) food quality (e) adulteration. (NCERT)

**Ans.** a. Hazard-Refer to points to remember no. 8

b. Toxicity - Refer to points to remember no. 7

c. Contamination - Refer to points to remember no. 13

d. Food quality - Refer to points to remember no. 14

e. Adulteration - Refer to points to remember no. 13

4. List the national and international food standards? (NCERT)

**Ans.** (i) National Food Standards- Refer to points to remember no. 17

(ii) International food standards - Refer to points to remember no. 18

## **6. EARLY CHILDHOOD CARE AND EDUCATION**

### **Points to remember**

- 1. Early Childhood Care and Education is an activity that benefits childhood in different circumstances, as well as families by providing the support to parents and the community in these basic tasks.**
- 2. Early Childhood Care and Education is also called E.C.C.E.**
- 3. Early childhood is the phase from birth till eight years of age, which is divided into two parts -**
  - i. Birth to 3 years
  - ii. 3 to 8 years

This division is based on the developmental changes taking place in young children in these two stages.
- 4. Infancy is the period between birth to two years of age, during which a child is largely dependent on adults for his/her everyday needs.**
- 5. A child between two to three years. is called as Toddler, who has a tendency to do jumpy walk.**
- 6. A preschool child is a child who is ready for experiencing some environment which is beyond that of the family.**
- 7. Care given to a child in the absence of the mother is called Substitute care. Child can be given substitute care by the following people :**
  - i. Grand parents
  - ii. Other relatives
  - iii. Elder sister / brother

- iv. Maid
- v. Creche
- vi. Day care centre

**8. Caregiver is a family member or paid helper who regularly looks after a child or a sick, elderly or differently abled person.**

**9. There can be many reasons for giving substitute child care-**

- i. Untimely death of the mother
- ii. Mother's ill-health/any disease
- iii. Working woman
- iv. Nuclear family

**10. There can be many disadvantages of an elder sister caring for her younger brother/ sister like-**

- i. She will have to leave her studies.
- ii. She is young, cannot take proper care of the child.
- iii. She can get involved in play, hence it is not safe to leave child with her.
- iv. If some emergency situation arises, like the child falls ill or gets hurt, then she will not be able to handle it.

**11. Creche is an institutional setting that is particularly designed for the care of infants and young children in the absence of home care.**

**Facilities provided by creche-**

- i. Feeding facilities
- ii. Resting facilities
- iii. Recreational facilities
- iv. First aid
- v. Informal education
- vi. Clean and safe environment

**12. Day care centres are the centres which provide daytime care to children in the preschool years. In these centres, infants and preschoolers are cared for in the absence of a primary caregiver.**

**13. Anganwadi means Courtyard shelter. These are a type of rural / urban child care centres as a part of ICDS programme for pre-school children.**

**14. Social development in Early childhood-**

- i. Infant develops an attachment with his family (specially parents, siblings).
- ii. He recognises his family members. Child learns to distinguish between people who he/ she recognises and those who are unfamiliar for him.
- iii. A child of 8-12 months shows fear of unknown people.
- iv. A 12 month old child is deeply attached to his mother, and cries when she is not around him. Gradually, he understands that mother does not vanish when she goes to another room.

**15. Characteristics of a three year old child-**

- i. His activities and experiences began to expand.
- ii. Child is able to do informal and small group activities.
- iii. Child is very eager to learn new things.
- iv. He learns new things and explores his environment.
- v. He interacts with people and things around him.

**16. Preschool education is the provision of education for children before the commencement of formal education between the ages of 3 to 6 years. This education is provided by a good preschool.**

### **Characteristics of a Good Preschool-**

- Child centred approach.
- Play way method of learning.
- Child learns quickly among peers.
- Child enjoys each others company.
- Child becomes independent.
- Informal education and preparation for formal school.
- Beneficial for children with special needs/Inclusive education.
- Safe and secure environment
- Clean and hygienic environment
- First Aid/Medical facilities
- Loving and trained teachers/Staff
- Variety of play materials/Recreational facilities
- Optimal learning environment.

**17. Montessori schools are those schools which are based on the principles of early childhood education as outlined by a well known educationist Maria Montessori.**

**The developmental psychologist 'Jean Piaget' spent his life trying to comprehend and explain that young children have different ways of understanding the world, due to which, they need a supportive environment to explore phenomena in their own ways.**

**18. Some principles related to E.C.C.E.-**

- i. Children have different approach to understand things that happen around them.

- ii. All institutions of children should work according to the cultural context of the families of those children.

**19. As per the National Curriculum Framework (NCF) 2005, objectives of E.C.C.E. (Early Childhood Care and Education) are-**

- i. Holistic development of the child to enable him/her to realise the potential.
- ii. To prepare the child to go to a formal school.
- iii. Providing support services for women and children.

**20. As per the National Curriculum Framework (NCF) 2005, the guiding principles of E.C.C.E. ( Early Childhood Care and Education) are -**

- i. Play should be the basis for learning.
- ii. Art should be the basis of education.
- iii. Special features of children's thinking should be recognised.
- iv. Give importance to experience rather than expertise.
- v. There should be experience of familiarity and challenge in everyday routines.
- vi. There should be a mix of formal and informal interactions.
- vii. There should be a blend of textual and cultural sources.
- viii. Local materials, arts and knowledge should be used.
- ix. Have developmentally appropriate practices, flexibility and plurality.
- x. It is important to teach health, well being and healthy habits.

**21. Following are the expectations from a caregiver of young children -**

- i. Teacher should teach children in playway method.
- ii. Children should be taught in an interesting and stimulating manner.

- iii. Focus on providing opportunities to children to work.
- iv. Teacher should have complete knowledge about children's capacities.
- v. The activities for the children should be kept according to their cultural and regional environment.
- vi. The teacher should have administrative and management skills like record keeping, accounting, report writing, interaction with parents etc.
- vii. Teacher should have various artistic skills like narrating stories to children, dance, music, voice modulation, organising games etc.
- viii. Young children have short attention span, hence teacher's plan of action should be flexible, which can be changed according to children's needs.

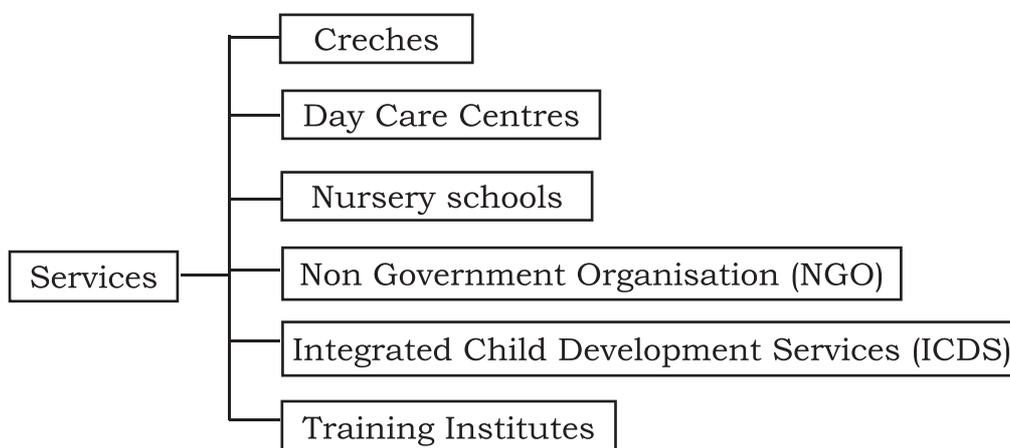
\* 'Vygotsky', a psychologist and educator, had outlined the great need that children have for a concerned, caring and knowledgeable adult, who can know/understand their capabilities and provide them with an optimal environments

## **22. Essential skills that an Early Childhood professional needs to have -**

- i. Have an interest in children and their development.
- ii. Have knowledge about the needs and capabilities of young children.
- iii. Have capacity for interacting with children.
- iv. Should be able to do creative and interesting activities with children.

- v. Do all activities with children with enthusiasm like story telling, poem recitation, talking about environment related topics etc.
- vi. Children have curious attitude, so there should be willingness and interest in answering their queries.
- vii. Young children are different from each other, she/he should have capacity for understanding their individual differences.
- viii. Be always prepared for different types of physical activities.

### 23. Services available in Early Childhood Care and Education-



### 24. Careers in Early Childhood Care and Education-

- i. Teacher in nursery schools.
- ii. Caregiver in Day care centres and Creches.
- iii. Team members for programmes for young children (like Integrated Child Development Services)
- iv. Professionals to plan and promote campaigns or services for young children organised by government or NGOs.
- v. Entrepreneur in children related activities like organising camps, educational picnics, running activity clubs, opening own preschool.

**25. Educational qualifications necessary for career in Early childhood field-**

- i. Nursery Teacher Training
- ii. Early Childhood Care and Education, Child/Human Development or Child psychology-Graduation/Diploma and then Post graduation.
- iii. Educational programme from Open University.
- iv. Ph.D

**Full forms of Abbreviations-**

ECCE	- Early Childhood Care and Education
NCF	- National Curriculum Framework
ICDS	- Integrated Child Development Services
NTT	- Nursery Teacher Training

**OBJECTIVE TYPE QUESTIONS (1 mark)**

**A) Multiple Choice Questions**

1. What is full form of E.C.C.E. ?
  - a) Primary Childhood Care and Education
  - b) Early Childhood Care and Education
  - c) Early Boyhood Care and Education
  - d) Early Childhood Education and Care

**Ans. b. Early Childhood Care and Education.**

2. Child of which age shows fear of unknown people?
  - a) 4-6 months
  - b) 0-2 months
  - c) 6-8 months
  - d) 8-12 months

**Ans. d. 8-12 months**

3. What is the child between two to three years old called?
  - a) Toddler
  - b) Infant
  - c) Adolescent
  - d) School going child

**Ans. a. Toddler**



8. Mrs Verma wants to open up pre school in her locality. Which guiding principles of ECCE should be considered by her? (CBSE Sample Paper 2022)

- (i) Blend of textual and cultural resources
- (ii) Use of local materials
- (iii) Focus only on nutritious meals
- (iv) Promoting difficult task

Choose the correct option

- (a) (i) and (ii)                      (b) (ii) and (iv)
- (c) (i)and(iv)                      (d) (ii) and (iii)

**Ans. (a) (i) and (ii)**

**B) (i) Match the following**

- A. Anganwadi                      (i) School for infants to 18 years
- B. Day care centre              (ii) Child centred approach
- C. Preschool                      (iii) Courtyard shelter
- D. Montessori                    (iv) Centre providing care during daytime

**Pick the correct option -**

- a) A.(i), B.(ii), C.(iii), D.(iv)
- b) A.(iii), B.(iv), C(ii), D.(i)
- c) A(iv), B.(ii), C.(i), D.(iii)
- d) A.(ii), B.(i), C.(iv), D.(iii)

**Ans. b. A. (iii), B.(iv), C(ii), D.(i)**

**(ii) Match the following**

- A. Early Childhood              (i) Birth to 2 years
- B. Infant                              (ii) 3 to 6 years
- C. Toddler                          (iii) Birth to 8 years
- D Preschool child                (iv) 2 to 3 years

**Pick the correct option-**

- a) A.(iv), B.(iii), C.(ii), D.(i)
- b) A.(i), B.(iii), C.(iv), D.(ii)
- c) A.(ii), B.(iv), C.(i), D.(iii)
- d) A.(iii), B.(i), C.(iv), D.(ii)

**Ans. (d) A (iii), B (i), C (iv), D (ii)**

**C) Very short answer questions**

1. What do you understand by the term Early Childhood Care and Education? (NCERT)

**Ans.** Early Childhood Care and Education is an activity that benefits childhood in different circumstances, as well as families by providing the support to parents and the community in these basic tasks.

2. Why is substitute care important, give any two reasons.

**Ans.** (i) Untimely death of the mother  
(ii) Mother's ill-health/any disease

3. Mita is a three year old young child. Give any two characteristics seen in her.

**Ans.** (i) She is able to do informal and small group activities.  
(ii) She will learn many new things from her nearby environment.

4. Seema wants to become a teacher in a preschool. Inform her that which two educational qualifications will be helpful to her ?

**Ans.** (i) Nursery Teacher Training  
(ii) Graduation in Child/Human development or Child Psychology subject.

## Case Study based questions

*Read the passage carefully and answer the questions :*

There are many expectations from an adult teacher/caregiver of young children. There is less of a requirement for supervision of physical care of preschool children, like cleaning, feeding, toilet activity since the child develops the capability to speak, to control his or her bowel and bladder movements, eat independently. A teacher needs to focus more on providing interesting and stimulating opportunities for children to learn new things, experience natural phenomena, provide ample opportunities for a variety of experiences like physical, language, social-emotional and other learning experiences. The focus is on enhancing creative expression and exploration.

1. In the context of Early Childhood Care and Education, chose the correct pair:
  - (a) Effective substitute care : Siblings
  - (b) Early childhood : Birth to 3 years, 3 to 8 years
  - (c) Creche : Maria Montessori
  - (d) Play school : Formal education

**Ans.** (b) Early childhood : Birth to 3 years, 3 to 8 years

2. Match the psychologist /educator/programme given in the List I with their work in List II.

List I (Psychologist/Educator/Programme)	List II (Work)
A. Maria Montessori	1. Children need a concerned, caring adult
B. Jean Piaget	2. Works for young children
C. Lev Vygotsky	3. Established Montessori schools
D. ICDS	4. Young children have different ways of understanding the world

Chose the correct option from the following:

- (a) A-3, B-1, C-4, D-2                      (b) A-2, B-4, C-1, D-3  
(c) A-3, B-4, C-1, D-2                      (d) A-4, B-3, C-3, D-1

**Ans.** (c) A-3, B-4, C-1, D-2

3. Given below are two statements labelled as Assertion (A) and Reason (R).

Assertion (A) : The child centred approach and the play-way method makes learning enjoyable in a pre-school.

Reason (R) : Teachers understand the children needs.

Select the most appropriate answer from the options:

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)  
(b) Both (A) and (R) are true but (R) is not the correct explanation of (A)  
(c) (A) is true, but (R) is false  
(d) (A) is false but (R) is true

**Ans.** (a) Both (A) and (R) are true and (R) is the correct explanation of (A)

3. Given below are two statements labelled as Assertion (A) and Reason (R).

Assertion (A) : Early childhood care and Education is not an important area of study in Human Development.

Reason (R) : Infants begin to learn from a very early age.

Select the most appropriate answer from the options:

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)  
(b) Both (A) and (R) are true but (R) is not the correct explanation of (A)  
(c) (A) is true, but (R) is false  
(d) (A) is false but (R) is true

**Ans.** (d) (A) is false but (R) is true

### Short Answer Questions (2 marks)

1. What do you understand by Caregiver ? In the absence of mother, which two people can look after one year Sonu ?

**Ans.** Caregiver is a family member or paid helper who regularly looks after a child or a sick, elderly or differently abled person. Sonu can be looked after by the following two people-

- (i) Grandparents            (ii) Maid

2. What is a creche and what services does this centre provide? (NCERT)

**Ans.** Creche is the name given to an institutional setting that is particularly designed for the care of infants and young children in the absence of home care.

Four facilities of a good creche:

- (i) Feeding facilities.            (ii) Resting facilities.  
(iii) Recreational facilities.    (iv) Informal education.

3. Rohit is eight month old infant and Rohan is of twelve months. Give one characteristic each of their Social development.

**Ans.**

Eight months            - Child shows fear of unknown people

Twelve months        - Child is deeply attached to his mother and cries when she is not around him.

4. What are the basic objectives of E.C.C.E. ? Where have these been documented.

**Ans.**

Basic objectives of E.C.C.E. were given in National Curriculum Framework 2005.

Basic objectives of E.C.C.E.-

- (i) Holistic development of the child to enable him/her to realise the potential.

- (ii) To prepare the child to go to a formal school.
  - (iii) Providing support services for women and children.
5. What are the different care arrangements young children may require? (NCERT)

**Ans.** Young children can be cared by these care arrangements-

- i. Parents
  - ii. Grandparents
  - iii. Maid
  - iv. Creche
  - v. Day care centre
6. What are some of the reasons why young children need a special informal programme at school? (NCERT)

**Ans.** Young children need a special informal programme at school because children have different approach to understand things that happen around them. It is essential to work according to the cultural context of the child's family.

7. What is meant by a child-centred approach? (NCERT)

**Ans.** Child-centred approach means to provide education to a child according to his interest, capability, age and trait.

### **Short Answer Questions (3 marks)**

1. Mrs. Kusum wants to select a good preschool for her three year old child. You explain her what characteristics should be there in a good preschool?

**Ans.** Refer to points to remember No. 16

2. Mishika is a three year old toddler. What do you understand by this term? What are the characteristics of a child of this age?

**Ans.** A child between two and three years is called a Toddler, a term that is derived from the jumpy walk that a young child has at this age.

Characteristics of Toddlers-

- (i) At this age, child's activities and experiences began to expand.
- (ii) Child is able to do informal and small group activities.

- (iii) Child at this age is very eager to learn new things.
  - (iv) He learns new things and explores his environment.
  - (v) He interacts with people and things around him.
3. Make a list of the services available in the field of Early Childhood Care and Education.

**Ans.** Refer to Points to Remember Number 23

**Long Answer Questions (4 marks)**

1. Shalu wants to make a career in Early childhood. Which essential skills are required in her for this career?

OR List the skills an ECCE worker must have (NCERT)

**Ans.** Refer to Points to Remember Number-22

2. Your sister wants to make her career in Early Childhood Care and Education. Educate her what career options can be available in this field? Also inform her which two educational qualifications she would need?

OR Describe how we can prepare for a career in ECCE (NCERT)

**Ans.** Refer to Points to Remember Number 24, 25

**Long Answer Questions (5 marks)**

1. Write down the guiding principles of Early Childhood Care and Education, as per the National Curriculum Framework 2005.

**Ans.** Refer to Points to Remember Number-20

2. Who is a preschool child? What are the expectations from a caregiver of this child?

**Ans.** A preschool child is a child who is ready for experiencing some environment which is beyond that of the family.

Refer to Points to Remember Number 21

- Q.3 You have been given a project to teach in the nursery class of your school for one day. Which methods you will follow to do this project in the best possible manner? Which of your skills will help you in this?

**Ans.** Refer to points to remember No. 21 and 22.

## **7. MANAGEMENT OF SUPPORT SERVICES, INSTITUTIONS AND PROGRAMMES FOR CHILDREN, YOUTH AND ELDERLY**

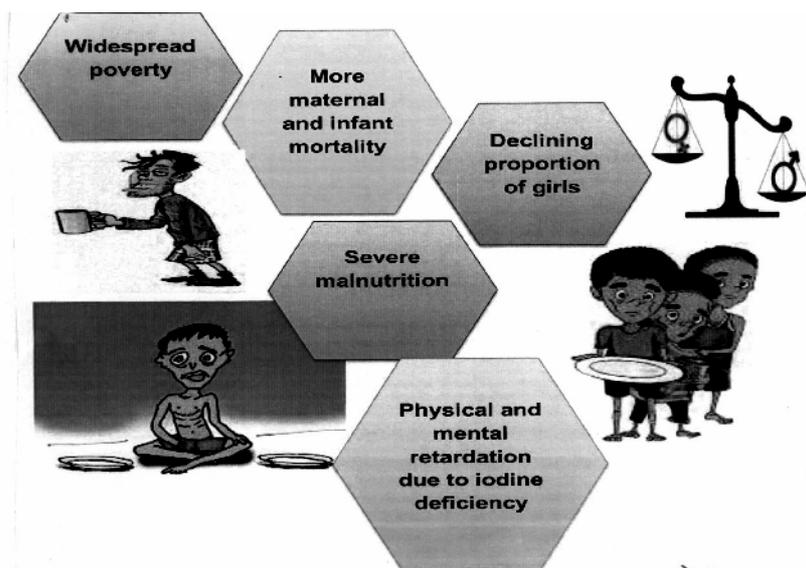
### **‘POINTS TO REMEMBER’**

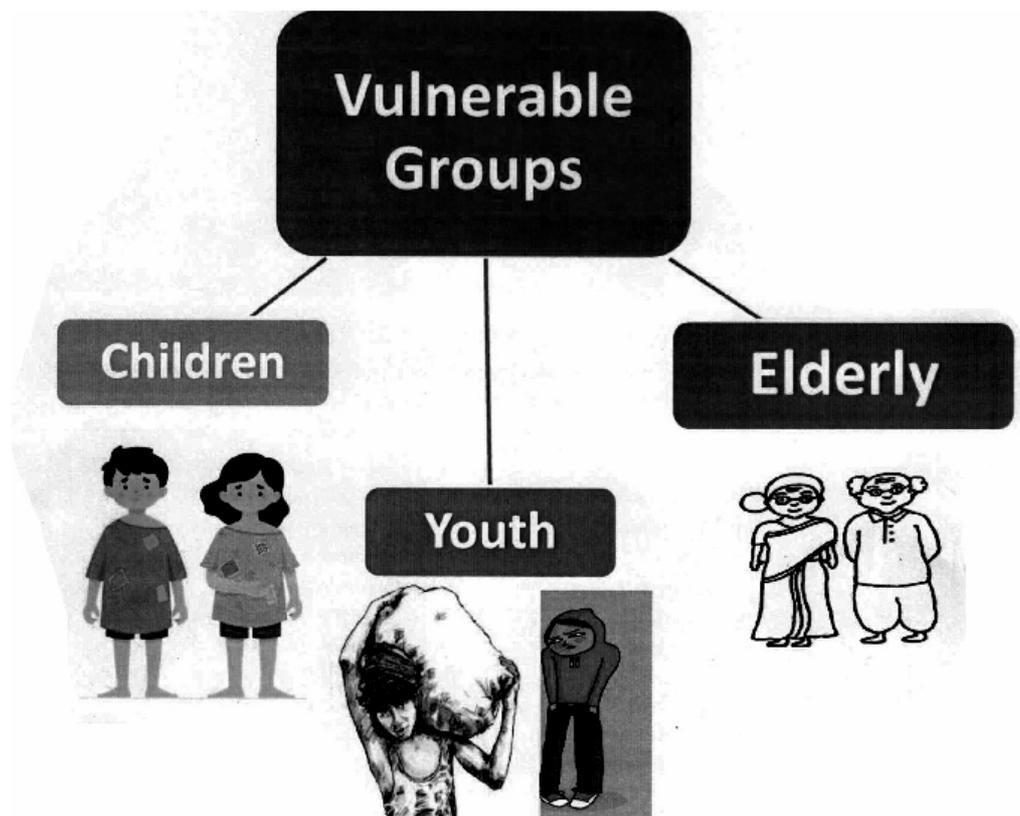
#### **1. Why is there a need for support services, institutions and programmes for children, youth, and the elderly?**

- i. The family is the basic unit of society. One of its main functions is to take care of the needs of its members, such as the need for formal education of children, the need for skills training for youth jobs, and the need for support and health care for the elderly.
- ii. Community builds schools, hospitals, universities, recreation centres, training centres, etc., which provide specialized services or support services, by which various members of the family get an opportunity to fulfil their needs.
- iii. Many families in our country are unable to access the basic services of their members and/ or access the various services provided by other systems of society, due to various reasons, especially due to lack of financial resources. Due to this many children, young and old people are separated from their families and live in challenging situations.
- iv. Many vulnerable children and youth face various difficulties including hunger, malnutrition, limited access to education or medical facilities, violence, discrimination and exclusion. The elderly often face illness, disability and economic dependence on their family members.

## 2. Barriers to access to support services in our country

- i. India has widespread poverty, and the country has one third of the world's poor. According to the Planning Commission, in 2011–12, 29.5 percent of the population was living below the national poverty line.
- ii. Childbirth assistance by less trained midwives, which is the cause of higher maternal and infant mortality rate.
- iii. Less than half of the country's households eat iodized salt. Iodine deficiency adversely affects the mental and physical growth of the child.
- iv. A sense of discrimination against girls and women, which is reflected in many adverse indicators, including nutritional and educational outcomes, and a declining proportion of girls, especially in the youngest age group, as compared to boys.
- v. Nearly two-thirds of children under the age of five suffer from moderate or severe malnutrition. Malnutrition affects the development of all regions.





### 3. Vulnerable Groups

The term vulnerable refers to those individuals/groups in the society who are more likely to be affected by adverse conditions. Children, Youth and Elderly are vulnerable groups.

#### 4. Why are children vulnerable?

- i. Children are vulnerable, because childhood is a period of rapid development in all areas and development of one area affects the development of all other areas.
- ii. For the overall development of children, it is important

that their needs of food, shelter, health, care, love, rearing are met in a holistic manner. Adverse experiences can have a lasting impact on the development of the child.

- iii. All children are vulnerable, but some children are more vulnerable than others. These are children who live in such challenging conditions and difficult conditions that their basic needs for food, health, care, and nurturance are not met.
- iv. All children living in difficult circumstances require special care and protection.

#### **5. Reasons of non-fulfilment of requirements of large proportion of child population in our country-**

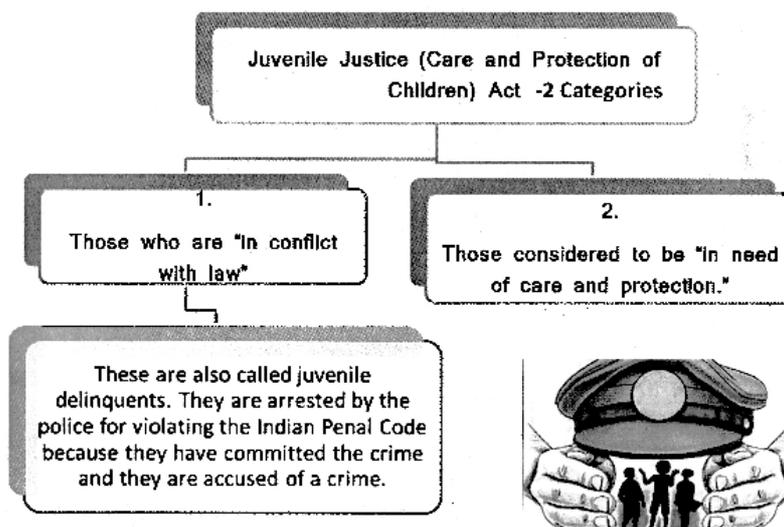
- i. Two-thirds of children under the age of five are malnourished. Malnutrition greatly affects their development.
- ii. About 30 lakh children live on the roads without any shelter.
- iii. Only one in three pre-school children gets an opportunity to participate in elementary education.
- iv. In India, less than half of the children between the age of 6-14 years go to school.
- v. Only one-third of the children enrolled in Class I reach Class VIII, leaving school for some reason or the other.
- vi. According to official estimates in India, 17 crore children work. According to the World Bank, their actual number can be up to 44 crores.

**6. Which children are vulnerable -**



**7. The Juvenile Justice (Care and Protection of Children) Act, 2000 and the Juvenile Justice (Care and Protection of Children) Act, 2015**

- i. The Juvenile Justice (Care and Protection of Children) Act, 2000 was the primary legal framework of justice for



adolescents in India. This was replaced by the Juvenile Justice (Care and Protection of Children) Act, 2015.

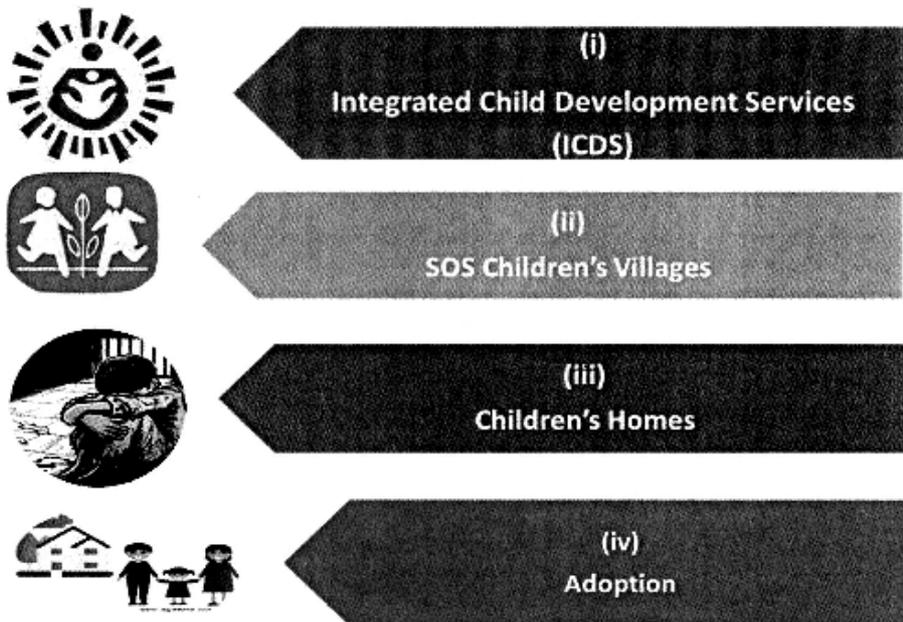
- ii. The Act is concerned with two categories of children–
  - Those who violate the law and
  - Those who need care and protection.
- iii. The Act provides for adopting a child-friendly approach in the adjudication and disposition of matters in the best interest of children and for their ultimate rehabilitation through various institutions.
- iv. This Act is in compliance with the Child Rights Convention and according to this Act, the identified children in need of care and protection are–
  - Those who do not have home or a fixed place or shelter or have no means of sustenance. These include abandoned children, street children, runaway children, and missing children.
  - Those who live with a person (guardian or someone else) who is unsuitable to control the child or where the child is likely to be killed, abused, or neglected by the person.
  - Children who are mentally or physically challenged, ill or suffering from any prolonged illness or incurable disease and have no one to care for or support them.
  - Those who are abused, tortured, or punished for sexual misconduct or immoral acts.
  - Those who are vulnerable to drug addiction or their trafficking.
  - Those who are victims of armed conflict, civil commotion, or natural calamity or disaster,
  - Those who are likely to be abused for unfair advantage. These include abandoned, orphans, trafficked minors rescued from red-light area, child labourers rescued from factories, lost, runaways, children with special needs and children of prisoners.

**Juvenile Justice (Care and Protection of Children) Act - 2015**

This new act allows a 16 to 18-year-old juvenile who commits a 'heinous crime' to be prosecuted in the same way as an adult. Under Juvenile Justice Act, 2000, it was not possible to prosecute any juvenile below the age of 18 years. The Act also includes the qualification of parents for adoption and the method of adoption.

**8. Institutional Programmes and Initiatives for Children**

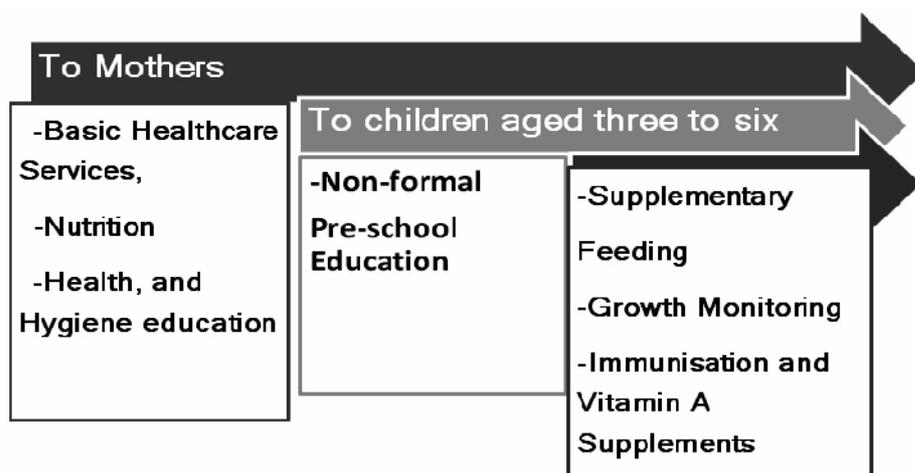
Several programs and various services are being provided by the government and non-governmental organizations in the country to cater to the needs of sensitive children.



**8 (i) Integrated Child Development Services - (ICDS)**

- Objectives –
  - To meet the health, nutrition, stimulation and early learning /education needs of children below six years of age in an integrated manner to promote their development.

- Basic healthcare services and nutrition for pregnant and lactating mothers
- It is the world's largest Early Childhood Program. Currently 41 crore children are benefiting from this program. These services are provided in an integrated manner at a care centres called Anganwadis.



### 8 (ii) SOS Children's Villages

- This is an independent non-governmental social organisation which has pioneered a family approach to the long-term care of orphaned and abandoned children.
- SOS villages have the purpose of providing family-based, long-term care to children who do not live with their biological families for any reason.
- In each SOS home there is a 'mother' who looks after 10-15 children. This unit lives like a family and the children experience relationships and love once again, which helps children to recover from traumatic experiences.
- They grow up in a stable family environment and are supported individually until they become independent young adults.

- The SOS families live together, forming a supportive 'village' environment. They are integrated with the local community and contribute to the social life.



In India, the first SOS village was set up in Faridabad in 1964. Whenever India has experienced unrest or environmental and natural disasters like the toxic gas accident of 1984 in Bhopal, or devastating cyclones, catastrophic earthquakes as well as Tsunami, the SOS Children's Villages provided immediate assistance through emergency relief programmes.

#### **Differences Between ICDS and SOS—**

<b>ICDS</b>	<b>SOS Children village</b>
1. This programme is for children (birth to 6 years), adolescent girls, pregnant and lactating woman.	This organization is only for orphaned and abandoned children
2. It was started by Government of India	It is an independent non-government social organisation.
3. It does not follow family approach	It follows family approach.

### 8 (iii) Children's home-

- Three types of houses have been set up by the government for 3–18-year-olds, which are in the periphery of the state due to various reasons.
- It is the responsibility of the government to provide them with home, boarding, education, and vocational training, so that they will be able to become productive/ useful members of the society. Most of these are run by the home government in partnership with non-governmental organizations.

These are as follows:—

<b>Observation Homes</b>	<b>Special Homes</b>	<b>Juvenile/ Children's Homes</b>
where children stay temporarily till the completion of an investigation to track down their parents and collect information on their family background	where juveniles (children under 18 years of age) found guilty in terms of violation of law, are placed in custodial care.	where children whose families are not traceable, or are unfit/ dead or simply unwilling to take the child back stay.

### 8 (iv) Adoption—

- Adoption means a legal process that allows someone to be the parents of a child, even if they do not have blood relations among themselves.
- The tradition of child adoption in India is quite old.

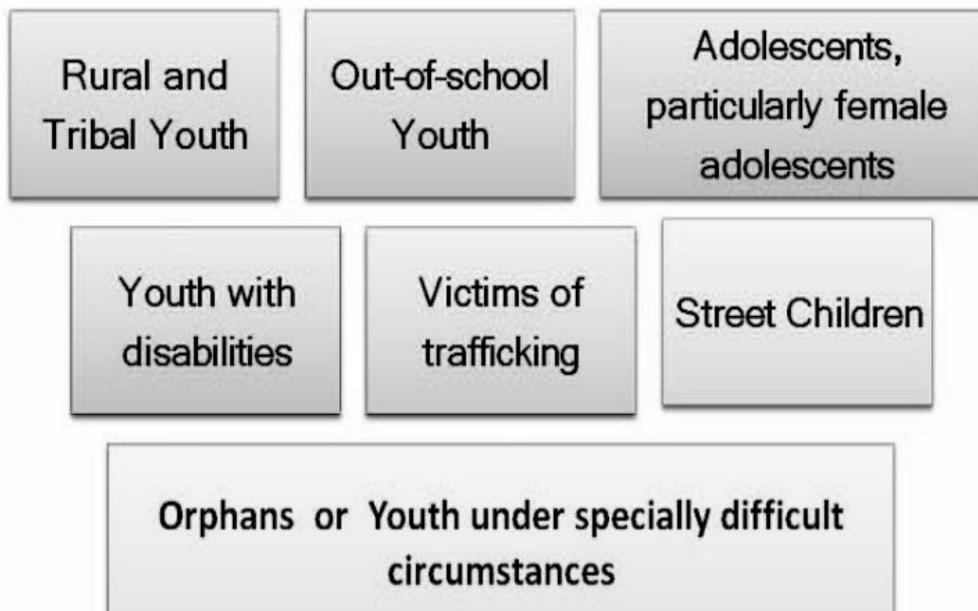
Now the practice of adopting children from outside the family has been made institutional and legal.

- While the Government of India and the State Governments provide the necessary support and guidance through policies and programs, non-governmental organizations (NGOs) provide the necessary delivery system for the adoption process.
- The Government of India has set up a Central Institution, Central Adoption Resource Authority (CARA) under the advice of the Supreme Court which makes guidelines for adoption also monitors and regulates them to protect the welfare and rights of Indian children.

### **9. Who are the 'Youth'?**

- i. According to the National Youth Policy, 2014, 'Youth' is defined as persons aged between 15 to 29 years. Those between 13 and 19 years are also called adolescents.
- ii. Youth is the period when a person prepares to play the role of an adult; The two most important roles during this period are earning a livelihood and marrying and starting a family life.
- iii. Our national progress depends primarily on how youth are encouraged and nurtured for the growth of the nation and are able to contribute to socio-economic development.

## 10. Which Youth are Vulnerable?



## 11. Why are Youth Vulnerable?

- i. Youth is a vulnerable period for many reasons. During this period, a person tries to reconcile the many biological changes that occur in his/her body, which have an impact on the person's health and sense of identity.
- ii. Constant peer pressure and pressure to improve are other factors.
- iii. As a result, some adolescents start consuming alcohol or drugs because the family / environment is not being able to provide positive support to adolescents.
- iv. Youth face many risks related to sexual and reproductive health and many people are not properly aware of the right options for sexual and reproductive health.

## 12. What are the needs of the youth?



## 13. Youth Programmes in India

The National Youth Policy was adopted by the Ministry of Youth Affairs and Sports in 2003, the new National Youth Policy was implemented in the year 2014.

### 13(i). National Service Scheme (NSS)



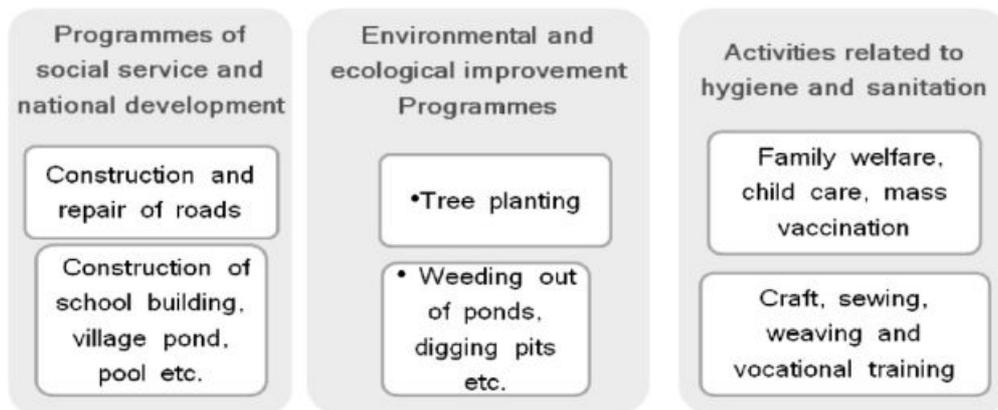
राष्ट्रीय सेवा योजना  
National Service Scheme  
युवा कार्यक्रम और खेल मंत्रालय  
Ministry of Youth Affairs and Sports  
भारत सरकार  
Government of India

- (i) The National Service Scheme (NSS) is a central sector scheme of the Ministry of Youth Affairs and Sports, Government of India.

- (ii) It provides an opportunity to young students from class 11 and 12, from schools, undergraduate and postgraduate students from technical institutions, colleges and universities, to participate in various community service activities and programmes being run in India by the Government.

Objective— NSS's sole objective is to provide experience to young students in providing community service. The students of National Service Scheme also provide assistance to local authorities for implementation of various relief and rehabilitation programmes for the economically and socially weaker sections of the society.

#### **Activities for students under National Service Scheme (NSS)**



### **13 (ii). The National Service Volunteer Scheme and Nehru Yuva Kendra Sangathan**

- (i) Nehru Yuvak Kendras were established in 1972 with the objective of providing opportunities for rural youth to participate in the process of nation building as well as their personality and skill development.

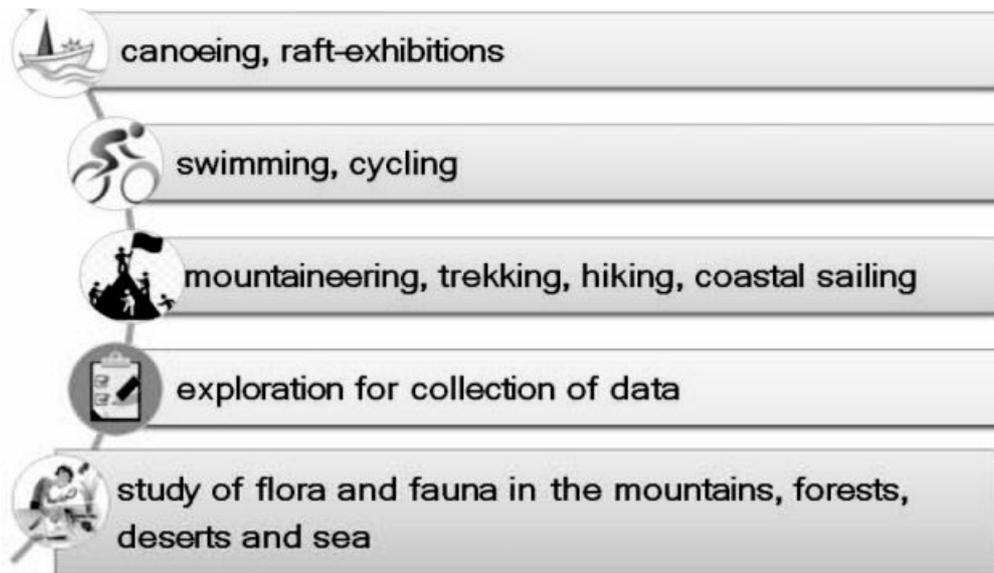
- (ii) In the year 1987-88, the Nehru Yuvak Kendra Sangathan (NYKS) was established as an autonomous body under the Ministry of Youth Affairs and Sports. It is the largest grassroots voluntary organization of its kind in the world.
- (iii) It gives the right direction to the youth of 13-35 years of age based on the principles of voluntarism, self-help, and community participation.
- iv. These activities are organized for the out of school youth with the following objective:
- To make them self-reliant i.e., functionally competent, economically productive, and socially useful.
  - Make them literate and develop mathematical skills.
  - To improve their work capacity and to make them aware of their growth prospects.

#### Various activities for students under Nehru Yuva Kendra Sangathan (N.Y.K.S.)



### 13(iii). Promotion of Adventure

- i. Many youth clubs and voluntary organisations organise various activities using the financial assistance provided by the government for the promotion of adventure, which are as follows-



- ii. These activities are aimed at encouraging the youth to develop courage, risk-taking, collaborative teamwork, ability to read and develop tolerance for challenging situations.

### 13(iv). Promotion of National Integration

- i. Financial assistance is provided by the Government to several voluntary institutions to arrange for the youth living in one region to visit other states with a lot of cultural concerns, thereby developing a greater understanding of the historical and cultural heritage of the country, the difficulties faced by people from different regions and surroundings, social customs of other parts of the country, etc.

- ii. Camps, seminars/conferences etc. are also organized to promote national integration.

### **13(v). Scouts and Guides**

- (i) The government provides financial assistance for training of scouts and guides, organizing rallies and jamborees etc.
- (ii) Objectives-
  - To develop the character of boys and girls by fostering loyalty, patriotism and a sense of being considerate towards others.
  - Promote physical and mental development as well.
  - Developing a spirit of social service.



### **13(vi). Commonwealth Youth Programme**

Objective-To provide a platform for the youth to participate in the development processes of their countries and to enhance cooperation and understanding in the Commonwealth countries.

Three regional centres were established for advanced studies in youth work. The Asia Pacific Regional Centre was established in Chandigarh, India.

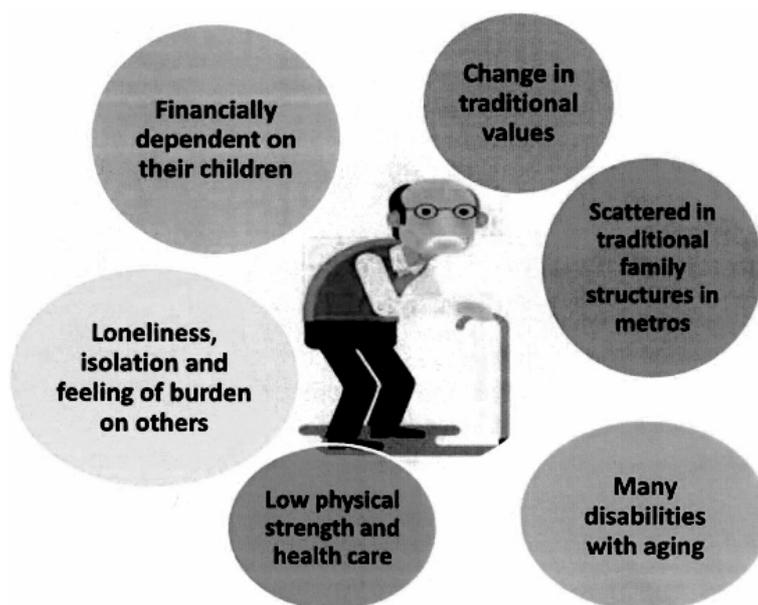
### **14. Characteristics of population of Elderly in India**

- i. In many countries, senior citizens are persons 65 years of age or more. In India, persons aged 60 years, or more are considered as senior citizens.

- ii. Population of elderly in India is continuously increasing-
- Life expectancy which was 29 years in 1947 increased to 67.9 years in 2011.
  - India is second only to China in the population of senior citizens.
  - Majority of these about 80 percent live in rural areas.
  - Increase in the number of women in the elderly population.
  - Increase in the number of old persons (above 80 years of age)
  - About 30 percent of senior citizens are living below the poverty line.

### **15. Why are elders a vulnerable group?**

- i. Poor health-Many diseases and disabilities with aging such as-
- Blindness due to vision impairment and cataract.
  - Deafness due to nervous disorder



- Trouble in walking due to arthritis and inability to take care of oneself.
- ii. The pain of loneliness- a period in the family life cycle when children are married or turned away from the family to earn their livelihood, feel like a feeling of separation or a burden on others or experience loneliness.
- iii. The stress of being financially dependent on your children.

#### **16. The reason for the lack of proper care for the elderly**

- i. There is fragmentation of the traditional family network– Certain features of city life (small family size, nuclear families, lack of free time to care for the aged, limited living space, high cost of living, long working hours), lead to reduced support within the immediate and extended family.
- ii. Changes in traditional values.
- iii. Sometimes concepts like privacy, space, independence, materialism, focus on self are also responsible for the inability to adequately care for the elderly. Thus, many older persons live alone at a time when family support is more essential for them.

#### **17. Some programs for the elderly**

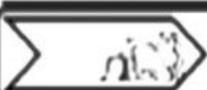
- i. The government adopted the National Policy for Older Persons in 1999.
- ii. The elderly should be treated as human resources and their extensive experience and remaining capabilities should be optimally utilized for the development of the nation. The government should also ensure their ability to live healthy and meaningful, lives.

iii. National Old Age Pension Scheme (NOAPS) This scheme was renamed as Indira Gandhi National Old Age Pension Scheme (IGNOPS) in the year 2007.

- It is for the elderly who are either destitute or belong to a family below the poverty line.
- Earlier, the age of senior citizens to participate in old age pension scheme was 65 years, which has been reduced to 60 years in the year 2011.
- Now the beneficiaries must be living below poverty line and 60 years or above in age. They should have their age certificate and proof of being destitute.

**iv. Some programs being run for the elderly in the country-**

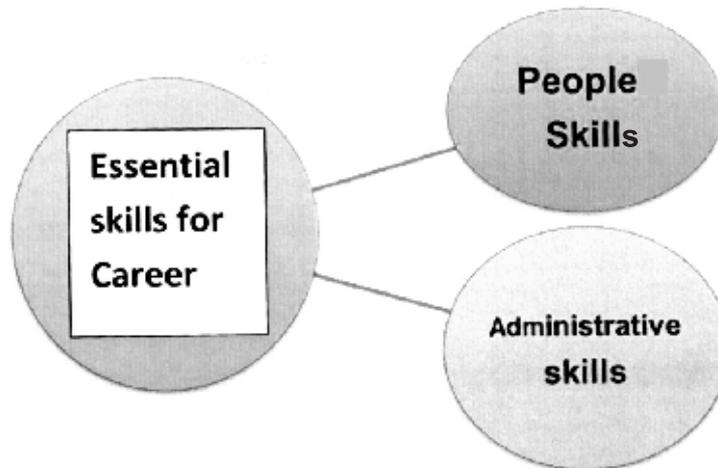
	• Mobile medical care units for the elderly living in rural and remote and backward areas.
	• Developing and strengthening inter-generational relationships, especially between children/youth and the elderly.
	• Food, shelter and health care for abandoned elderly
	• Mult-service centers for the elderly who provide them with day care education, entertainment, companionship and health care.
	• Program to awaken sensitivity in children of school and colleges.
	• Training and awareness programs for caregivers of the elderly.

	• Respite Care Homes for elderly people who are seriously ill
	• Old Age Homes to provide food, care and shelter
	• Research advocacy and awareness.
	• Mental health care and specialized care for the elderly such as disability and hearing aids / devices
	• Indira Gandhi National Old Age Pension Scheme (IGNOAPS)
	• Physiotherapy Clinic Physiotherapy Center
	• Assistance and Counseling Center for the Elderly
	• Day care center for patients with Alzheimer's disease/dementia

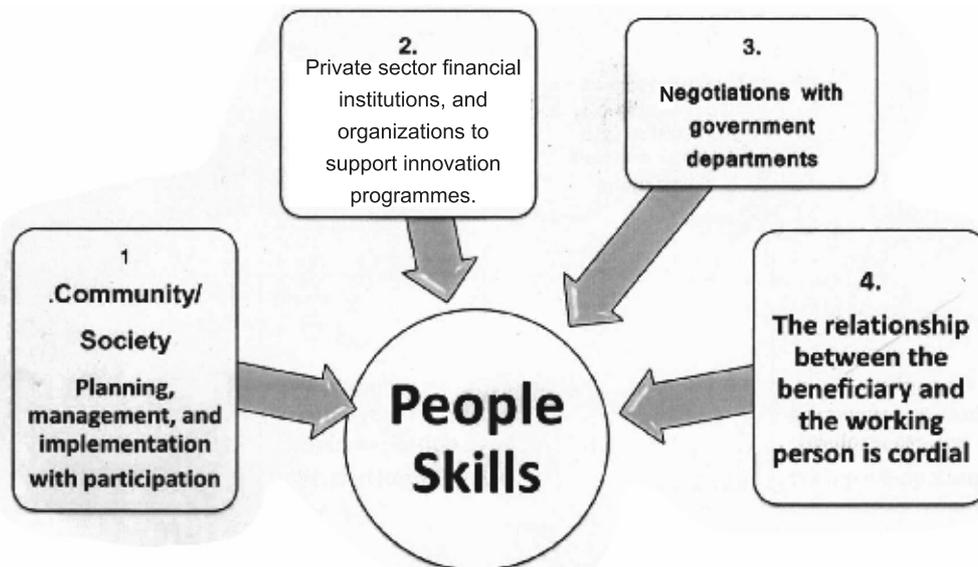
## 18. Preparing for career

- i. Career/ employment in the management of institutions and programmes for children, youth and the elderly requires the capabilities and skills of a planner, manager and supervisor, to work as an in-charge or manager in an already running program/ institution.
- ii. As a career/ employment option, entrepreneurs can also take initiative to set up an organisation / programme for youth, children, or elderly people. For which, the needs of the target group and methods of care should be fully known.
- iii. Comprehensive knowledge of career and development of many skills and abilities.

## 19. Essential Skills for Career



- (i) **People Skills-Running or working in an organisation means that one has to interact with people from different backgrounds working in different positions.**



## ii. Administrative skills –

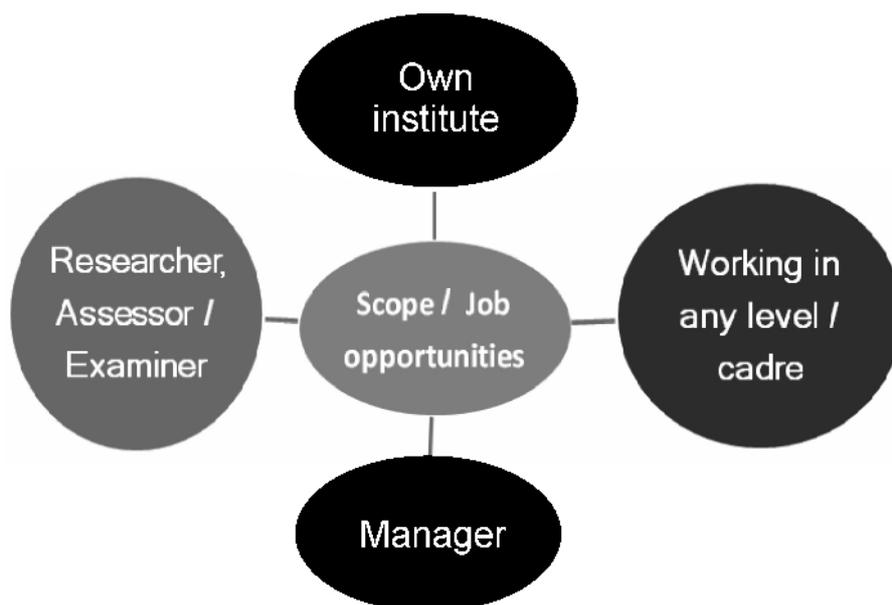
A fundamental understanding of each issue must be there in running or managing an organisation or programme.



## 20. Study programmes/ courses to enter the employment market of the region



## 21. Scope/ Career Avenues



### Full forms of abbreviations

1	JJ Act	Juvenile Justice (Care and Protection of Children) Act
2	CRC	Convention on the Rights of the Child
3	ICDS	Integrated Child Development Services
4	NGO	Non-Government Organisation
5	IPC	Indian Penal Code
6	CARA	Central Adoption Resource Authority
7	NYP	National Youth Policy
8	NSS	National Service Scheme
9	NYK	Nehru Yuvak Kendra
10	CYP	Commonwealth Youth Programme
11	NOAPS	National Old Age Pension Scheme
12	IGNOAPS	Indira Gandhi National Old Age Pension Scheme
13	IGNOU	Indira Gandhi National Open University
14	MYAS	Ministry of Youth Affairs And Sports

**OBJECTIVE QUESTIONS (1 MARK)**

**(A) Multiple choice questions**

1. What do children who indulge in illegal activities and who are arrested by the police for violating the Indian Penal Code known as?

- a) Smuggled minors
- (b) Juvenile delinquent
- (c) Abandoned children
- (d) Young rebels

**Answer-** b) Juvenile delinquent

2. Why was the Central Adoption Resource Authority (CARA) formed?

- a) To provide immediate assistance through emergency relief programmes
- b) To provide positive support to the adolescents
- c) To develop skills and impart vocational training among children
- d) To facilitate and strengthen adoption rules

**Answer-** d) To facilitate and strengthen the adoption rules

3. Under which programme do youth clubs or volunteer organisations organise activities such as study of flora, fauna of the mountains, forests, deserts, and seas?

- a) Promotion of adventure
- b) Promotion of national integration
- c) National Discipline Scheme
- d) Commonwealth Youth Programme

**Answer-** a) Promotion of adventure

4. What is the minimum age of the beneficiaries in Indira Gandhi National Old age Pension Scheme (IGNOAPS)?

- a) 60 years or more
- b) 62 years or more
- c) 65 years or more
- d) 68 years

**Answer-** a) 60 years or more

5. In which year the first SOS village was set up in India and who were the beneficiaries? (CBSE Sample Paper-2022)
- a) 1954 and disabled children
  - b) 1964 and abandoned children
  - c) 1965 and special need children
  - d) 1963 and juvenile delinquents

**Answer-b) 1964 and abandoned children**

6. Name the agency which set up guidelines for adoption to safeguard the Welfare and Rights of children. (CBSE Sample Paper-2022)
- a) NARA
  - b) CARA
  - c) CAPA
  - d) RACA

**Answer- b) CARA**

7. Mention the years in which 'National Policy for older person' and 'National Youth Policy' were adopted. (CBSE Sample Paper-2022)
- a) Year 1999 and 2003
  - b) Year 1998 and 2003
  - c) Year 1999 and 2004
  - d) Year 1998 and 2004

**Answer- a) Year 1999 and 2003**

8. Mr. Ramesh found a four-year-old child near the Railway station and handed him over to local Police. Suggest the suitable option for the police for the time being, where the child should be sent. (CBSE Sample Paper-2022)

- a) Juvenile home                      b) Special home  
c) Observation home                  d) SOS Village

**Answer- c) Observation home**

9. Mr. Anil is 80 years old. He is living in an old age home and underwent heart surgery last week and he needs continuous nursing care. Which of the programme is suitable for him?  
(CBSE Sample Paper-2022)

- a) Mobile care unit                      b) Respite homes  
c) Multi-units                              d) Daycare

**Answer- b) Respite homes**

10. The National Service Volunteer Scheme provides opportunities to students to involve, on a whole-time basis for a short period of one or two years, in programme of national development.

(CBSE Sample Paper-2022)

Following are the programmes undertaken by them-

- a) Organizing jamborees              b) Vocational training  
c) Adult Education                      d) Coastal sailing

Choose the correct option.

- a) (i)and(ii)                                  b) (ii) and (iv)  
c) (iii) and (iv)                              d) (i) and (iv)

**Answer- d) (i) and (iv)**

11. The elderly are vulnerable group due to various reasons.  
(CBSE Sample Paper-2022)

Some reason are-

- i. Decreased defense mechanism
- ii. Increased financial resources
- iii. Improved physiological reserves



2. Name any two 'vulnerable' groups.

**Answer:** Children, youth, elderly (any two)

3. According to the new National Youth Policy-2014, which age group has been considered as youth?

**Answer-** 15-29 years

**(D) Case Study Based Questions**

*Read the passage carefully and answer the questions :*

National Service Scheme Day is observed every year on 24 September. It was first celebrated on September 24, 1969, when the National Service Scheme was established. The motto of this scheme is 'Not me but you ', through which the volunteer supports the need for selfless service in a democratic manner. Youths have a huge contribution in building a nation. Today 65 percent of the population in the country is young. For this, at the time of independence, Gandhiji had laid special emphasis on connecting youth with national service. After independence, the University Grants Commission, under the chairmanship of Dr. Radhakrishnan, recommended for the first time to start national service in educational institutions on a voluntary basis.

1. Choose the correct pair in the context of programmes for youth:

- (a) National Services Schemes: ICDS
- (b) Scouts and Guides : Jamborees
- (c) Promotion of Adventure : Social services
- (d) Promotion of National Integration : Respite Homes

**Ans.** (b) Scouts and Guides : Jamborees

2. Match the programme in List I with the appropriate vulnerable group in List II.

- | List I<br>(Programme) | List II<br>(Vulnerable Group)      |
|-----------------------|------------------------------------|
| i. ICDS               | 1. Children below 6 years          |
| ii. NSS               | 2. School/college level youth      |
| iii. CARA             | 3. Children upto 18 years          |
| iv. IGNOAPS           | 4. Elderly aged 60 years and above |

Choose the correct option from the following :

- (a) i-1, ii-2, iii-3, iv-4                      (b) i-4, ii-3, iii-2, iv-1  
(c) i-2, ii-1, iii-4, iv-3                      (d) i-3, ii-4, iii-1, iv-2

**Ans.** (a) i-1, ii-2, iii-3, iv-4

3. Given below are two statements labelled as Assertion (A) and Reason (R).  
Assertion (A) : Nehru Yuva Kandra's youth development through community-based initiatives.

Reason (R) : Their primary objective is to recruit youth for the Air Force.

Select the most appropriate answer from the options given below :

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A).  
(b) Both (A) and (R) are true, but (R) is the correct explanation of (A).  
(c) (A) is true, but (R) is false.  
(d) (A) is false, but (R) is true.

**Ans.** (c) (A) is true, but (R) is false.

4. Given below are two statements labelled as Assertion (A) and Reason (R).  
Assertion (A) : All youth naturally develop strong coping skills during adolescence.

Reason (R) : Youth are often exposed to peer pressure, identity confusion and emotional fluctuations.

Select the most appropriate answer from the options given below :

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A).  
(b) Both (A) and (R) are true, but (R) is the correct explanation of (A).  
(c) (A) is true, but (R) is false.  
(d) (A) is false, but (R) is true.

**Ans.** (d) (A) is false, but (R) is true.

### **Short Answer Questions (2 Marks)**

1. 'What does vulnerable mean? Briefly explain.

**Answer** - Refer to Points to remember No. 3.

2. Seema works as a planner in an organization for the elderly. She has to meet people from different backgrounds, both inside and outside the organization, in relation to work. Explain what skills she would use and which two groups she might have to talk to.

**Answer:** Refer to Point to remember 19 (i)

3. What are some concerns with respect to the elderly?

**Answer-** Some concern in the context of old persons-

- a) Health is a major concern. Older persons are more susceptible to diseases due to less physical strength and defense mechanisms. Vision loss and blindness due to cataract, deafness due to nerve disorder, difficulty in walking due to arthritis and inability to take care of themselves can occur.
  - b) Pain of Loneliness - They suffer the pain of loneliness as their children get married or go out of the family to earn a livelihood.
  - c) They become financially dependent on their children, due to which they feel stressed.
  - d) In city life, they also experience the feeling of becoming a burden on others due to small family, nuclear family, lack of time to care for the elderly, limited space to live or high cost of living.
  - e) Sometimes concerns like privacy, long working hours of family members, independence, materialism, focus on self are also responsible for the inability to adequately care for the elderly.  
(Any other, any two)
4. Within the broad category 'Youth', write names of four groups who are especially vulnerable. (CBSE Paper 2022-23)

**Answer** Names of four Youth groups who are especially vulnerable :

1. Rural and Tribal Youth
  2. Out-of-school Youth
  3. Adolescents, particularly female adolescents
  4. Youth with disabilities
  5. Youth under especially difficult circumstances like victims of trafficking, orphans and street children
5. Viren wants to work with vulnerable group of society. He is doing his graduation from renowned state university. Advise him with two courses he can do along with his graduation. (CBSE Sample Paper 2023-24)

**Answer** Two courses which can be done along with graduation :

- (i) Certificate Programme in NGO Management
- (ii) Diploma in Youth Development Work

### Short Answer Questions (3 Marks)

1. Why are children, youth and the elderly vulnerable? (NCERT)

**Answer** - Children, youth and elderly are vulnerable due to the following reasons

	Children	Youth	Elderly
1	Living in challenging situations and difficult situations	Unable to keep pace with many biological changes occurring in the body	Low physical strength, mental problems
2	Basic requirements of food, health, care, shelter, and rearing are not met.	Peer pressure, Alcoholism or drug abuse to relieve stress	In addition to illnesses, many disabilities with aging such as- vision impairment, inability to take care of themselves
3	Other needs of the child such as love, nurturance and stimulation is not met in a holistic manner.	Not receiving positive support from the family/ surroundings	Pain of loneliness, separation, being ignored by children or giving less time
4	Due to adverse experiences of any kind, their full capabilities do not develop and leave a lasting impact on the child's development	Facing multiple risks related to sexual and reproductive health	The feeling of becoming a burden on others, The stress of being financially dependent on the children

(Any other, any two for each group)

2. Describe two programmes each for children youth and elderly. (NCERT)

OR

David has come to India from New York for training at a voluntary institution. Tell him about two ongoing programmes each for the Children, Youth and Elderly.

Refer to points to Remember-

No. 8 (for Children), No. 13 (for Youth) and No. 17 (for elderly)

3. What advice will you give to someone who is planning to setup her/his own institution for children/youth elderly. (NCERT)

OR

Naveen is planning to open his own private institute for children / youth / elderly people. Guide him by mentioning any six important points related to it.

**Answer** - i. Acquiring information and developing understanding about children, youth and the elderly.

- ii. A clear and complete concept - what its goal is and how the organization will contribute to meeting the needs of the target group.
  - iii. What will be the benefit to the targeted beneficiaries.
  - iv. Combining the service / services provided.
  - v. Financial assistance for running the organisation.
  - vi. Recruitment of staff with various skills and knowledge to oversee various aspects of the programme
  - vii. Knowledge of activities based on organization registration formalities, recurring evaluation, and feedback.
  - viii. Programme execution skills
- (Any other, any six)

#### **Long Answer Question (4 Mark)**

1. The Juvenile Justice (Care and Protection of Children) Act deals with which two categories of children? What are the children in need of care and protection as per this Act?

**Ans.** Refer to Points to Remember Number-7

1. In order for the child to grow optimally in all areas, it is important that the child's needs for food, shelter, healthcare, love, nurturance and stimulation be met in a holistic. Manner,  
SOS children's village and ICDS are example of some of the initiatives operating in the country to meet the needs of vulnerable children.
- When was first SOS village established?
  - What is the main aim of SOS village?
  - How can you distinguish it with ICDS? Give two points.

(CBSE Sample Paper 2023-24)

**Answer** (a) First SOS village was established in 1964.

- Main aim of SOS village- Provides family based long term care to children who can no longer grow up with their biological families.
- Two differences between ICDS and SOS :

ICDS	SOS
This organization is for children (birth to 6 years), adolescent girls, pregnant and lactating woman.	This initiative is only for orphaned and abandoned children.
It was started by Government of India.	It is an independent Non-government social organisation.
It does not follow family approach.	It follows family approach.

- Five-year-old Bunty is separated from his parents at the railway station. Which type of children's home will the railway personnel send him to?
  - Briefly explain two other kinds of children's homes run by the Government for vulnerable children.
  - Name the law enacted for children involved in anti-social activities.

(CBSE Paper 2022-23)

**Answer-** (a) Observation Home

(b) Two other kinds of children homes run by the Government for vulnerable children :

(i) Special homes-where juveniles (children under 18 years of age) found guilty in terms of violation of law, are placed in custodial care.

(ii) Juvenile/children's homes-where children whose families are not traceable or are unfit/dead or simply unwilling to take the child back stay.

The government is responsible for providing room, boarding, education and vocational training.

(c) Juvenile Justice (Care and Protection of Children) Act

### **Long Answer Questions (5 Marks)**

1. Kusum has to go to a remote area to deliver a lecture on 'Aged in India', a project on social work. Help Kusum by making a list of ten ongoing programs for the elderly in the country.

**Answer:** Refer to points to remember No.17.

2. Describe the knowledge and skills you will need in order to pursue a career in management and programmes for children/youth/elderly.

**Ans.** Refer to Points to Remember no. 19, 20

## 8. DESIGN FOR FABRIC AND APPAREL

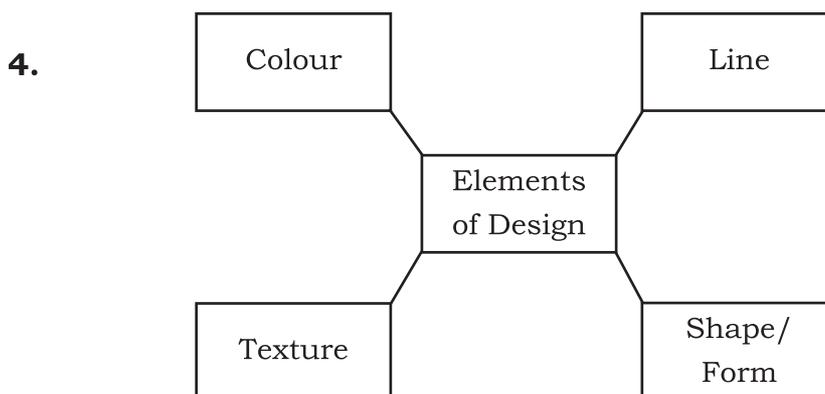
### Points to remember

1. **Design is the human power to conceive, plan and realise products that serve human beings in the accomplishment of any individual or collective purpose.**

**Design Analysis—Design is an arrangement according to a plan for creation of a desired object which gives aesthetic satisfaction.**

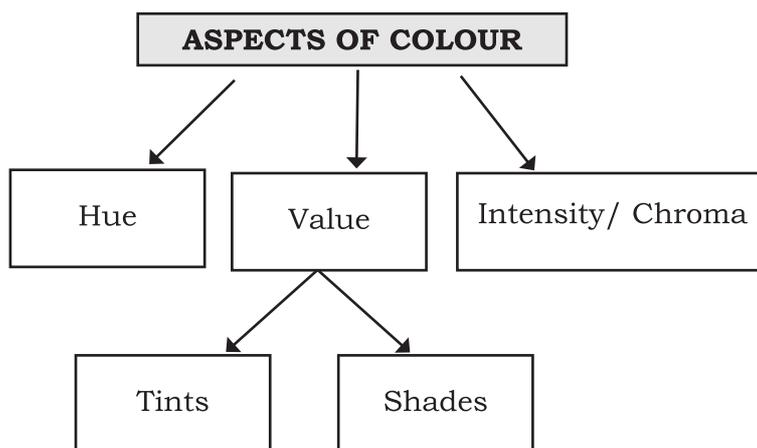
2. **Designs are of two types- Structural, Applied**
  - i. Structural design depends on the basic cut of the garment. Fabric is cut and stitched in different ways to give the structural design in the dress. Example- A line frock.
  - ii. Applied design is super imposed on the fabric. It beautifies the dress and it looks attractive. Example- embroidery, fancy buttons, lace, dyeing and printing, fancy needle work etc. on garments.

3. **Two main factors of Design- Elements and Principles**



5. Choice of colour of clothes depends on the following points-
  - i. Personal choice
  - ii. Season
  - iii. Occasion
  - iv. Peoples' thoughts
  - v. Culture/ Traditions
  - vi. Climate
  - vii. Fashion
6. Colour can be defined as reflection of light striking the surface of an object. It is the visual sensation resulting from reflection of visible light rays that strike the retina and stimulate cells in the nerves of the eye. The nerves send a message to the brain and we can see colour. When all light rays are reflected, the object appears white, when none are reflected, it is black.
7. Light is a form of radiant energy. It is a part of electromagnetic radiation spectrum. Sunlight is the radiant energy reaching the Earth from Sun by light waves.
8. When light falls on raindrops, it gets scattered to produce the spectrum of seven colours. Spectrum is briefly called VIBGYOR. The seven colours are Violet, Indigo, Blue, Green, Yellow, Orange and Red. Besides these seven colours, sunlight rays have ultra-violet and infra-red rays.
9. Receding or restful colours:- These are light rays of short wavelengths like- green, blue and purple.  
Advancing or Stimulating colours:- These are light rays of longer wavelengths like- red, orange, yellow.

**10. According to Munsell's colour wheel, three aspects of colour-**

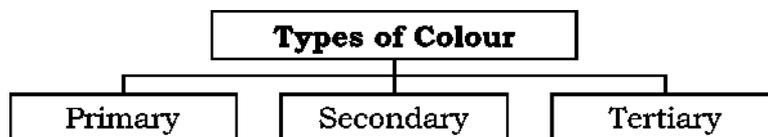


**Hue-** Hue is the common name of the colour like red, blue, yellow

**Value-** Value describes lightness or darkness of a colour. When white is added to any colour to make it light, it is called Tint. Black can be added to any colour to make it dark. It is called Shade. Like Pink and mehroon are two values of red colour.

**Intensity or chroma-** It tells the brightness or dullness of a colour like rose red and blood red are of different intensities.

**11. Three types of colour according to Munsell's colour wheel- Primary, Secondary and Tertiary.**



**Primary colours-** They are basic colours which cannot be made by mixing any other colours e.g. red, yellow, blue.

**Secondary colours-** When two primary colours are mixed in same quantities, secondary colours are formed e.g.

Blue+Yellow= Green

Blue+Red= Purple

Red+Yellow= Orange

**Tertiary colours-** When two colours (one primary and one secondary) are mixed in same quantities, tertiary colours are formed e.g.

Red+Orange = Red Orange

Red+Purple = Red Purple

Yellow+Green = Yellow Green

Yellow+Orange = Yellow Orange

Blue+Green = Blue Green

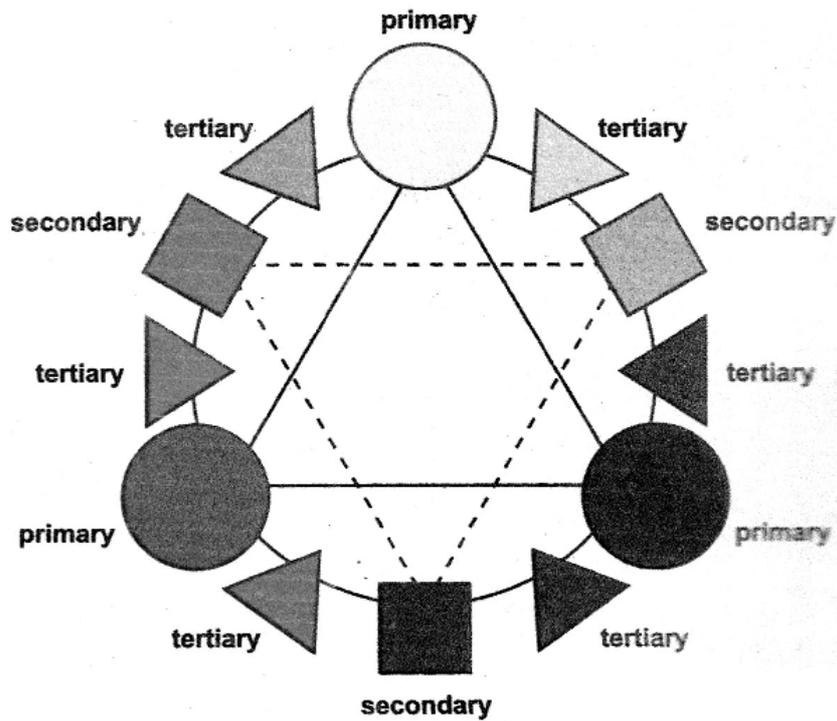
Blue+Purple = Blue Purple

**12. Neutral Colours/ Achromatics-** They are colours without colour like- white, black, grey, silver, metallics.

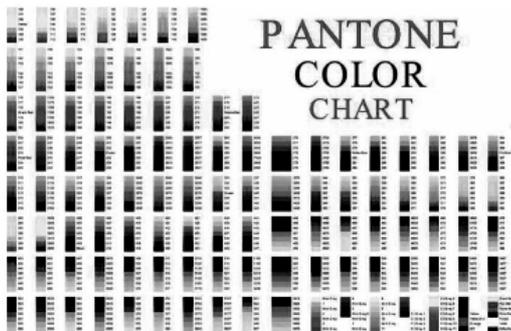
**13. Grey scale-** Grey scale helps to judge the value of any colour. It has 11 grades (0 to 10). Value of black is 0 and white colour is 10. The mid value for grey or hue is 5. It shows the tints and shades of any colour (hue).

0	1	2	3	4	5	6	7	8	9	10
BLACK					GREY					WHITE
S	H	A	D	E	HUE	T	I	N	T	S

**Grey Scale**



Pantone Colour Chart



Pantone Shade Card



**14. Recognising colour- There are many ways to recognise a colour**

- i. According to various values and intensities- like red colour can be of many types; brick red, blood red, tomato red, ruby red, carrot red.

- ii. According to natural sources of colour- like fruits, flowers, trees, food items, animals, birds, stones, metals.
- iii. Pantone shade card- Pantone shade card shows all possible hues, tints and shades in varying intensities. Each has been given a code number, which is recognised internationally. This helps in fashion forecasting and when orders for products are given in foreign lands.

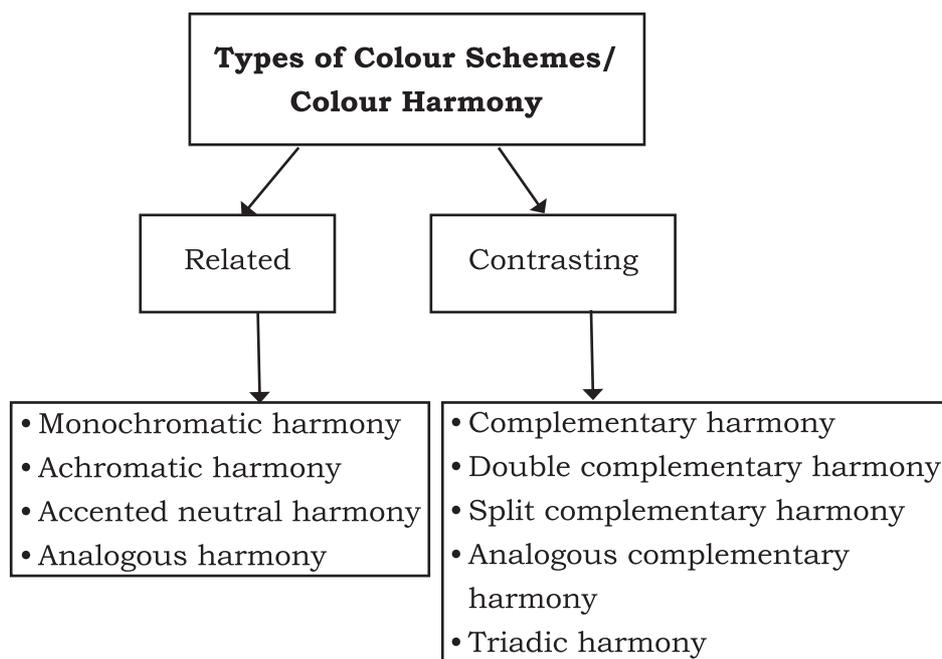
**15. Colour can be added on fabric at different stages-**

- i. At fibre stage- Many times fibre can be dyed. It is done when fibres which are not easily dyed or if the design requirement is for a yarn with multicoloured fibres. Dyeing at fibre stage is done rarely because it is an expensive process.
- ii. At yarn stage- Many times yarn is dyed which helps to create multifarious designs like woven stripes, checks, plaids, brocade and jacquard.
- iii. At fabric stage- It may be done on ready fabrics using one colour to produce simple single coloured fabrics and also as designed materials through tie and dye or batik. It is the most popular method.
- iv. At fabric stage, colour can be added by painting, printing, embroidery, patch or applique work.

**16. Colour scheme/ Colour harmony-Using various colours in a systematic manner is called Colour Scheme or Colour harmony.**

**(A) Related Colour Schemes/ Harmonies**

Colour schemes which are made using colours which lie near each other on the colour wheel are called related colour schemes/ harmonies. They have atleast one common hue. They are of four types-



- i. Monochromatic harmony- This colour scheme is based on one hue. Here one hue, with different values and intensities is used. e.g. red, pink, mehroon.
- ii. Achromatic harmony- Only neutral colours are used in this colour scheme. e.g. white, black.
- iii. Accented neutral harmony- In this colour scheme, one neutral colour and one other colour are used. e.g. white and red, black and yellow etc.
- iv. Analogous harmony- In this colour scheme, two or three neighbouring colours of the colour wheel are used. e.g. yellow, yellow green and green.

### **(B) Contrasting Colour Schemes/ Harmonies**

Colour schemes which are made using colours which lie far away from each other on the colour wheel are called contrasting colour schemes/ harmonies.

- i. Complementary harmony- In this colour scheme, two colours are used which lie exactly opposite to each other on the colour wheel. e.g. red and green, blue and orange.
- ii. Double complementary harmony- In this colour scheme, there are two pairs of complements which are neighbours to each other on the colour wheel. e.g. red, green, purple, yellow.
- iii. Split complementary harmony- In this colour scheme, one colour and two colours on left and right of its complement are used to make a colour scheme. e.g. red, blue green, yellow green.
- iv. Analogous complementary harmony- This colour scheme is a combination of analogous and complementary schemes, a complement selected for dominance in a group of neighbouring colours. e.g. red, red purple, purple and yellow, yellow green, green.
- v. Triadic harmony- In this colour scheme, three colours are used which form equidistant triangle on the colour wheel. e.g. red, blue, yellow.

**17. Texture is the sensory impression of sight and touch and refers to the tactile and visual qualities of the material.**

Texture can be described in the following terms-

- i. How it looks- shiny, dull, opaque, transparent, translucent, dense, glossy
- ii. How it behaves- limp, stiff, sticking out, clinging, flowing out.
- iii. How it feels- soft, crisp, harsh, smooth, rough, coarse, grainy, pebbly.

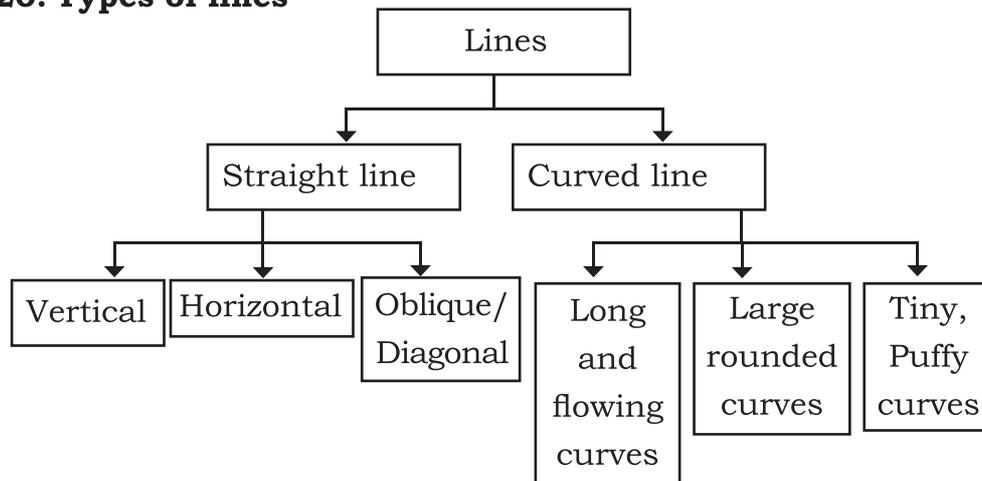
**18. Factors which determine the texture in textile materials-**

- i. Fibre content- fibre type (natural or man made), its length and fineness and its surface characteristics.

- ii. Yarn processing and yarn type- method of processing, twist inserted during processing, fineness of the yarn and type of yarn.
- iii. Fabric construction technique- Weaving (type of weave and its compactness), knitting, felting, braiding, lace making.
- iv. Fabric Finishes- Stiffening (Starching, sizing or gumming)] ironing, calendaring, tentering, napping, fulling.
- v. Surface ornamentation- tufting, flock printing, embroidery and stitched effects.

**19. Line is defined as a mark that connects two points. It has a beginning and an end. It can be outline of an object, shape or form. As an element of design, line indicates the shape of things, provides movement and determines direction.**

**20. Types of lines**



**Straight lines-** Straight line is a rigid unbroken line, which creates different effects depending on its direction.

They can express mood. They indicate force, strength and rigidity.

Straight lines are of three types-

## STRAIGHT LINES



VERTICAL LINES



HORIZONTAL LINES



OBLIQUE/ DIAGONAL LINES

## CURVED LINES



**Long and flowing curves**

**Tiny, puffy curves**

**Large rounded curves**

- i. Vertical lines- These lines stress up and down movement. They give an illusion of height, and give the severe, dignified and reserved effect.
- ii. Horizontal lines- These lines stress one side to other side movement. They give an illusion of width and give a stable and placid effect.

- iii. Oblique or Diagonal lines- These lines increase or decrease width and height depending on the degree and direction of angle. They can create an active, startling or dramatic effect.

**Curved Lines-** Curved line is one with any degree of roundness. The curved line can be a simple or a complicated free hand curve. The degree of roundness determines the curve. A slight degree of roundness is called a Restrained curve, a greater degree of roundness gives a circular curve. Certain objects are associated with these curves and named as such, for example- parabola, scroll, meander, hairpin, whiplash serpentine, figure of 8 etc. Curved lines appear soft and graceful.

Curved lines are of three types-

- i. Long and flowing curved lines- They appear most graceful and rhythmic.
  - ii. Large rounded curves- They lend a dramatic touch and tend to exaggerate size.
  - iii. Tiny puffy curves- They are youthful and gay.
21. Shapes or Forms are made by connecting lines. They can be two dimensional like drawing or print on a fabric. They can be three dimensional (which can be viewed from three or more sides) like a garment on human body. The characteristics of the lines used will determine the characteristics of the shape.

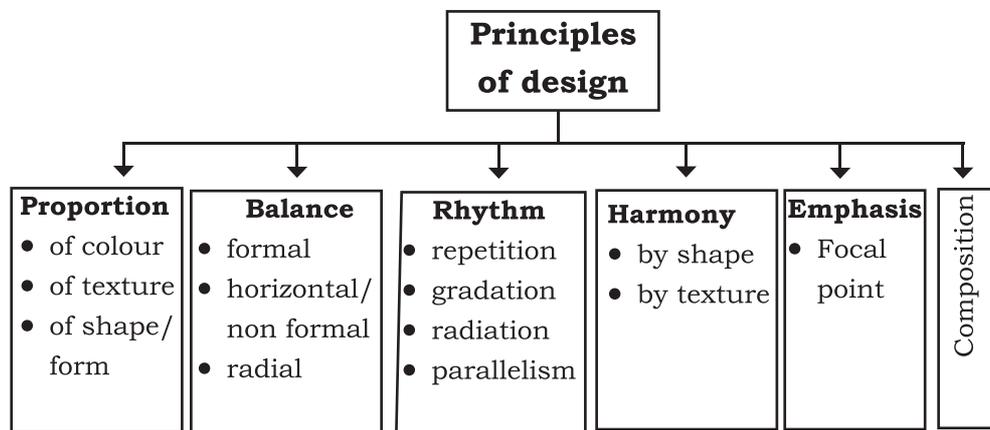
## 22. Four basic groups of shapes-

- i. Natural shapes- They are like nature or common shapes of man made objects.
- ii. Stylised shapes- They are simplified or modified natural shapes. They may have some part distorted or exaggerated.
- iii. Geometric shapes- They are those which can be mathematically formed, which are made by using ruler, compass or other measuring instruments.

- iv. Abstract shapes - They are free form. They do not resemble any specific object but may represent different things to different people because of personal association.

**23. Pattern is formed when shapes are grouped together. This grouping may be all of one shape or a combination of two or more types of shapes. The arrangement of these shapes can also be natural, stylised, geometric or abstract.**

**24. Principles of Design are the rules that govern how design elements are mixed in the most appropriate way.**

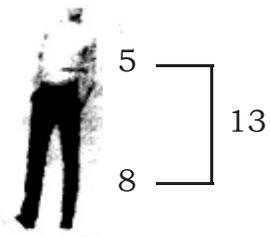
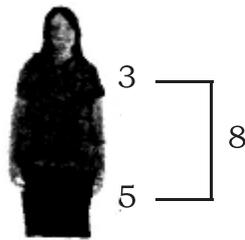


**1. PROPORTION-** Proportion means relation of one part of an object to another. This relationship can be created in size, colour, shape and texture. This is generally based on the proportion of **Golden Mean**. The Golden Mean of a skirt and top is 3:5:8 and of a pant shirt is 5:8:13.

There are various ways of bringing proportion in a dress -

- i. Proportion of colour- Different colours can be worn as shirt and pant to create proportion of colour by using the Golden mean.
- ii. Proportion of texture- This is achieved when various textures of material used for making a dress increase or decrease the size of the person wearing the garment,

PRINCIPLES OF DESIGN  
PROPORTION (Golden Mean)



FORMAL BALANCE



HORIZONTAL/  
INFORMAL BALANCE



RADIAL BALANCE



EMPHASIS



**HARMONY**

By shape



By Texture



**RHYTHM**



**REPETITION**

**RADIATION**



**GRADATION**



**PARALLELISM**

eg. heavy textured garments do not look good on a thin person.

- iii. Proportion of shape and form- The size and positioning of motifs or print in a dress are in proportion to the size of the wearer. Small child's dress should have small prints, elderly person's dress should have big prints. In pregnancy, women's kurti should have high waist bodice. Unequal horizontal division makes a person look slim.

**2. BALANCE-** Balance means equalling the distribution of weight from the central point of the garment. If a vertical line is drawn in the centre of any garment, then it should have balance. The elements of design-line, form, colour, texture all are considered while creating balance in a dress.

Balance can be achieved in three ways-

- i. Formal balance- A human body is symmetrical, which means the body appears to be the same on each side of a central vertical line. If a central vertical line is made in any garment, and its left and right side are same, then that garment has formal balance, like in a shirt both sides there is collar, cuff, sleeve etc. This is less expensive. Formal balance gives a feeling of stability, dignity and formality but tends to get monotonous.
- ii. Non formal/ Horizontal balance- If a central vertical line is made in any garment, and its left and right side are not same, then that garment has non formal/horizontal balance like angrakha kurta. This can be expensive but does not get monotonous.
- iii. Radial balance- This type of balance can be created when the design details of a garment emerge or radiate from a central focus point. This is a complicated design and is used for novelty effect.

**3. EMPHASIS-** It is the focal point of the garment, which first attracts the viewer's eye. Point of emphasis attracts others and adds interest in the garment. Emphasis can be created by colour, design, lines and accessories like attractive buttons, embroidery. Example- getting beautiful patch or embroidery done on neck of the garment, wearing, attractive belt on a plain gown. People with figure problems can emphasise or hide their figure problems. like a woman with slim waist can wear a bright and contrasting belt to emphasise the positive part of her figure, whereas a woman with large hips wears a hip belt or other design details at the hip area would highlight it further.

**4. RHYTHM-** Rhythm means repetition of lines, colours, other elements of design or details to create a pattern by which the eye can flow through the material or article/ garment. When any garment is seen from one end to other end, rhythm should not break inbetween. Rhythm can be created by use of lines, shapes, colours and textures in such a way that it gives visual unity.

Rhythm can be created in the following ways-

- i. Repetition- Repetition of embroidery, laces, buttons, piping, colour at necklines, sleeves and hemlines can bring about rhythm etc
- ii. Gradation- Rhythm can be achieved by gradual increase or decrease in size of motifs, lines, buttons, colours and textures like arranging patch/ embroidery in a shirt from small to large sequence, colour of the saree increases from light to dark colour or decreases from dark to light colour.
- iii. Radiation- Here eyes move in an organised way from a central point eg. gathers in waist, yolk or small pleats in cuffs which radiate like sun rays.

- iv. Parallelism- This is obtained when elements lie parallel to each other eg. tucks in a yoke or Knife pleats in a skirt. Bands of colours also create a rhythm effect in a dress.

**5. HARMONY-** Harmony or Unity is created in a garment when all elements of design come together to give a pleasing harmonious effect.

Harmony can be obtained by two ways-

- i. Harmony by shape- It is obtained when all areas of a garment reflect the same shape. eg. in a girl's frock; collar, cuff, pockets and sides all are in curved shape.
- ii. Harmony by texture- If a dress is in several pieces, like salwar, kurta, dupatta; then selecting the right texture can help to create harmony. Cotton salwar kurta with cotton dupatta establishes good harmony.

**6. COMPOSITION-** A composition is defined as an artwork or concept developed by the arrangement or placement of elements of design and applying principles of designs in the best possible way in a given space. To create a composition, the creator can select two or three principles of designs befitting best to the requirement of the final artwork and good casual appeal. In other words, it's a play of elements of design in a given space which can be 2-Dimensional or 3-Dimensional.

**25. To have a career in the field of Design for Fabric and Apparel, following knowledge is essential -**

- i. Knowledge of fibre characteristics, its advantages and limitations and its processing.
- ii. Knowledge of dyeing properties of different fibres and fabrics.
- iii. Knowledge of Principles of design.

26. Various institutes offer both long and short term courses leading to a certificate, a diploma, an associate, or a bachelor's degree in the field of Design for fabric and apparel like- Home Science colleges, NIFT, ITI etc.

27. **Scope of Fabric and Apparel-**

- i. Work in Textile design industry
- ii. Research work
- iii. Producing designs for textile companies or fashion houses
- iv. Working in Design agency - Costume designer
- v. Becoming freelance designer
- vi. Becoming fashion coordinator
- vii. Becoming fashion illustrator
- viii. Being Visual merchandiser
- ix. Becoming Retail manager in textile mills
- x. Being an entrepreneur
- xi. Becoming fashion merchandiser

**Full forms of Abbreviations-**

1. NIFT- National Institute of Fashion Technology
2. ITI- Industrial Training Institute
3. VIBGYOR- Violet, Indigo, Blue, Green, Yellow, Orange, Red

**OBJECTIVE TYPE QUESTIONS (1 MARK)**

**Multiple choice Questions**

1. Which of the following colour is not in VIBGYOR?
  - a. Red
  - b. Blue
  - c. White
  - d. Green

**Ans.** c. White

2. What is lightness of hue called?
  - a. Tint
  - b. Shade
  - c. Shade card
  - d. Chroma

**Ans.** a. Tint

3. Which of the following quality does not determine the texture of the fabric ?
- a. Yarn type
  - b. Fibre type
  - c. Cost of fabric
  - d. Ornamentation of fabric

**Ans.** c. Cost of fabric

4. These lines give an illusion of height
- a. Horizontal
  - b. Vertical
  - c. Diagonal
  - d. Curved

**Ans.** b Vertical

5. Proportion of Golden Mean with respect to garments size is represented by the following ratios: (CBSE Paper 2022-23)
- (i) 1:2:4
  - (ii) 5:8:3
  - (iii) 2:4:10
  - (iv) 3:5:8

Choose the correct option :

- (a) (i) and (ii)
- (b) (iii) and (iv)
- (c) (i) and (iii)
- (d) (ii) and (iv)

**Ans.** (b) (iii) and (iv)

6. Which of the following dresses are examples of complementary colour scheme?
- (i) Red saree with green border
  - (ii) Black shirt with grey pant
  - (iii) Orange top with blue jeans
  - (iv) Pink suit with white dupatta

Choose the correct option :

- (a) (i) and (iii)
- (b) (i) and (iv)
- (c) (ii) and (iii)
- (d) (iii) and (iv)

**Ans.** (a) (i) and (iii)

7. Aditya is wearing dark pink kurta with light pink pajama. Which colour harmony he is referring to? (CBSE Sample Paper 2023-24)
- (a) Analogous
  - (b) Achromatic
  - (c) Accented
  - (d) Monochromatic

**Ans.** (d) Monochromatic

**B(i) Match the following**

- |               |                  |
|---------------|------------------|
| A. Emphasis   | i) Repetition    |
| B. Balance    | ii) Golden mean  |
| C. Rhythm     | iii) Focal point |
| D. Proportion | iv) Formal       |

Pick the correct option

- |                          |                       |
|--------------------------|-----------------------|
| a) Ai, B iv, C ii, D iii | b) Aii, Bi, Ciii, Div |
| c) Aiii, Biv, Ci, Dii    | d) Aiv, Biii, Cii, Di |

**Ans.** c) Aiii, Biv, Ci, Dii

**(ii). Match the following**

- |                                 |                                 |
|---------------------------------|---------------------------------|
| A. Achromatic harmony           | i) Combination of three colours |
| B. Double Complementary harmony | ii) Two pairs of complements    |
| C. Monochromatic harmony        | iii) Only neutral colours       |
| D. Triadic harmony              | iv) One colour                  |

Pick the correct option

- |                           |                           |
|---------------------------|---------------------------|
| a) A-i, B-ii, C-iii, D-iv | b) A-iv, B-iii, C-ii, D-i |
| c) A-ii, B-i, C-iii, D-iv | d) A-iii, B-ii, C-iv, D-i |

**Ans.** d) A-iii, B-ii, C-iv, D-i

**C. Very Short Answer Questions**

1. What is meant by Grey scale?

**Ans.** Grey scale helps to judge the value of any colour. It has 11 grades (0 to 10).

2. How is any colour recognised at international level?

**Ans.** Colours are recognised at international level by Pantone Shade card. This card shows all possible hues, tints and shades in varying intensities.

3. Define Proportion in garments.

**Ans.** Proportion means relation of one part of an object to another. This relationship can be created in size, colour, shape and texture.

4. In order to make a career in Fabric and Apparel, a person should have knowledge of which two things?.

**Ans.** i. Knowledge of fibre characteristics, its advantages and limitations and its processing.

ii. Knowledge of Principles of design.

5. What do you understand by the term 'design'? (NCERT)

**Ans.** Design is the human power to conceive, plan and realise products that serve human beings in the accomplishment of any individual or collective purpose.

### **Case Study Based Question**

*Read the passage carefully and answer the questions :*

Design industry is a vibrant, varied and dynamic creative sector that plays a powerful and important role in several areas of our lives. Working in textile or fabric design demands awareness of the changing trends and styles and an ability to produce designs that are fresh, current or even ahead of the fashion curve. Textile designs for apparel fashion tend to have a quicker turnaround than designs for furnishing. Textile designers work in industry-researching and producing designs for textiles companies or fashion houses-but they might also work for a design agency or as freelancers.

1. In the context of colour scheme/harmony, choose the correct pair:
- (a) Related colour scheme/harmony : Using far away colours on colour wheel
  - (b) Contrasting colour scheme/harmony : Using near by colours on colour wheel
  - (c) Related colour scheme/harmony : Accented neutral
  - (d) Contrasting colour scheme/harmony : Monochromatic
- Ans.** (c) Related colour scheme/harmony : Accented neutral
2. Match the Dimension/Aspect of colour given in List-I with its explanation in List-II

List-I  
(Dimension/aspect of colour)

- A. Hue
- B. Tint
- C. Intensity
- D. Shade

List-II  
(Explanation)

- 1. Darkness of colour
- 2. Common name of colour
- 3. Brightness/Dullness of colour
- 4. Lightness of colour

Choose the correct option from the following :

- (a) A-4, B-2, C-1, D-3
- (b) A-2, B-4, C-3, D-1
- (c) A-1, B-4, C-2, D-3
- (d) A-3, B-1, C-4, D-2

**Ans.** (b) A-2, B-4, C-3, D-1

3. Given below are two statements labelled as Assertion (A) and Reason (R).

Assertion (A) : Light gets scattered to produce the spectrum of seven colours.

Reason (R) : Light rays of short wavelengths are called receding colours.

Select the most appropriate answer from the options given below :

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
- (c) (A) is true, but (R) is false.
- (d) (A) if false, but (R) is true.

**Ans.** (b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

4. Given below are two statements labelled as Assertion (A) and Reason (R).

Assertion (A) : Fabrics can have different types of textures.

Reason (R) : Texture depends on fibre content and yarn type.

Select the most appropriate answer from the options given below :

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
- (c) (A) is true, but (R) is false.
- (d) (A) is false, but (R) is true.

**Ans.** (a) Both (A) and (R) are true, and (R) is the correct explanation of (A).

### **Short Answer Questions (2 marks)**

1. Shalu wants to buy clothes for herself. On what four factors will the selection of colour of the clothes depend ?

**Ans.** Refer to points to remember No. 5

2. Give difference between Restful and Stimulating colours.

**Ans.** Restful or receding colours are light rays of short wavelengths like- green, blue, purple. Stimulating or advancing colours are light rays of longer wavelengths like- red, orange, yellow.

3. What do you understand by texture?

**Ans.** Refer to Points to Remember No. 17

4. Neetu wants to make a career in Fabric and Apparel field. Inform her which four options are available to her.

**Ans.** Refer to Points to Remember No. 27

### **Short Answer Questions (3 marks)**

1. According to Munsell colour wheel, which are the three types of colours? Explain giving examples.

**Ans.** Refer to Points to Remember No. 11

2. Straight lines on garments are of three types. Give name of each type and write its one characteristic.

**Ans.** Three types of straight lines —

- i. Vertical lines- They give an illusion of height.
- ii. Horizontal lines- They give an illusion of width.

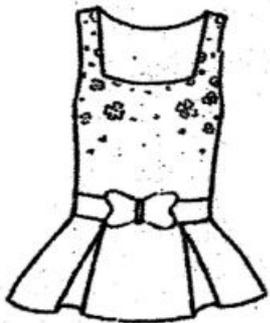
iii. Oblique or diagonal lines- These lines increase or decrease width and height depending on the degree and direction of angle.

3. Illustrate and explain the difference between formal and informal balance. (CBSE Paper 2022-23)

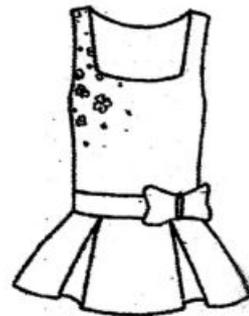
Ans.

S.No.	Formal Balance	Informal Balance
1.	It is symmetrical balance.	It is asymmetrical balance.
2.	Same on each side of a central vertical line.	Not same on either side of a central vertical line.
3.	Tends to get monotonous.	Does not get monotonous.
4.	It is less expensive	It can be expensive
5.	It gives feeling of stability and formality.	It is used to correct figure problems.

(Any other, any three differences)



Formal Balance



Informal Balance

Any other suitable illustration

4. Mandeep wants to buy a readymade pant and shirt. Explain two ways by which he can bring harmony in it.

(CBSE Sample Paper 2022-23)

Ans. Refer to Points to Remember No. 24(5).

### Long Answer Questions (4 marks)

1. According to Munsell's Colour wheel, explain the three aspects of colour.

**Ans.** Refer to Points to Remember Number-10

2. How does the application of colour during the different stages of fabric manufacturing affect the design in fabric? (NCERT)

**Ans.** Refer to Points to Remember Number-15

3. Rohan wants to make his garments according to Related colour schemes. Explain him different related colour schemes so that he can choose properly.

**Ans.** Refer to Points to Remember Number-16(A).

4. What are the different types of lines and shapes? How do they create different effects and moods? (NCERT)

### OR

Sushma wants to create dress using different shapes. Which four basic shapes she can create by using different types of lines? (CBSE Sample Paper 2022)

**Ans.** Refer to Points to Remember Number 20,22.

5. The field of design for fabric and apparel has expanded and become so vast that it can actually be considered as two specializations. Reena has done a certificate programme from a recognised institute in this field. She wants to open up a fashion house. (CBSE Sample Paper 2022)
  - a. She wants to create a unique design in frock for a six-year-old girl. Explain with the help of diagram two ways of creating rhythm in it.
  - b. She is designing a gent's kurta for a person with heavy arms. In what two ways she is going to shift the emphasis away from the arms. Support your answer with the help of suitable diagrams.

### **Long Answer Questions (5 marks)**

1. You have to decorate your double bed sheet using contrasting colour schemes. Explain all five colour schemes by giving examples.

OR

Noori wants to create a clothing collection using contrasting colour scheme. What four different types of contrasting schemes she can apply? (CBSE Sample paper 2022)

OR

Demonstrate any four colour harmony of contrasting colour scheme.  
(CBSE Sample Paper 2023-24)

**Ans.** Refer to Points to Remember Numbers-16(B)

2. What do you understand by texture of fabrics? Which are the factors that affect the texture of a fabric during its manufacture? (NCERT)

**Ans.** Refer to Points to Remember Number 17, 18

3. How do you achieve rhythm and harmony in dress. (NCERT)

**Ans.** Refer to Points to Remember Number 24(4) and 24(5)

4. Mona wants to make a career in Fabric and Apparel field but she is not totally aware of its career options. Make a list of career options in Fabric and Apparel for her.

**Ans.** Refer to Points to Remember Number 27

5. Elaborate any two ways each of creating balance and proportion in a dress.  
(CBSE Sample Paper 2023-24)

**Ans.** Refer to Points to Remember Number 24(1) and 24(2).

## **9. FASHION DESIGN AND MERCHANDISING**

### **Points to Remember**

- 1. Fashion design and business is an exciting career option in which the creative urge and materialistic needs of a person are fulfilled.**
- 2. With the production of 'ready to wear garments in the year 1920, Fashion Apparel has established itself as an important business employing millions of people in design, manufacturing, distribution, marketing, advertising, broadcasting and consulting.**
- 3. Significance: Fashion design and merchandising enables one to understand the various processes of fashion business such as:-**
  - i. The process involved in producing raw materials, apparel, and accessories.
  - ii. The process of manufacturing fibres, fabric and garments.
  - iii. How a style changes to fashion? What, Why and When?
  - iv. It helps to determine the suitability of a fashion for a particular retail operation and for what length of time. It encompasses planning, buying and selling.
- 4. Fashion Terminology**
  - i. Fashion: It is a style or styles which are most popular at a given time.
  - ii. Style: It is any particular look or characteristics in apparel or accessories.

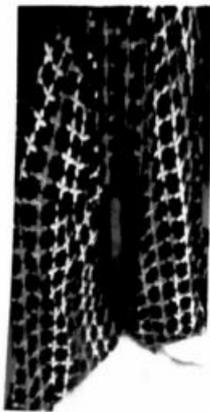
- iii. Fads: Temporary fashions that are short lived and go away quickly. Example-Baggy pant, torn jeans, hot pants, unmatched buttons etc.
- iv. Classic: A style that is never completely obsolete and is accepted for an extended period. These have the distinction of simplicity of design. Example-Kurta Pyjama, Coat pant, Sarees, Blazer Jacket, Polo shirts, Chanel suits.

## **5. Fashion Development**

- i. The history of fashion helps the designers to make decision for the present day and future fashions. Ideas from the past are often reinterpreted for today's fashion. The ancient and medieval styles did not change for almost a century. Fashion changes were encouraged by Western civilization during Renaissance.
- ii. Fashion Hub France
  - France's dominance in international fashion began in the 18th century.
- iii. Fashion until Industrial Revolution
  - The style of royal costumes of Emperor Louis XIV and his court members made Paris the fashion capital of Europe.
  - The silk, ribbon and lace for the items of the emperors and courtiers were supplied from different cities of France. Garments were hand-stitched according to the customer's size or measurements.
  - The art of garment making was called Couture. The

man who designed the garment was called couturier and the woman counterpart was a couturiere.

- iv. Fashion after Industrial Revolution: The industrial revolution marked the beginning of technological advances in textile and apparel production.



**Palazzo Pant**



**Baggy Pant**



**Torn Jeans**



**Kurta Pyjama**



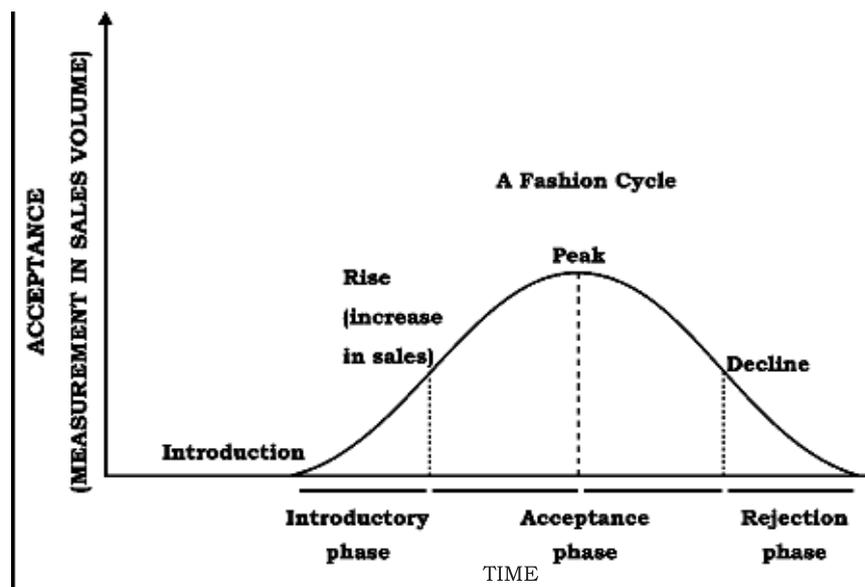
**Coat Pant**



**Saree**

- Due to the invention of spinning machine and machine looms, more items started being manufactured in a short time.
  - The invention of the sewing machine transformed handicrafts into an industry. In 1859 Issac Singer developed the foot treadle for the sewing machine.
  - In 1849 Levi Strauss made pants using clothes intended for tents and wagon covers, with pockets to hold tools, specially for labourers. These became popular and were known as 'denims'. This is the only dress which has remained the same for the last 150 years.
- v. From the 1880s, the practice of wearing skirt blouses by women was the first step towards the manufacture of ready to wear clothing.
  - vi. By 19th century affordable fashion were made available to the general public through fairs and and Bazaars. This helped both buyers and sellers to bargain according to their need.
  - vii. Due to large number of people settling in towns and a growing demand for a variety of goods, general stores and retail shops were set up.
  - viii. Pret-a-porter (ready to wear) were first introduced in 1960. This terms describes factory made clothing that is sold in finished condition and in standardized sizes (as distinct from bespoke made-to-measure). Yes Saint Laurent (YSL) is the first French haute couturier.

**6. Fashion cycle: The way in which a fashion changes or life span of a fashion can be described as fashion cycle. The life span of any fashion is completed in 5 stages. It can be represented by a bell shaped curve of time and sales.**

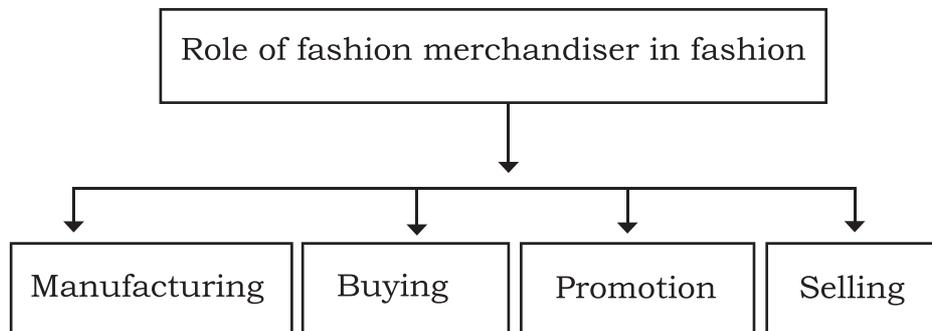


### Stages of Fashion Cycle

- i. Introduction of a Style: Designers provide a new style of fashion to the public. New designs are created by changing elements such as line, colour, shape, type of fabric and their relationship to one another.
- ii. Increase in popularity: When a new fashion is purchased, worn and seen by many people, it becomes popular.
- iii. Peak of popularity- When a fashion is at the height of its popularity, many other manufacturers copy that fashion and produce the adapted products at a lower price.
- iv. Decrease in popularity- With the arrival of adapted products in the market, they become popular in large numbers. The fashion conscious people want to buy something new and the old styles are sold in the retail shops at lower prices.
- v. Rejection of a style or Obsolescence- In the last phase the old style is slowly rejected and the new fashion cycle begins.

**7. Fashion merchandiser- The person who designs, produces, promotes and distributes products for the needs and demands of consumers by turning his inspiration or imagination into a design with the use of technology is called a fashion merchandiser.**

**8. Role of fashion merchandiser in various aspects of fashion**



i. Manufacturing

- A fashion merchandiser makes significant input in types of fabrics to be used for making his design.
- Keeping in mind the historical and socio cultural understanding of the fabric, he creates his designs.
- He chooses the best way to manufacture his design/ apparel.
- He also considers price and target market while converting his vision into reality.

ii. Buying

The fashion merchant buys fashion materials to keep in his shop.

- He must be aware of the target market:
- He should be skillfull in making fashion trend analysis and forecasting so that he can make accurate orders for goods.

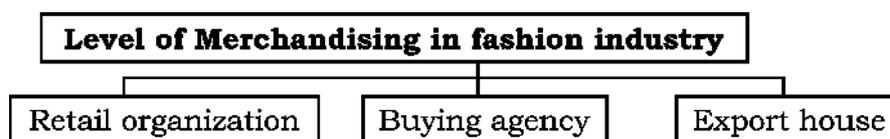
iii. Promotion

- When a fashion trader works for a designer, his primary responsibility is to bring the designer's products to stores where it can be sold in large quantities. For this, he needs to have a creative mind, strong visual merchandising and production skills.
- To promote the products of the designer, the fashion merchandiser participates in fashion exhibitions and find the target market for the products,

iv. Selling

- Fashion merchants are responsible for selling fashion items to the stores and the goods are sold in the shop (stores). For this, he should have knowledge of Market trends so that he can forecast and recommend production.
- A merchandiser working in retail organisation is responsible for decoration of his shop. He must have art of displaying the fashion items in the stores in an attractive way.

**9. Levels of Merchandising in the fashion industry:**



**i. Retail Organization Merchandising:** It is a specialized management activity in which fashion/product is delivered from the showroom of the fashion designer to retail outlets and from there to the customers. It is achieved by internal planning which includes

- Ensuring adequate amount of goods for sale.

- The selling price of the goods should be within the reach of consumers.
- Selling price should be such to provide profit to the retail organization.

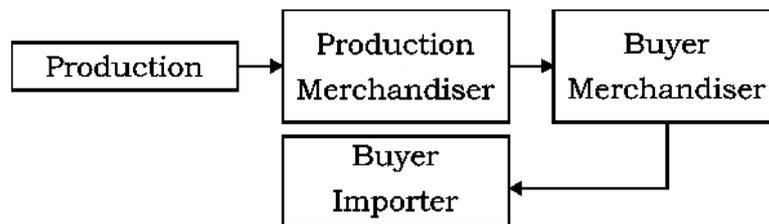
**ii. Buying Agency Merchandising:** This agency provides consultancy services for the goods merchandisers. Selling through buying agency is beneficial for exporters as it saves time and cost.

Responsibility of buying agents:

- Identification of vendors
- Cost negotiation
- Check in process quality
- Preshipment quality inspection

**iii. Export House Merchandising:** There are two types of merchandiser in an export house.

- Buyer merchandiser
- Production merchandiser



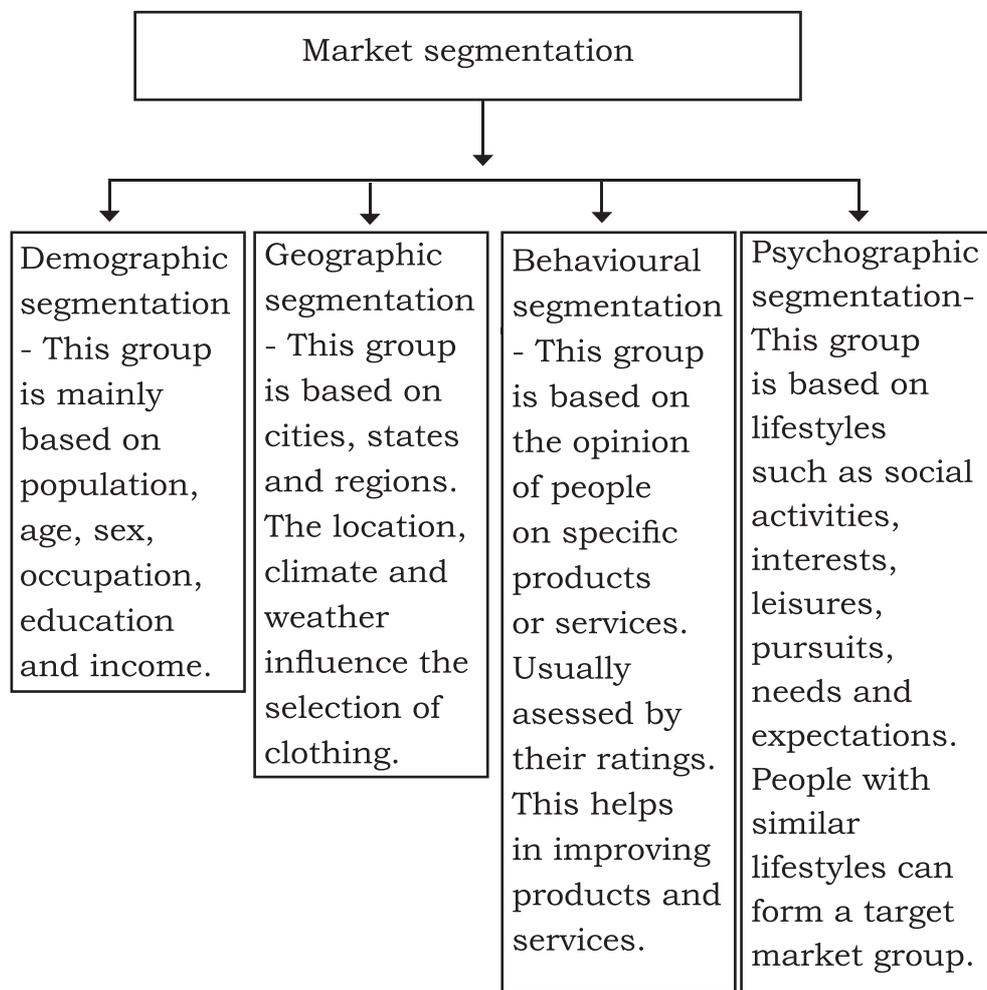
- Buyer merchandiser
  - They act as an intermediary between the buyer and the manufacturer and ensure that the product is developed according to the buyer's requirement.
  - They are responsible for sourcing, sampling and communicating with the buyer.
- Production merchandiser
  - These act as an intermediary between the Production and the Buyer merchants
  - Their responsibility is to ensure that production is as per the schedule and requirement of the buyers.

## 10. Target market

- i. The category of consumers that fashion traders targets at to sell their products is the target market.
- ii. We can understand the target market by market segmentation.

## 11. Market segmentation

This is a strategy in which large markets are divided into sub-groups of consumers, based on the common needs for the goods and services offered in the market.

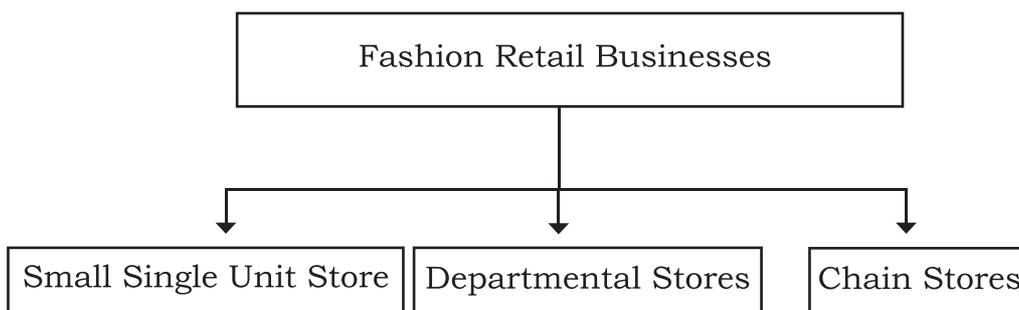


## 12. Right things for Business

- i. Right Merchandising: The retailer should keep its shelves full of goods that customers need.
- ii. At right place: Location is most important for the business, as it determines accessibility.
- iii. At Right time: Most of the merchandise is seasonal in nature. The material should be available when it is most needed.
- iv. Right quantity: This means a beneficial profitable balance between the volume of sale and amount of inventory.
- v. Right price: The merchant must keep a price that is high enough to benefit the shop and still be low enough to be in competition and in line with customer expectations
- vi. Right promotion: Right balance between investment and the appeal created for the customers ensures successful promotion.

## 13. Fashion Retail Organization

The organization system in the fashion industry can be divided into three parts based on different types of merchandise, size of retail firm and target customer.



- i. Small Single Unit Store: It is a neighbourhood store, which is owned and operated by a single person or his family.
- ii. Departmental stores: It has different sections known

as departments like clothing, sporting goods, electronic equipments etc.

- iii. Chain Stores: Retail outlets that share a same brand and central management. They have standardized business methods and practices.

#### **14. Major Departments of Chain Stores**

- i. Merchandising Division- Buying, selling, business planning and control.
- ii. Sales and Promotion Division-Advertising, publicity, visual merchandising, special events publicity, public relations.
- iii. Finance and Control Division- Credit, account payable and inventory control i.e. all types of financial transactions.
- iv. Operational division- Maintenance of facilities, stores and merchandise protection, personnel, customer service, receiving and marketing of merchandise.
- v. Personnel and Branch Store Division- If stores are very large then this department is required. It decides who, when and where a person will be deputed for work.

#### **15. Preparation for Career**

Essential skills that a fashion designer and merchandiser should have—

- i. Forecast ability- The ability to forecast fashion trends is an essential part of this career. He should predict the future fashion trend based on past future trends and present future fashion trends.
- ii. Analytical Ability- They should know about the economy as a whole, know the economy of their particular company and understand how certain styles can fit into the consumer's budget so that they can get the proper benefits from their capital investment.

- iii. Communication ability- Excellent communication skills are must in this field. They should be able to negotiate with the manufacturer to fix prices and to sell products to the masses. They should have writing skills for advertisements, press release, newspapers, etc.
- iv. Knowledge of style and business sense is also necessary.

Professional qualifications

- i. Certificate (Certificate) or Diploma or Degree program in Fashion merchandising (6 months to 1 year)
- ii. 2 year post graduate program related to fashion merchandising.
- iii. 4 year Bachelor degree programme in Fashion Design or Fashion merchandising.

**16. Scope (Livelihoods in the field of Fashion Design)**

- i. Visual Merchandise Designer: These are responsible for the following tasks:
  - Designing Window displays
  - Store arrangement
  - Creating attractive props and accents.
  - Organising clothing placements
  - Styling mannequins
  - Spearheading advertising campaigns
- ii. Fashion designer: The following tasks to be done
  - Specific work of clothing and apparel design.
  - Working with popular designers.
  - Doing your own fashion work.
- iii. Set designer: They are assigned to
  - Conceptualise designs needed for movies, television and theatre production
  - Produce set designs for trade exhibits and museums
- iv. Interior Designer: Their main goals are
  - To combine form with function.
  - To introduce interior concepts in a particular place



Choose the correct option :

- (a) (i) and (ii)                      (b) (i) and (iv)  
(c) (ii) and (iv)                      (d) (i) and (iii)

**Ans.** (d) (i) and (iii)

**B. Match the following**

- |                             |                                     |
|-----------------------------|-------------------------------------|
| A. Style                    | i. A characteristic in an apparel   |
| B. Visual Business Designer | ii. Link between buyer and producer |
| C Buying agent              | iii. Create attractive ads          |
| D. Fashion Designer         | iv. Costume design                  |

**Pick the correct option**

- a) Ai, Biii, Cii, Div  
b) Aii, Biv, Ciii, Di  
c) Ai, Bii, Ciii, Div  
d) Aiv, Biii, Cii, Di

**Answer-a) A i B iii C ii D iv**

**C. Very Short Answer Questions (1 mark)**

1. Who is a Fashion Merchandiser?

**Ans- The fashion merchandiser is the person who converts his inspiration into a design. He plans produces, promotes and distributes the product according to the needs and demands of the consumers.**

2. What is term given to a category of consumer that a merchandiser targets at to sell his product?

**Ans- Target Market**

3. Which two types of merchandisers are there in an export enterprise?

**Ans- (i) Buyer Merchandiser ii) Production Merchandiser**

4. Which inventions of the Industrial Revolution encouraged the production and trade of textiles?

**Ans- The invention of spinning machine and machine loom**

### Case Study Based Questions (4 × 1 mark)

Fashion has been a part of our tradition for centuries. This is an area which attracts a large number of youth. In the era of globalization, the fashion world is making its impact fast. Creative and artistic skills are essential for making a career or livelihood in fashion designing. After passing class 12th from a recognized board, a person can pursue a diploma or degree course in fashion designing. Fashion is never permanent. This changes with the passage of time. Every person coming to this field will always have to be vigilant and enthusiastic. It is a challenging and glamorous business.

- In the context of scope of fashion design, choose the correct pair:
  - Visual merchandise designer : designing Window Displays
  - Set designer : Store arrangements
  - Interior designer : Conceptualize designs needed for movies
  - Fashion designer : Styling mannequins

**Ans.** (a) Visual merchandise designer : designing Window Displays

- Match the fashion terminology given in List I with its Description/ Example in List II.

List I	List II
(Fashion Terminology)	(Description/Example)
A. Fashion	i. Coat pant
B. Classic	ii. Baggy pant
C. Style	iii. Most popular style at a given time
D. Fads	iv. Particular look or characteristics in apparel

Choose the correct option from the following:

- A-i, B-ii, C-iii, D-iv
- A-ii, B-i, C-iv, D-iii
- A-i, B-iii, C-iv, D-iii
- A-iii, B-i, C-iv, D-ii

**Ans.** (d) A-iii, B-i, C-iv, D-ii

- Given below are two statements labelled as Assertion (A) and Reason (R).

Assertion (A) : It is very important for any fashion merchandiser to identify and understand the target market.

Reason (R) : Understanding the demand and requirement of consumers helps the merchandisers to decide the policies for the sale of his product.

Choose the most appropriate answer from the options given below :

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (b) Both (A) and (R) are true but R is not the correct explanation of (A)
- (c) (A) is true but (R) is false
- (d) (A) is false but (R) is true

**Ans.** (a) Both (A) and (R) are true and (R) is the correct explanation of (A)

4. Given below are two statements labelled as Assertion (A) and Reason (R).

Assertion (A) : The history of fashion helps fashion makers in making current and future fashion designs.

Reason (R) : The ancient and medieval styles did not change for almost a century.

Choose the most appropriate answer from the options given below :

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (b) Both (A) and (R) are true but R is not the correct explanation of (A)
- (c) (A) is true but (R) is false
- (d) (A) is false but (R) is true

**Ans.** (b) Both (A) and (R) are true but R is not the correct explanation of (A)

**Short answer questions (2 marks)**

1. What are the functions of Sales and Promotion Division in a fashion merchandising store?

**Ans-**

**i) The act of creating advertisements to increase sales**

**ii) Visual merchandising**

**iii) Management of special events**

**iv) Organizing public relations and publicity.**

2. What is the role of buying agency in fashion business merchandising?

**Ans. The buying agency provides services for goods buying consultancy. A buying agent has the following responsibilities:**

- i) Identification of vendors
- ii) Price negotiation
- iii) Quality check at the time of manufacture
- iv) Quality check before shipment.

3. What is the difference between style and fashion?

**Ans. i. A style is the special appearance of a garment or its accessories.**

**ii. One or several styles which are the most prevalent in a given period are called fashions. Style comes and goes in fashion.**

4. "To interpret consumer demand one should understand target market and customer motivations." Explain

**Ans. i) It is very important for any fashion merchandiser to identify and understand the target market for his product.**

**ii) Target market is the category that the merchant targets to sell his product**

**iii) According to the demand and requirement of the consumers of its target market, the sales department decides the policies to sell its product.**

**iv) Consumer-centric policies encourage customers to buy more. This gives the producer more profit.**

5. What two roles Sudha will have as a fashion merchandiser in each of the following fields: (CBSE Sample Paper 2022)
- (a) In Manufacturing
  - (b) In Promoting

**Ans.** (a) & (b) Refer to Points of Remember Number 8 (i) & (iii)

6. 'Analytical capability is pre requisite of a fashion merchandiser'. Justify the statement with two reasons.

(CBSE Sample Paper 2023-24)

**Ans.** Two reasons why analytical capability is required for fashion merchandiser:

- (i) Fashion merchandisers and marketers must keep abreast of the economy as a whole and the economy of their particular companies.
  - (ii) They must be able to assume how certain styles will fit into a consumer's budget.
  - (iii) They must ensure that they make a profit for their employers.
7. France's dominance over international fashion began in the early 18th century. Mention any two developments in Fashion until the industrial revolution. (CBSE Sample Paper 2022-23)

**Ans.** Development fashion until the industrial revolution:

- (i) Support from the Royal court.
- (ii) Development in of silk industries in France.
- (iii) Many of the French cities were supplying the court with silk fabrics, ribbon and laces.
- (iv) Clothes were handmade/hand sewn
- (v) Clothes were custom made

**Short answer questions (3 marks)**

1. Describe the three primary skills that a fashion designer or merchandiser must possess.

**Ans.** Refer to Point to Remember No. 15

2. How is the organization system of the fashion retail industry divided?

*Or*

Mrs Sharma went to buy wedding clothes for her daughter from the market compare and contrast about three types of different stores she must visit.

(CBSE Sample paper 2023-24)

**Ans.** Refer to Point to Remember No. 13

3. Define the fashion cycle and write the names of its stages.

**Ans.** Refer to Points to Remember No. 6

4. Nitesh wants to be a visual merchandise designer.

(a) What are the four merchandising rights he should be aware of?

(b) What two specific skills he must possess? (CBSE Sample paper 2022)

**Ans.** (a) Refer to 'Points to Remember' number 12.

(b) Refer to 'Points to Remember' number 15.

**Long Answer Questions (4 marks)**

1. Your friend wants to pursue fashion design and merchandising as his career, guide him by telling about the options available.

**Ans.** Refer to Points to Remember Number-16

2. Enumerate the various divisions of a fashion store State any two functions of each division.

**Ans.** Refer to Points to Remember Number-14

**Long answer questions (5 mark)**

1. Outline the major steps in development of fashion.

**Ans. Fashion Development—Refer to Points to Remember**

**Number-5**

2. What do you understand by fashion merchandising? Describe the role of a merchandiser in every aspect of fashion business.

**Ans. Fashion merchandising means making necessary plans at the right place at the right time and at the right price that will encourage the sale of the product. Refer to Points to Remember Number-8**

3. Explain different levels of merchandising in fashion industry. (CBSE Sample Paper 2022)

**Ans.** Refer to 'Point to Remember' No. 19

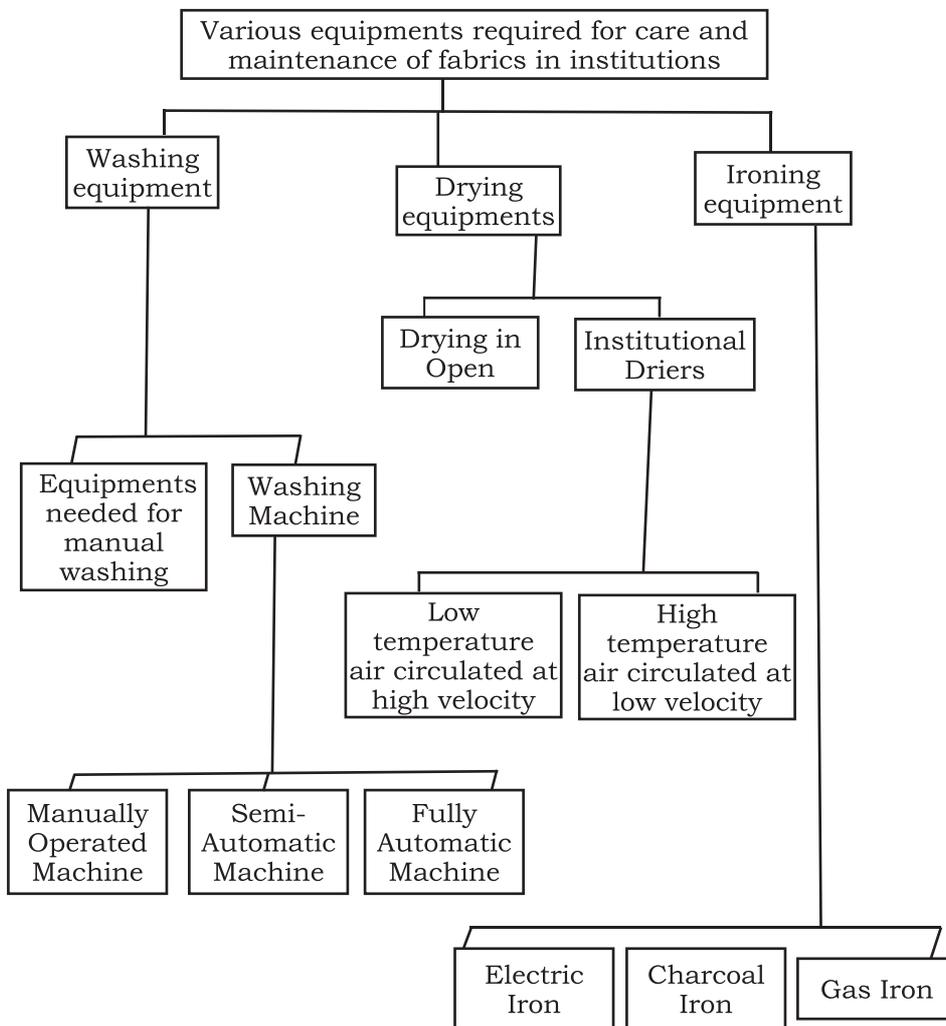
## **10. CARE AND MAINTENANCE OF FABRICS IN INSTITUTIONS**

### **Points to Remember**

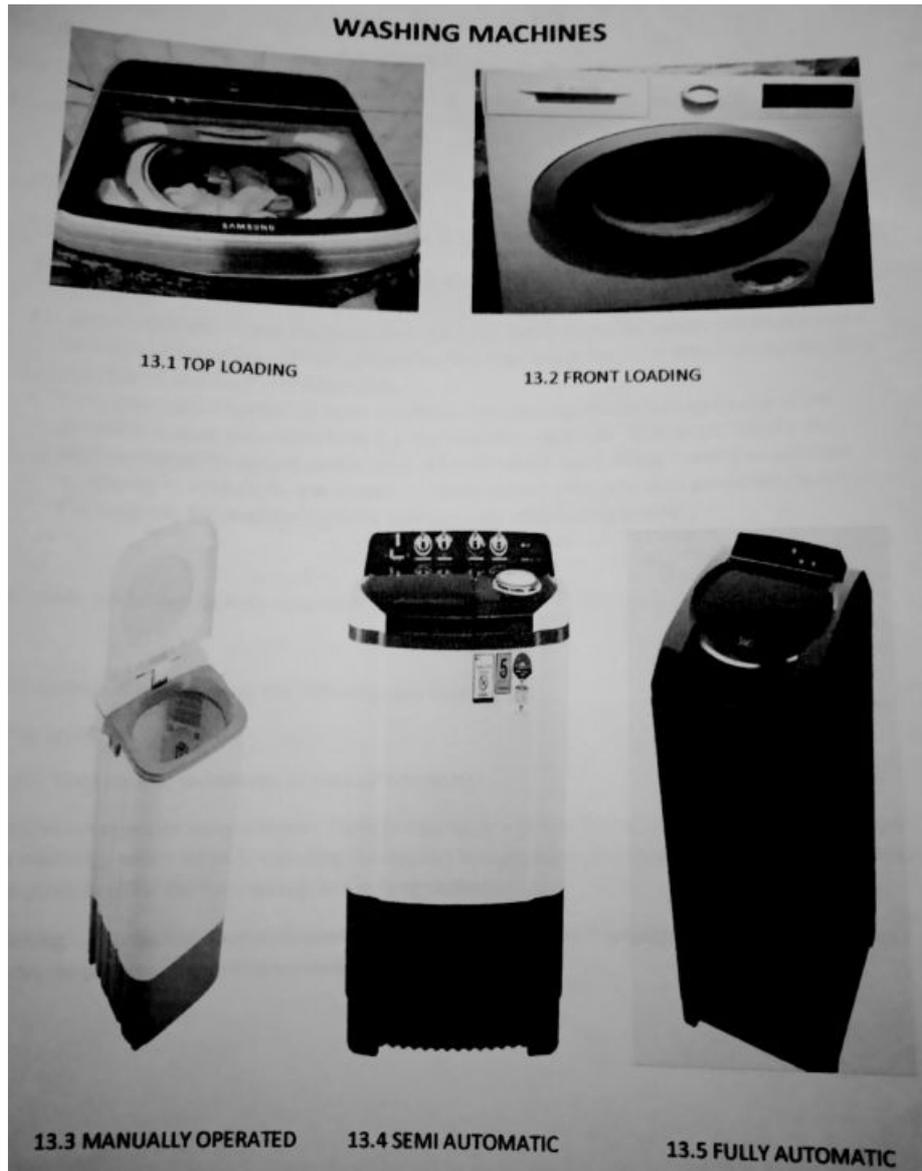
- 1. Fabrics used in institutions must have certain special qualities, in line with their industrial purpose and scope. These fabrics are selected on the basis of their special usage and functionality.**
- 2. Special care and maintenance is necessary to maintain the special qualities of these materials and to extend their life span.**
- 3. The care and maintenance of fabrics includes two aspects;**
  - i. To keep the material free from physical damage and to rectify any damage that may have occurred during its use.
  - ii. To retain the visual appearance and textural characteristics of clothes.
- 4. The care and maintenance requirements of different fabrics depend on the following factors;**
  - i. Fibre content
  - ii. Type of yarn
  - iii. Fabric construction technique
  - iv. Finishes given to the fabric
  - v. Purpose for which they are used

Laundry is both a science and an art. It is a science, as it is based on the application of scientific principles and techniques. This is an art, as its application requires to have mastering of the certain skills to achieve asthetically pleasing results.

### 5. Laundry equipment of organizations



## 6. Washing Equipments



Washing machines are found in two types of models

- a) Top loading
- b) Front loading

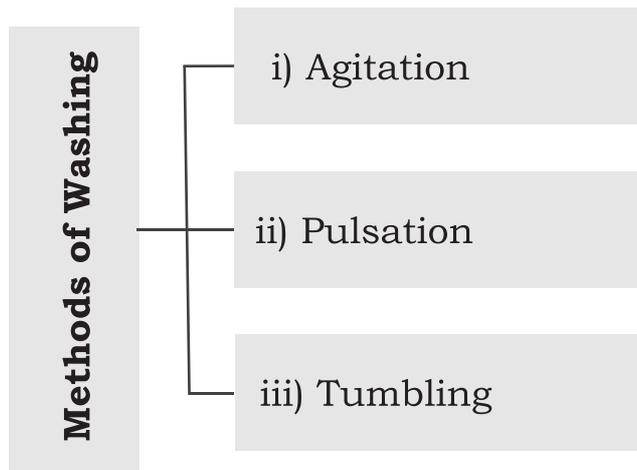
These models can be of three types:

- Hand operated- In these machines 50% or more of the work is done manually by the operator.
- Semi-automatic- These machines have two tubs. These machines require the intervention of the person washing clothes, periodically. The rinse water has to be filled into the machine and then drained out with each cycle.
- Fully automatic machine- In these machines, the washing, rinsing and squeezing of the garments is done automatically by the machine in a single tub. It does not require the intervention of the person once it is set. All controls for water filling, heating to a certain temperature, wash cycle, and number of rinses are set once, and then garments are put in the machine. The machine turns off automatically after a certain time.

### **7. Operations performed by Fully Automatic Machine**

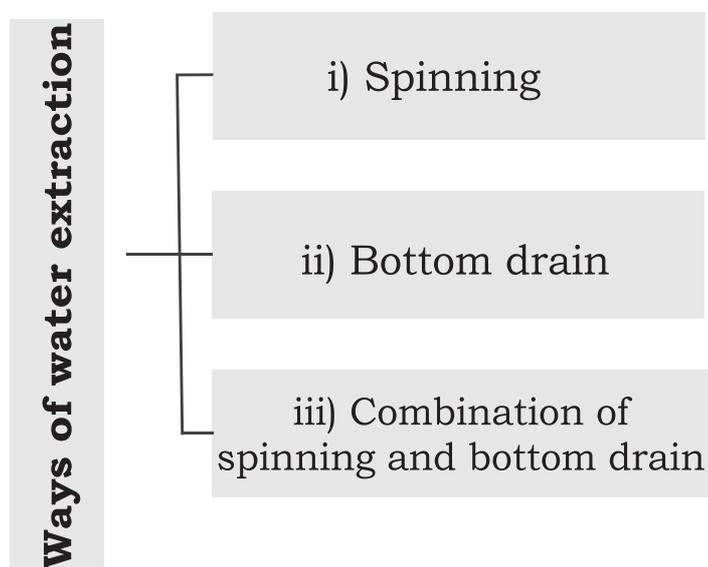
A fully automatic machine has the following operations.

- i. Filling up water
- ii. Water level control (automatic or manual operation)
- iii. Regulation of water temperature - There is a panel or a button to control the water temperature of the machine. This button helps in selecting the desired temperature of water. Water temperature may be the same or different for washing and rinsing clothes.
- iv. Washing- All washing machines operate on the same principle "to keep the fabric in movement in soapy or detergent water to remove dirt from them"



- Agitation: (i) It is used in top-loading machines. (ii) It consists of blades, which either rotate (move in one direction) or oscillate (rotate in both directions). (iii) The clothes swirl rapidly with water and are cleaned.
- Pulsation: (i) It is also used in the top loading machine. (ii) In this, the movement of water is done by a vertical device, which rapidly moves vertically and cleans clothes.
- Tumbling: (i) It is used in front loading machines. (ii) Washing takes place in a horizontally placed cylinder which is perforated and which revolves in a partially filled tub. (iii) With each revolution the cloth are carried to the top and then dropped in the wash water. This means that the clothes move through the water rather than water moving through clothes as in previous two types. (iv) The agitators are made of plastic, aluminium or bakelite, depending on the size of the machine and the type of fabric to be washed. These materials are not adversely affected by bleaching agents and softeners. The speed of the agitator can also be controlled depending on the fabric.

- v. After washing, clothes are rinsed with water to remove detergents and soaps etc. from them. Otherwise the clothes may look grey and dull and have a harsh texture.
- vi. **Water extraction:** Water is extracted after the wash phase and after each rinse phase of the cycle. This can be done in three ways-



- Spinning: Spinning at speeds exceeding 300 revolutions per minute (rpm) produces a centrifugal force, which draws water out of the clothes. This water is released into the drain by the pump.
- Bottom drain: Machines with perforated tubs stop at the end of wash phase and then at the end of the rinse process. The water filled in the tub of the machine is discharged through the bottom. At the end of the drain period the tub spins rapidly, which removes the remaining water from the clothes.

- Combination of spinning and bottom drain: Some machines drain through the bottom without stopping that is the bottom draining occurs during the spin period. This is the best method of removing water from the machine. This also removes the suspended dirt in the water as well.

The Spinning speed of the tub can range from 333 to 1100 rpm. It affects the amount of water removed from the clothes. The optimum speed of rotation is approximately 600 to 620 rpm.

### **8. Drying Equipment and Process**

Dryers are used to dry clothes at commercial and institutional levels.

There are two types of operations in dryers:

- i. Air of relatively low temperature is circulated at high velocity: In this system room air enters the dryer from the bottom of the front panel and passes over the heat source. Hot air passes through the clothes and then leaves through an exhaust pipe. This allows room temperature and humidity to remain normal.
- ii. Slow circulation of high temperature air. In this system, when the air enters the dryer and passes over the top of the heat source, it is pulled by a small fan through the perforations in the upper part of the dryer. This air then moves downwards through the clothes and gets out through the exhaust. The expelled air has high relative humidity.

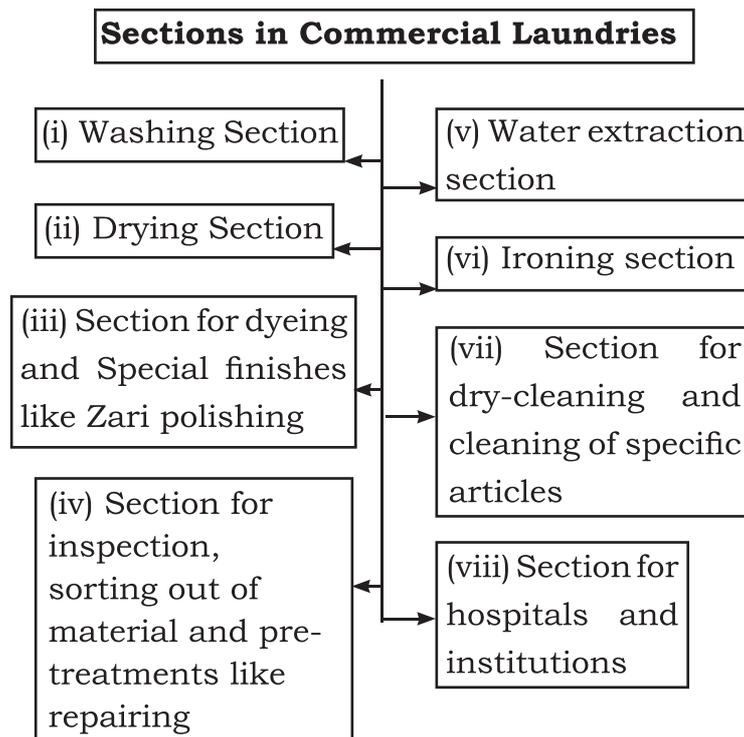
### **9. Ironing Equipment**

Ironing is a process that removes the wrinkles from the clothes and helps to set creases in the trouser and pleated skirts. They are mainly of two types-

- Electric ironing is done in most homes. The irons have a smooth metallic surface which can be heated. These can weigh from 1.5 to 3.5 kg. They have an inbuilt thermostat that can adjust the temperature to suit the fabric. Some machines also have a system of producing steam while in use.
- Charcoal Irons: It is like a metal box with a lid, in which live coal pieces are put to heat the iron.
- Now a days many people are using gas operated irons.

#### **10. Different levels of care and maintenance of garments:**

1. Household Level- Washing and maintenance of daily wear clothing and small articles of daily use can be done at home.
2. Business level- For Washing of some special items and clothes, services may be hired by commercial laundry or by professionals.
  - i. Professionals (Dhobis):  
They provide services to institutions such as homes, hostels, hotels and restaurants. Dhobis wash clothes at their homes or special places (Dhobi Ghats),
  - ii. Laundry or dry cleaning shops:  
Here customers bring clothes to be washed and a few days later they take back washed and ironed clothes. Customers may be an individual or an institution. Some laundries also provides services of transport of material to and from the customer.
  - iii. Commercial Laundry:  
These washing houses have different sections for different washing processes.



- These washing houses have large appliances. The washing machine has the capacity to handle 100 kg or more of load in one cycle. Other equipments include hydro extractors, dryers, flatbed ironing and pressing equipment, roller ironing and calendaring machines, folding and packaging table and trolleys to carry material from one place to another.
- All commercial establishments have a system of keeping record through code tags. A receipt/invoice is given to the customer on which the number, type of cloth and the work to be done on it are written. The garment is tagged according to this receipt and this helps in identifying each customer's garment.

## **11. Care and maintenance of fabrics in institutions (hospitals and hotels)**

The organized collection, laundering and timely delivery of processed material is very essential for the operation of an institution. There are two types of institutions which have in house laundry and maintenance setups. These are hotels and hospitals

### **Hospitals:**

- i. The hospital laundry takes care of hygiene and cleanliness and disinfection Many hospitals that have a higher risk of infection use disposable materials, which are destroyed by burning.
- ii. Almost all the clothes (except blankets) are of cotton. They are of white colour or dyed in fast colours (specific to hospital or its department).
- iii. In hospital laundry removal of stains and other special finishes such as starching, whitening or ironing etc. are not given special attention. Repair and mending and condemnation of the material may or may not form a part of the services required.
- iv. Steps in the process of laundry functioning in hospitals
  - Collection of dirty clothes from various departments of the hospital
  - Transportation to the laundry plant
  - Sorting of dirty linens (bed linens, patients dress, doctor's dress, blankets etc.)
  - Washing clothes
  - Water extraction
  - Drying of clothes
  - Pressing, ironing, folding and stacking

- Repairing if needed
- Disposal of unusable content
- Packing clean clothes
- Distribution of clean clothes in relevant departments

### **Hospitality sector or hotel**

- i. Aesthetics and final finish of the garments and the articles are the most important.
- ii. As compared to hospitals, the articles here may be of different fibre contents.
- iii. Special emphasis is laid on final finishes of laundered garments such as starching, pressing, folding, etc.
- iv. Washing of personal clothes of the guests is also to be taken care of, when required.

### **12. Washing capacity in institutions**

- i. The number of clothes to be washed is much more in the hospitals as compared to hotels
- ii. A large hotel may have up to 400 to 500 rooms whereas a hospital may have to take care of 1800 to 2000 beds or even more.
- iii. The sheets in operation theatre, maternity ward, delivery room, may require five or more changes per day.
- iv. Linen requirement in stock is a minimum of 6 sets per day. Each set consists of a bed sheet, a draw sheet and a pillow cover.
- v. The blankets are not changed daily. But these are also kept in extra quantity in the store house.
- vi. Apart from these, there may be clothes of the patient, doctor's dress and some common materials like tablecloth, curtains etc. As in the case of commercial laundries there is a system of keeping record for collection and disbursement of material to each department.

### 13. The example is given below.

Name of the Hospital _____			
Receipt No. _____			
Received from _____			
Dated _____		Time _____	
S. No.	Name of the clothing	No.	Remarks
1	Bed Sheet		
2	Draw Sheet (white)		
3	Patient's Kurta		
4	Patients Pyjama		
5	Towel		
6	Mask		
7	Pillow cover		
8	Apron		

### 14. Preparing for a career

#### Primary Requirements/Skills

- i. Knowledge of the material i.e. its fibre content, quantity of yarn and fabric production technology and the colour and finishes applied, in terms of the effect of care required
- ii. Knowledge of the processes involved.
- iii. Knowledge of chemicals and reagents used in various processes and their effect on different types of fabrics.
- iv. Practical knowledge of requirements of machines and their functioning.

#### Educational Qualifications

- i. Short Term Courses in Laundry Management: Through these courses, practical training is imparted in hi-tech laundry houses along with training, job placement assistance, assistance for business start-up etc.
- ii. Practical training or internship in various institutions such as airline companies, ships, railways, hotels, hospitals etc.

- iii. Graduate degree courses in Home Science, Textile Science, Textile Chemistry, Fabric and Apparel are also available in several universities.

### **15. Scope**

- i. Entry into entrepreneurial activities.
- ii. Service in Nursing Home, small hospital, day care centre etc.
- iii. Jobs in various positions in hi-tech laundries of big institutions like railways, airlines, shipping companies, hotels, hospitals.

#### **Some important definitions:**

1. Dry cleaning: Washing of wool, silk, rayon and some special or expensive fabrics is done with organic solvents instead of water. This is called dry cleaning.
2. Calendering: This is a process in which the cloth is passed through large hot rollers under high pressure.
3. Disinfection: The process of destroying microbes is called disinfection. This action can be done with high pressure, heat or chemicals.

### **OBJECTIVE TYPE QUESTIONS (1 Mark)**

#### **A Multiple choice questions**

1. What is the main principle of washing clothes, in a machine?
  - a) To keep the cloth in movement in washing solution
  - b) Filling of water in the machine.
  - c) Setting the control of the machine.
  - d) To put a good detergent in the machine for removing dirt

**Ans- (a) To keep the clothes in movement in washing solution**

2. Which of the following method of washing is used in front-loading machines?

**CBSE Sample Paper 2023-24**

- a) Agitation                      b) Pulsation  
c) Tumbling                        d) Spinning

**Ans- (c) Tumbling**

3. What is the optimum speed of spinning for washing clothes?

- a) 300-350 rpm                      b) 500-530rpm  
c) 900-1100rpm                      d) 600-620rpm

**Ans- (d) 600-620rpm**

4. Which fabric is most used in hospital clothing?

- a) Cotton                              b) Silk  
c) Woollen                            d) Synthetic

**Ans- (a) Cotton**

5. Spinning at speeds greater than 300 rpm generate which force in washing machines?

- a) Centrifugal force    b) Gravitational force  
c) Regional force        d) Magnetic force

**Ans- (a)Centrifugal Force**

6. Identify the methods of washing clothes in a top loading washing machine :

- (i) Agitation                              (ii) Tumbling  
(iii) Calendaring                              (iv) Pulsation

Choose the correct option :

- (a) (i) and (ii)                              (b) (i) and (iv)  
(c) (ii) and (iv)                              (d) (ii) and (iii)

(CBSE Sample Paper 2022-23)

**Ans. (b) (i) and (iv)**

**(B) Match the following**

- |                     |  |
|---------------------|--|
| A. Agitator         | i. smoothening out wrinkles            |
| B. Ironing          | ii. method of washing clothes          |
| C. Hydro extractors | iii. spinning                          |
| D. Dhobi Ghats      | iv. specially marked place for laundry |

**Pick the correct option**

- a) Aii, Biii, Ci, Div    b) Aii, Bi, Ciii, Div  
c) Aiii, Bii, Civ, Di    d) Ai, Bii, Ciii, Div

**Ans- (b) Aii, Bi, Ciii, Div**

**C. Very Short Answer Questions (1 mark)**

1. What are the aspects of care and maintenance of fabrics?

**Ans-1 The care and maintenance of fabrics includes two aspects;**

- a) To keep the material free from physical damage and to rectify any damage that may have occurred during its use.  
b) To retain the visual appearance and textural characteristics of clothes.
2. How many types of models are available in washing machines? Name them.

**Ans- Two types of models are available in the washing machine:**

- a) Top-loading, in which clothes are put in the machine from above.  
b) Front loading in which the clothes are filled from the front.
3. How do we clean large items of household linen or some special garments?

**Ans-We do not wash the silk, wool or some special clothes at home  
We get them cleaned in the laundry where their cleaning is done with organic solvent i.e. dry-cleaned**

4. Write the names of any two methods of keeping the clothes moving in the washing machine

**Answer 1 Agitation**

**2 Pulsation**

**Case study based questions (4 × 1 mark)**

Institutional laundries are organized in different departments. Each part deals with a specific task, such as-washing, drainage, drying, pressing. Some laundries may have separate sections for hospitals and institutions and for personal work of individuals. Most laundries have separate unit for inspection, sorting, segregation and pre-treatment for stubborn spots.

1. In the context of Machine laundry choose the correct pair :

- (a) Spinning : Water extraction
- (b) Tumbling : top loading machines
- (c) Pulsation : Front loading machines
- (d) Agitation : Rinsing

**Ans.** (a) Spinning : Water extraction

2. Match the type of institutional laundry in List I with its specific feature in List II.

List I (Institutional Laundry)	List II (Feature)
A. Dry cleaning	i. Washing and disinfection of cotton fabrics
B. Laundry of hospital	ii. Special attention to the aesthetic sense of clothing
C. Laundry of hotel	iii. Water less washing of silk woolen and special items
D. Dhobi Ghat	iv. Traditional way of laundry in open areas.

Choose the correct option from the following:

- (a) A-iii, B-i, C-ii, D-iv
- (b) A-i, B-ii, C-iv, D-iii
- (c) A-ii, B-iii, C-i, D-iv
- (d) A-iii, B-ii, C-i, D-iv

**Ans.** (a) A-iii, B-i, C-ii, D-iv

3. Given below are two statements labelled as Assertion (A) and Reason (R).

Assertion (A) : The agitators in washing machine are made of bakelite

Reason (R) : Bakelite is not adversely affected by bleaching agents and detergents.

Choose the most appropriate answer from the options given below:

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (b) Both (A) and (R) are true but R is not the correct explanation of (A)

(c) (A) is true but (R) is false

(d) (A) if false but (R) is true

**Ans.** (a) Both (A) and (R) are true R is the correct explanation of (A)

**Short answer questions (2 marks)**

1. Write any four factors that affect the process of cleaning of clothes.

**Ans-** i. Type and content of fibres and yarns

ii. Fabric manufacturing techniques

iii. Finishes given to the fabrics

iv. Purpose of use of fabric

2. "Washing of clothes is both a science and an art." Discuss this statement. (CBSE Sample Paper 2022)

**Ans- Laundry is a science, as it is based on the application of scientific principles and techniques. This is an art, as its application requires to have mastering the certain skills to achieve aesthetically interesting results.**

3. What do you understand by the dry cleaning shops (waterless washing shops)?

**Ans-** In the dry cleaning shops, people give some special clothes for cleaning. Here the customers give clothes to be washed, and after a few days they take back the washed clothes. These customers can be any person or an organization. Some washing houses also provide service to collect and deliver materials from the customer. These also serve small institutions like small hotel, hostels, restaurants and nursing homes. Some shops also have units for pre-treatment such as darning, repairing and dyeing of textiles.

4. Write the names of any 4 appliances used in commercial washing houses.

**Ans-** 1 Large washing machines

2 Water extractors

- 3 Dryers  
 4 Ironing equipment  
 5 Calendaring machine  
 6 Trolley to move clothes from one place to another
5. Give the reason for the following:
- Spinning to near dryness is avoided.
  - Agitators of washing machine should be made of bakelite. (CBSE Sample paper 2022)
- Ans.** a) Spinning to near dryness is avoided- It may cause wrinkles which are difficult to remove during ironing.  
 b) Agitators of washing machine should be made of bakelite as they are not affected by detergents, bleaches, softeners, etc.
6. Give any four differences between household and commercial laundry (CBSE Sample paper 2022)

**Ans.** Four differences between household and commercial laundry.

HOUSEHOLD LAUNDRY	COMMERCIAL LAUNDRY
Quantum of clothes is less (5-10 kg)	Quantum of clothes is more (100 kg or more)
No need of records	Proper record is maintained
No separate sections	Separate area for inspection, sorting, drying, ironing, etc.
Equipment used are brushes, bucket, basin, washing machine, etc.	Bigger equipment such as hydroextractors, flat bed for ironing, roller ironing, etc.

**Short answer questions (3 marks)**

1. What are the primary requirements in a person who wants to earn a livelihood in the care and maintenance of clothes?

**Ans-**Refer to 'Points to Remember' No. 14

2. Which clothing items need to be washed and maintained in a hospital?

**Ans- 1. Clothes like bed sheets, draw sheets, blankets etc. of hospitals.**

2. Clothes of employees or uniform
  3. Furnishings of rooms of hospitals
  4. Aprons, caps, head costumes, masks
  5. Dresses of patients in hospital
  6. Kitchen clothes.
  7. Some other materials like curtains, tablecloths etc.
3. What are different methods used for water extraction in an automatic washing machine?

**Ans-** Refer to Points to Remember No. 7(vi)

**Long Answer Questions (4 marks)**

1. What is the function of a dryer in a machine? Describe its different methods of operation.

**Ans-** Refer to Points to Remember Number-8

2. Explain what are the differences in the process of laundry work in commercial laundries and laundries of hospitals. (NCERT)

**Ans-**

S.No	Commercial laundries	Laundries of hospitals
1	In commercial laundries, cleaning and maintenance of the clothes of the customers is done. The customer can be any person, hostel or institution.	In the laundries of hospitals, only the clothes of that hospital, the clothes of their patients and the employees are cleaned and maintained.
2	There may be separate sections for dry-cleaning of silk, woollen and other expensive textiles and for specific items such as washing of carpets, brocade polish of fabrics, dyeing etc.	Most of the material here is made of cotton cloth. There may be sections for different departments of hospitals.
3	Special attention is paid to the ironing and packing of garments.	No special attention given to ironing and packaging of the garments.

4	The disinfection of the materials is not given much importance. Special attention is paid to the cleanliness of the spots and the aesthetic sense of the garment.	Here emphasis is not given to remove tough stains, but special care is taken for the hygiene of clothes and also disinfection.
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**Long answer questions (5 marks)**

1. Make a record keeping format related to the distribution of clothes in professional laundry.

**Ans- Refer to Points to Remember No. 13**

2. What are the different types of Washing machines? Briefly write the working of a fully automatic machine. Which materials are commonly used for making agitators in washing machine and why?

**Ans- Refer to Points to Remember No. 6**

Agitators of the washing machine are made from materials such as plastic, aluminium or bakelite. These substances are not affected by different types of detergents, bleaching agents, softeners etc.

3. Mohan has recently opened a Hitech laundry in the city. He got a contract signed with the Government Hospital.

(a) What two important points he must consider while doing hospital laundry

(b) Write eight steps of the process of laundry

(CBSE Sample paper 2023-24)

**Ans.** (a) Refer to Points to Remember No. 11(i).

(b) Refer to Points to Remember No. 11(iv).

# 11. HOSPITALITY MANAGEMENT

## Points to Remember

1. **In Indian culture guests are regarded as God-Like and treated accordingly, as represented in the words "Atithi Devo Bhavo".**
2. **In ancient times, people generally stayed with relations or friends or in 'dharmashalas'. However, in modern times the travelling to different places has increased due to various purposes, which has necessitated provision of paid services for hospitality.**
3. **Significance of Hospitality Management** - With globalisation people travel from one place to another for many reasons.
  - i. Some people travel to see various places especially for experiencing different cultures, seeing heritage monuments, wild life or natural beauty.
  - ii. People travel for pilgrimage, to visit holy places and to participate in religious festivals, like Pushkar and Kumbh Mela, Dusshera festival in Mysore, Ganpati festival in Mumbai and Pune etc.
  - iii. People also travel to different countries for business purposes.
  - iv. Medical tourism is also an upcoming field as people travel to seek health care.
  - v. Students also travel to different countries for studying.  
All the people who visit / participate in such events need a place to stay that is comfortable safe and hygienic. The hospitality industry, hence, has grown to provide "A Home Away From Home" and this is one of the fastest growing industries.

Tourist—Tourist is one who travels and stays temporarily in another place.



**Motel**



**Hotel**



**Resort**



**Lodge**



**Furnished Flats**



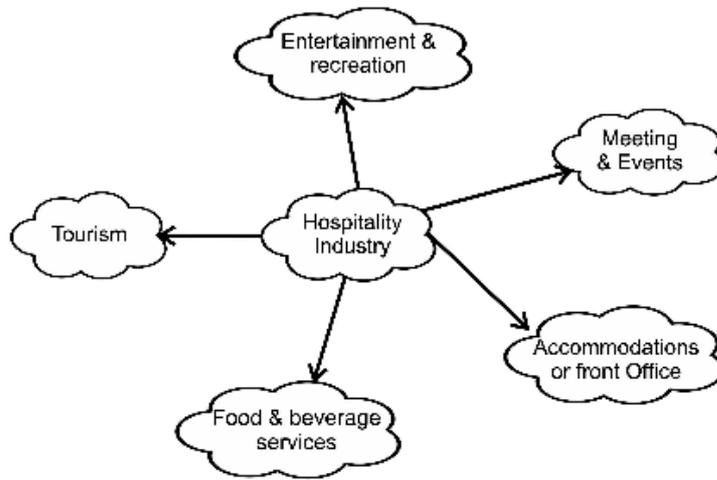
**Furnished camps**

**DIFFERENT TYPES OF ESTABLISHMENTS**

**4. Hospitality** – Hospitality is the relationship between the guest and the host. It is the act/ practice of being hospitable including friendly generous reception /welcoming of guest their entertainment and providing services with warmth and courteousness.

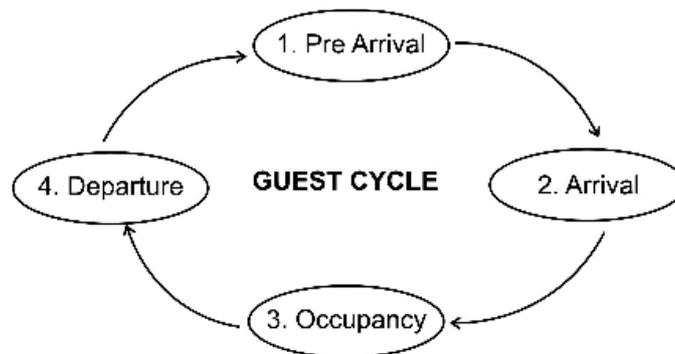
Different type of establishments which offer hospitality services are-

- i. Hotel- A hotel is a commercial establishment offering lodging, meals and other services to its guests.
- ii. Motel- A motel provides services like a hotel and provides parking facility near the room or a room door that opens out into the parking lot.
- iii. Lodge- A Lodge offers rented accommodation especially for sleeping and may not offer food and other services.
- iv. Resort- It offers a broad range of amenities, sports facilities and leisure activities for ensuring a total vacation experience. A resort is known for its leisure attraction.
- v. Furnished apartments- They provide all essential amenities needed by guests.
- vi. Furnished camps- These provide hospitality to people who go hiking, trekking, rock climbing, rafting and other adventure sports.
- vii. In addition to these, hospitality services are also provided at conventions, conferences, theme parks, cruise lines etc.
- viii. Hospitality services are also provided by guest houses, hostel and hospitals.



Departments/Sectors in Hospitality Industry

**5. Guest Cycle** – In order to understand hospitality industry, one needs to understand concept of Guest Cycle.



1. Pre-arrival stage- Following activities are carried out in this stage.

- Quoting rates for a guest.
- Reserving a room after the consent between guest and the hotel.

2. Arrival Stage - The guest actually arrives and registers or check-in.
3. Occupancy - This stage consists of providing various services as per guest's requirements after guest moves to the room like ensuring security of the guest and coordination of various guest services. Guest satisfaction is the main focus in order to obtain or retain customer loyalty.
4. Departure - This is the final stage of the Guest Cycle where the guest is ready to leave / move out or "check-out" the accommodation. Following activities are carried out at this time -
  - Clearance of bill by the guest.
  - Handing over the keys of the room to hotel staff
  - An up to date record of the guest is kept along with other information about the guest as 'guest history'.
  - Feedback from the guest.

**Departments involved in Hospitality Management of an Organisation :-**

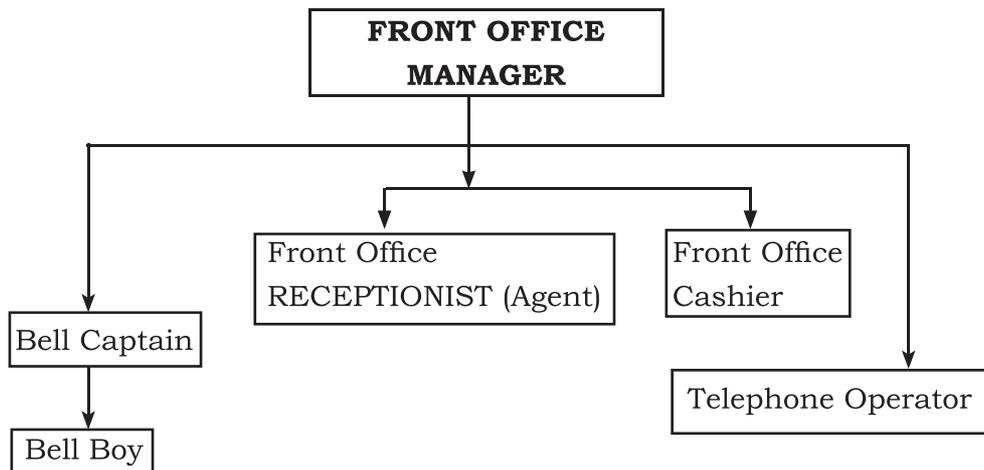
6. **Front Office** - The guest cycle falls largely under the domain of Front Office
  - The guest arrives at the front office and comes in contact with the staff of the hospitality industry.
  - The front office is the focal point of any hotel as interaction between the guest and the staff is very critical to develop good relationship between the guest and the organisation.
7. **The services offered by Front Office staff are**
  - Welcoming guests, meeting & greeting them.
  - Organising reservation status of room availability.
  - Registering guests and allocation of rooms.

- Maintaining records of check-in and check-out details.
- Porter services.
- Issuing room keys to the guests.
- Providing in house and external information to guests.
- Preparing and settling bills.

**8. The front office staff also coordinate with various departments for providing services to the guests like-**

Transport department,  
 Accounts,  
 Billing,  
 Room service,  
 Restaurants,  
 Engineering,  
 Stores,  
 Sales,  
 Housekeeping,

**9. Organisation of the Front Office Department**



### **10. Designations and Functions/Duties of Various Personnel in The Front Office**

<b>DESIGNATION</b>	<b>FUNCTIONS /DUTIES</b>
1. Front office Manager	<ul style="list-style-type: none"> <li>• Responsible for managing the front office, lobby, transport activities.</li> <li>• Schedules shifts / staff rotation and duties of the staff in shifts</li> <li>• Checks the arrivals of the day.</li> <li>• Checks the arrivals of the V.I.P.'s, coordinates with housekeeping and other departments.</li> </ul>
2. Front office Supervisor	<ul style="list-style-type: none"> <li>• Is responsible for a shift.</li> <li>• Meets and greets all arrivals.</li> <li>• Ensures accurate and speedy rooming procedure.</li> <li>• Checks occupancy.</li> </ul>
3. Front office Cashier	<ul style="list-style-type: none"> <li>• Is responsible for maintaining guests bills.</li> <li>• Receiving payments when the guests check-out.</li> </ul>
4. Telephone Operator	<ul style="list-style-type: none"> <li>• Is responsible for providing information.</li> <li>• Communicates with in-houses guests and visitors.</li> </ul>
5. Assistant Manager - Front office	<ul style="list-style-type: none"> <li>• Organises, supervises the front office in the absence of front office manager.</li> <li>• Ensures smooth functioning of the front office.</li> </ul>
6. Lobby Manager	<ul style="list-style-type: none"> <li>• Organises supervises and controls all uniformed services.</li> </ul>

7. Receptionist (Front office Agent)	<ul style="list-style-type: none"> <li>• Reserves registers and assign rooms to guests.</li> <li>• Provides information as and when necessary to guests during their stay in hotel.</li> </ul>
8. Bell Captain .	<ul style="list-style-type: none"> <li>• Organises, supervises and controls all uniformed services, bell boys in the lobby</li> <li>• Supervises all baggage movement during check-in and check-out.</li> <li>• Is responsible for shifting of baggage of guests within and out of the room.</li> <li>• Welcomes guests upon arrival and escorts them to the registration desk.</li> </ul>

**11. Housekeeping Department:** Housekeeping department is primarily responsible for providing cleanliness and maintaining hygiene.

- In hotels room decor, facilities provided within the rooms, safety, cleanliness and hygiene are most important.
- House keeping department ensures the aesthetics of the entire establishment.

Nowadays, many organisations, including corporate offices, are hiring housekeeping services on contractual basis. Different departments and trained people are required for this.

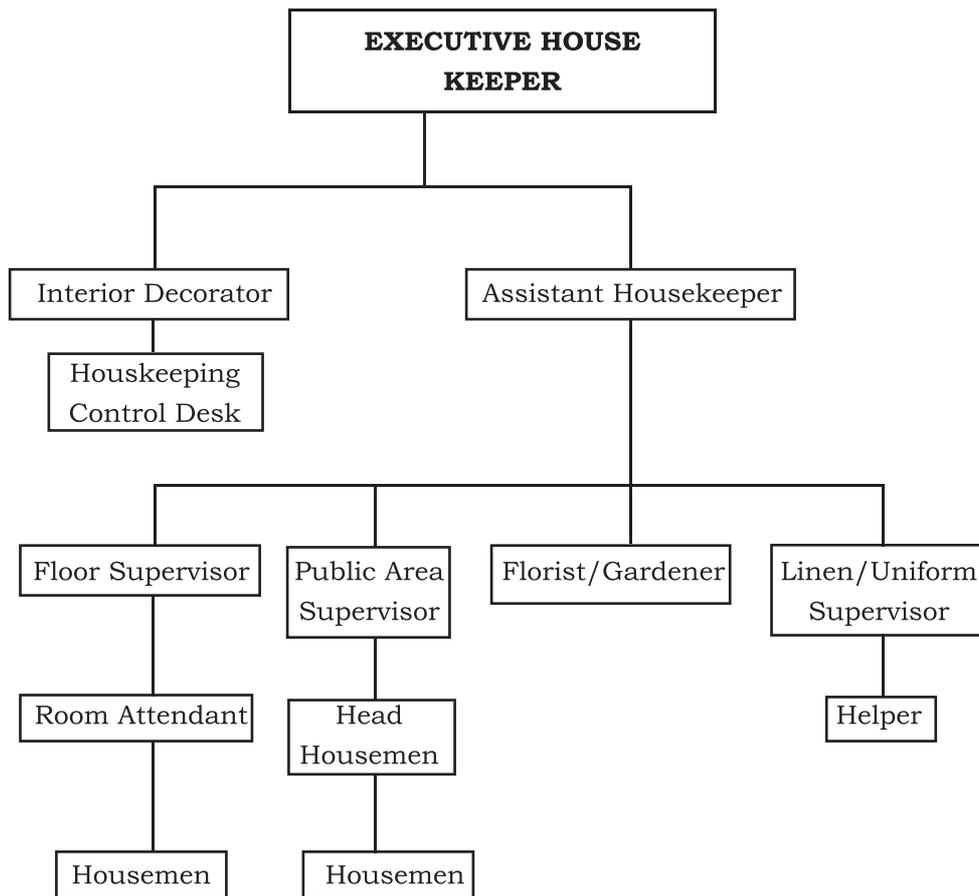
### (i) **Functions of Housekeeping Department**

- Cleaning of public areas.
- Supply, upkeep of laundry and exchange of various linens and uniforms
- Flower arrangement in the hotel and maintenance of external landscape or garden

- Coordination and Communication with other departments such as front office, restaurants, engineering, accounts etc.
  - Pest-control.
- (ii) In order to carry out all the above functions, the house keeping department is divided into various sections.
- Housekeeping control desk - It passes on the information to housekeeping staff who are working in various parts of the hotel.
  - Housekeeping management - It plans, organises and controls all the activities of the housekeeping department.
  - Guestroom brigade- upkeep and cleans the guest rooms.
  - Public area brigade- maintains cleanliness of foyer, lobby, front office and other common areas.
  - Linen and uniform room - coordinates with laundry, responsible for providing clean linen to establishment and uniform to all the staff.
  - Horticulture and flower arrangement team - maintains landscape of the hotel and arranges flowers in rooms and at various places.
  - Lost and found section deposits misplaced luggage of guests.

## **12. Staffing Pattern of Housekeeping Department**

In order to run the department smoothly, it is essential to select appropriate manpower to various posts. The organisational structure and hierarchy may vary from one organisation to other. One may appoint different individuals in different posts on have some staff 'multi-tasking'.



**General Organisational Chart of Housekeeping Department**

### **13. Responsibility of the House Keeping Department Personnel**

- i. Executive Housekeeper – He is responsible for managing the functioning of the department through judicious use of manpower, materials, money, time and other available resources. He checks schedules, cleanliness and all functioning of the housekeeping department
- ii. Assistant Housekeeper – He prepares duty schedule and

- checks cleanliness and functioning of the housekeeping department.
- iii. Desk Control Supervisor – Coordinates with front office for information on departure of guests.
    - Gets vacated rooms cleaned and hands over cleaned rooms.
    - This desk should be manned 24 hrs.
  - iv. Floor Supervisor - There is one supervisor for each floor, responsible for cleanliness and maintenance of guest rooms, corridors, staircase and floor pantries .
  - v. Room Attendant - He does the actual cleaning of guest rooms and bath rooms.
  - vi. Housemen does the heavy cleaning activities such as vacuuming, mopping, sweeping, shifting of furniture.
  - vii. Public Area Supervisor - He is responsible for maintaining cleanliness of public areas such as main entrance, corridor offices, banquet halls & restaurants.
  - viii. Florist/ Gardener - He maintains garden and does flower arrangement in various parts of the hotel.
  - ix. Linen Room /Uniform Room Supervisor– He is responsible for supply, acquisition, storage, issue and cleanliness the linen and uniform required in various parts of the hotel.

#### **14. Cleaning Work in an Organisation /Hotel**

- Cleaning is an integral part of an organisation /hotel. Following points are to be borne in mind.
  - Knowledge of correct cleaning procedures
  - Trained staff
  - Selection of specialised equipment, tools.
  - Selection of appropriate cleaning solutions
  - Knowledge of latest technological applications.

## **15. Cleaning of Various Surfaces**

- Cleaning of various surfaces in the hotel is done with suitable tools, cleaning solutions and specific methods.
- Various materials and finishes used for walls, floor, counter tops and furniture are wood, granite, marble, ceramic tiles, stones, linoleum, plastic, vinyl, fibre glass, metals, leather, cane, rubber, cloth paints & wall papers. Different type of equipments are needed for keeping good cleanliness.
- Commonly used equipments are vacuum cleaners, brushes, brooms & mops, containers, cleaning cloth and trolleys to carry multiple equipment.
- Various cleaning agents such as water, ammonia vinegar, soaps and detergents, washing soda, abrasives, polishes, acids etc. are used for cleaning purposes.

## **16. Washing & Maintenance of Linen**

- The linen and uniform room is an integral part of house keeping
- The laundry may be done in the department or it can be given to an outside agency.
- The linen room stores and maintains enough stock of bed linen, bath linen, linen for restaurants and uniforms of all staff members of the hotel.

## **17. Aesthetic Appeal of Interior Spaces of Hotel**

- Flowers are used to enhance the aesthetic appeal of various interior spaces
- The organisation may give a contract to florists to supply flower arrangements regularly.

## **18. Environmental Conservation**

- Hotel staff is trained for eco-friendly practices like avoid the use of single use plastic.
- 100% organic cotton bed sheets used.
- Chemical free laundry cycles are encouraged.
- Using agents which are non-toxic, water based, hypoallergic and biodegradable.
- Cards are put in hotel rooms urging to save natural resources.
- Use of energy efficient light bulbs and use of solar energy
- Rainwater harvesting
- Tree plantation
- Composting from hotel's kitchen waste

## **19. Food And Beverages Department**

The food and beverages department is responsible for the sale of food and beverages. Various service departments involved in kitchen are banquets, restaurants, room service, stewarding, bars and coffee shops.

- (i) Kitchen** - It is a place where food is prepared. In large hotels the kitchen may be divided into various sections for various aspects related to food preparation such as butchery, bakery and confectionery, vegetable preparations. soup section, pantry, hot range etc. In smaller hotels the kitchen would combine various sections.-

### **There could be various staff in the kitchen—**

- The Executive Chef (Chef-de-cuisine) is the head of the kitchen and is responsible for planning, organising and controlling the kitchen operations.

- Next in the hierarchy is the Deputy Chef
- There are supervisors for some sections of the kitchen 'Chef-de-Parties'.
- There are number of cooks who make the common food items.

**(ii) Kitchen stewarding department:**

- Kitchen Stewarding is concerned with the storage maintenance, cleanliness and issue of cutlery, crockery and glassware to the restaurant and kitchen.
- It is the responsibility of the department to maintain cleanliness in the kitchen and to wash the pots and pans used.
- This department may have an executive kitchen steward, kitchen steward, dish washer, pot washer. and utility workers to clean the kitchen.
- Staff working in this deparment must have standards of grooming, hygiene and sanitation, good manners and base etiquettes.

**(iii) Restaurants**

- It is a commercial facility that provides food and beverages to the customers.
- It is equipped with dining tables, chairs and other required furniture with crockery, cutlery, linen and decor.

**Functions of Various staff Members of a Restaurant**

- A restaurant manager is responsible for overall restaurant functioning of the restaurant.
- The Senior Restaurant Supervisor and head waiter lead a team of waiters / Stewards who actually serve the food.

- Take bill payments of food and beverages from the customer.
- Assistant waiter clears the table.
- Restaurant personal have to be smiling, courteous to guests and possess good manners and etiquettes. They should have thorough knowledge of the ways of serving the food.
- They maintain the standard of cleanliness, hygiene and services in the restaurant.

## **20. Support Service Department**

A hotel has other departments which provide support and are involved in the overall management and efficient functioning of the hotel which are referred to as "back office" departments. These are

- Finance and accounts Department
- Engineering Department
- Human Resource Department
- Sales and marketing department..

## **21. Management Functions**

The organisational structure of a hotel is as follows:

- It has a hierarchy of top management, middle management, junior management, supervisors and operational staff.

Key management functions are as below:

- i. Planning
- ii. Organising
- iii. Co-ordinating
- iv. Staffing
- v. Directing

- vi. Controlling
- vii. Evaluating

The fundamentals of hospitality management is not only limited to hotels but are applicable to hostels and large hospitals also.

## **22. Reasons for preference of youth in Hospitality industry**

- ▶ Youth is preferred for working in this industry as they can work for long hours.
- ▶ Youth is better informed and have better competency through advancement in education.
- ▶ They are open to new ideas and latest technology.
- ▶ They are ambitious and want to earn high monetary returns.

## **23. Essential Competencies Required to Work in this Industry**

- The person should be qualified in this field.
- The staff needs to be well groomed, have good hygiene, orderliness good manners and etiquettes besides smiling face.
- The front office staff should be cheerful, self-disciplined courteous physically fit, self confident and should have good communication skills
- The staff should wear clean and neatly ironed uniform, minimum accessories and well groomed hair.
- Nails should be clean and properly manicured.
- The front office staff must be seen at their best at all times as they not only present their good image but also of the establishment.

## 24. Scope/Career Opportunities

- Hotel management is one of the most popular choices for a career. Catering and Hospitality management courses are offered by various institutes. Candidates can pursue catering courses at undergraduate as well as post graduate level. Apart from degree course, one can pursue diploma and certificate course in this field.
- Position in housekeeping departments at various hierarchical levels.
- Entrepreneurial opportunities in housekeeping.
- Positions in front office and reception / control desk in hotels.
- Entrepreneurial opportunities for supply of flower arrangements.
- As a interior decorator
- Specialised in theme based events within the organisation.

### OBJECTIVE QUESTIONS (1 MARK)

#### A) Multiple Choice Questions

6. Which of the following option does not fall under hospitality services?
- |           |                |
|-----------|----------------|
| a) Hotel  | b) Lodge       |
| c) Resort | d) Janta flats |

**Ans.**d) Janta Flats

2. Who cleans the room in a hotel ?
- |                   |                       |
|-------------------|-----------------------|
| a) Bell boy       | b) Floor Supervisor   |
| c) Room attendant | d) Restaurant Manager |

**Ans.**c) Room Attendant

3. Which of the following department is not a part of support services department
- Front office.
  - Finance & accounts
  - Human Resource department
  - Sales and marketing department

**Ans.** a) Front office.

4. For which of the following a decorated camp is set up?
- River rafting
  - Tracking
  - Wedding
  - Birth day party

Choose the correct option

- i and iii
- ii and iii
- i and iv
- i and ii

**Ans.** (d) i and ii

5. Which of the following does not come under hospitality industry?
- Tourism
  - Meetings
  - Accommodation
  - Wedding

**Ans.**d) Wedding

**(B) (i) Match the following**

- |                          |                           |
|--------------------------|---------------------------|
| A) Assistant Housekeeper | i) Flower decoration      |
| B) Gardener              | ii) Clearing of bathrooms |
| C) Room attendant        | iii) Duty schedule        |
| D) Floor supervisor      | iv) Cleanliness of lobby  |

**Pick the right option**

- A - iii), B - i) C - ii) D - iv)
- A - i), B - ii) C - iii) D - iv)
- A - ii), B - iii) C - iv) D - i)
- A - iv), B - i) C - ii)- D - iii)

**Ans.** a) A - iii), B - i) c - ii) D - iv)

**(B) (ii) Match the following**

- |                |                                    |
|----------------|------------------------------------|
| A. Guest Cycle | i) Finance and Accounts department |
| B. Camp        | ii) Deputy Chef                    |
| C. Back office | iii) Arrival                       |
| D. Kitchen     | iv) Rafting                        |

**Pick the Correct Option.**

- a) A iii), B iv), C (i), D ii)
- b) A i), B ii), C iii), D. iv)
- c) A ii) B iii), C iv), D i)
- d) A iii), B iv), C ii) D i)

**Ans.** a) A iii), B iv), C (i), D ii)

**(B) (iii) Match the following :** (CBSE Sample Paper 2022-23)

- |                                 |                   |
|---------------------------------|-------------------|
| i. Food and Beverage department | 1. Receptionist   |
| ii. Front office                | 2. Accountant     |
| iii. House keeping department   | 3. Chef-de-partie |
| iv. Support Service department  | 4. Room Attendant |

Choose the correct option :

- (a) i-3, ii-1, iii-4, iv-2
- (b) i-1, ii-2, iii-3, iv-4
- (c) i-2, ii-3, iii-1, iv-4
- (d) i-3, ii-4, iii-2, iv-1

**Ans.** (a) i-3, ii-1, iii-4, iv-2

**(C) Very Short Answer Question (1 Mark)**

1. In Indian culture guests are regarded a 'God-like', write the words which imply this treatment?

**Ans.** In Indian culture guests are regarded as God like and treated accordingly as implied in the words "Atithi Devo Bhava."

2. How does a resort attract the tourists?

**Ans.** A resort is known for its leisure attraction.

- It offers a broad range of amenities & sports activities.
- It gives total vacation experience.

3. Which activities are included in pre-arrival stage of a 'Guest cycle'?

**Ans.** The activities done in the pre-arrival stage include:

- (i) quoting rates to the guests.
- (ii) reserving a room as a part of central reservation system.

4. What is the duty of a bell-boy in a hotel?

**Ans.** A bell boy is responsible for shifting of baggage of guests, within and out of the room.

### **Case Study Based Questions (4 × 1 Mark)**

Cleaning is an integral part of any organisation / office / hotel, hence it involves planning and having a well organised approach in selecting staff with practical housekeeping operational skills with correct cleaning procedures and skill to do the task well under a qualified supervisor to ensure quality services.

1. Which of the following is incorrect pair?

- (a) Bell Boy : Shifting of baggage of guests to the room.
- (b) Floor Supervisor : Responsible for cleanliness and maintenance of each floor
- (c) Linen Room Supervisor : Cleanliness of staircase and kitchen
- (d) Gardener : Maintains flower arrangement in various parts of the hotel

**Ans.** (c) Linen Room Supervisor : Cleanliness of staircase and kitchen

2. Which of the following hospitality service offers rented accommodation especially for sleeping and may not offer food and other services?

- (a) Hotel
- (b) Lodge
- (c) Motel
- (d) Camp

**Ans.** (c) Motel

3. Given below are two statements labeled as Assertion (A) and Reason (R).

Assertion (A) : Smiling is the most enduring competency required for front office personnel.

Reason (R) : The front office is not the focal point of any hotel.

Select the most appropriate answer from the options given below :

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (b) Both (A) and (R) are true but R is not the correct explanation of (A)
- (c) (A) is true but (R) is false
- (d) (A) is false but (R) is true

**Ans.** (c) (A) is true but (R) is false

4. Given below are two statements labeled Assertion (A) and Reason (R).

Assertion (A) : Youth form the major part of work force.

Reason (R) : Youth have high energy to work for long hours and are better informed.

Select the most appropriate answer from the options given below :

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (b) Both (A) and (R) are true but R is not the correct explanation of (A)
- (c) (A) is true but (R) is false
- (d) (A) is false but (R) is true

**Ans.** (a) Both (A) and (R) are true and (R) is the correct explanation of (A)

### **Short Answer Questions (2 Marks)**

1. What are the responsibilities of a Front Office Supervisor?

**Ans.** Refer to point to remember No. 10 (2)

2. How is environmental conservation being encouraged in the hospitality industry?

**Ans.** Refer to points to remember No. 18.

3. Which departments come under Support Service department?

**Ans.** Refer to points to Remember No. 20

4. What are the different types of food services in a hotel. (NCERT)

**Ans.** Different types of food services in a hotel are:

- (i) Banquets
- (ii) Restaurant
- (iii) Room service
- (iv) Coffee shops/bars

5. What are the management functions in relation to hotel. (NCERT).

**Ans.** Refer to 'Points to Remember' No. 21

### Short Answer Questions (3 Marks)

1. Hospitality Industry has grown to provide. 'A Home Away from Home.' Why is this industry one of the fastest growing Industry?

**Ans.** Refer to Points to Remember No. 3

2. The front office staff coordinates with various department for providing services to guests. Name these departments.

**Ans.** i) Transport department.

ii) Accounts and billing department.

iii) Restaurant.

iv) Engineering department.

v) Stores.

vi) Housekeeping department.

3. List the main functions of Housekeeping department?

**Ans.** Refer to points to Remember No. 11 (i)

4. What in the importance of 'Front Office' in a hotel? (NCERT)

**Ans.** • The guest arrives at the front office and comes in contact with the staff of the hospitality industry for the first time.

- The front office is the focal point of any hotel as interaction between the guest and staff is very critical to develop good relationship between the guest and the organisation.

- The guest cycle falls largely under the domain of front office.

5. Write the responsibilities of any three members of the front office? (NCERT)

**Ans.** Refer to Points to Remember no. 10.

6. Write the responsibilities of any three members of housekeeping department of a hotel.

**Ans.** Refer to Points to Remember no. 13.

7. Julia wants to set up her own small hotel. (CBSE 2022-23)

(a) She wants to make her employees understand the guest cycle first. Explain the four stages of guest cycle for her employees.

(b) List two environmental conservation and eco-friendly practices which she will ensure in her hotel.

**Ans.** (a) Refer to Points to Remember No. 5 (i), (ii), (iii), (iv)

(b) Refer to Points to Remember No. 18

### **Long Answer Questions (4 Marks)**

1. Explain the meaning and functioning of kitchen in a hotel?

**Ans.** Refer to Points to Remember No. 19 (i)

2. Write about any four establishments which provide hospitality services.

**Ans.** Refer to Points to Remember Number-4

3. Why youth are given more jobs and business opportunities in the field of hospitality management? Explain.

**Ans.** Refer to 'Points to Remember' No. 22

4. Draw an organizational chart of a housekeeping department. What four responsibilities will Neeta perform if she joins this department? (CBSE Sample Paper Term-II 2022)

**Ans.** Refer to Points to Remember no. 12 and 13.

5. Your brother has recently joined front office department of a hotel. Tell him about four duties and responsibilities of each manager and supervisor of this department. (CBSE Sample paper Term-II 2022).

**Ans.** Refer to Points to Remember no. 10.

### **Long Answer question (5 marks)**

1. What are the essential competencies required to work in hospitality industry?

**Ans.** Refer to Points to Remember Number-23

2. What are the career opportunities available in the field of Hospitality industry?

**Ans.** Refer to Points to Remember No. 24

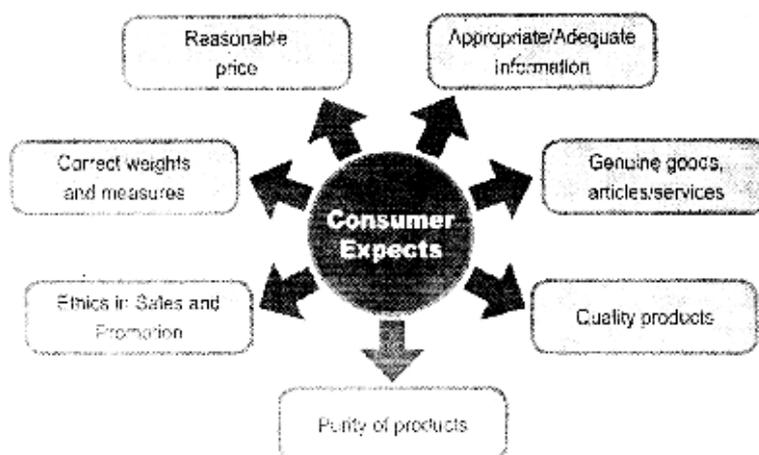
3. Explain meaning and functioning of restaurant and kitchen? (NCERT)

**Ans.** Refer to Points to Remember No. 19(i) (iii)

# 12. CONSUMER EDUCATION AND PROTECTION

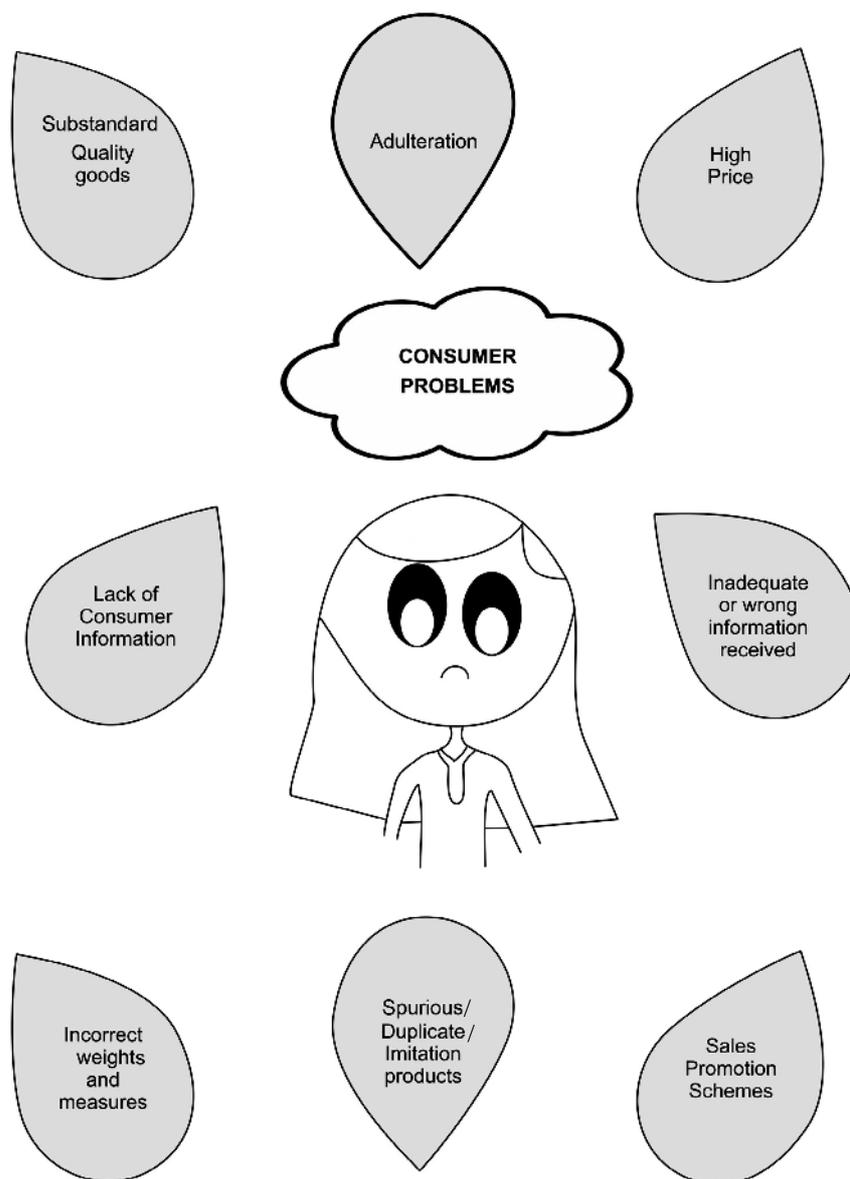
## Points to Remember

1. Consumer is a person who buys goods and services for the satisfaction of his/her personal needs. Consumers are the primary component of a socio-economic system.
2. Consumer product means any article, produced or distributed for sale to a consumer for personal or family use in one's home or in an institution e.g. school, hospital, college, office etc. or for business purposes.
3. Consumer behaviour is a process through which the buyer makes decisions about purchasing.
4. Consumer forum is a place/ organisation where consumers can discuss consumer products/ services and their advantages and disadvantages.
5. Consumer footfalls mean the number of customers/ consumers who visit any given space such as a store or a mall.
6. Consumers have following expectations while purchasing goods -



Expectations of Consumers while purchasing goods

**7. Consumer Problems** - Consumers have to face many problems in the market because manufacturers or services providers are unable to fulfill their expectations. They may cheat because consumers do not do anything against their problems and they are not aware of various protection measures.



### **Consumer Problems are —**

- i. Substandard poor quality goods** - Many manufacturers produce poor quality goods and sell them. Many times the label on goods is a copy of good quality products. When this happens, consumer gets confused and buys those products.
- ii. Adulteration** - Adulteration means when some inferior quality product is added or some good content is removed from any substance. Adulteration is done intentionally to make profit, but sometimes it can be done unintentionally. Adulterants can cause harm to health, like metanil yellow in turmeric powder, iron fillings in tea leaves, water in milk etc.
- iii. High prices** - Many times the price of same product is different in different shops. It can be due to many reasons like big shops have extra expenditures, place of purchase, demand of goods, delivery system, quality of goods. Consumer should not think that expensive goods only are of good quality, he should do proper market survey and compare prices, then buy goods.
- iv. Lack of consumer information** - Most of the consumers are not aware of their rights and responsibilities, that's why they face so many problems.
- v. Inadequate or wrong information received** - There are many sources to provide information about any product, still the consumer does not get complete correct information.
  - a. Most of the labels on products are incomplete, they do not give complete information. Few labels are imitations of big companies, hence they cheat the consumers.
  - b. The second source to get information about a product by the consumer are advertisements, but most of the

advertisements do not give complete information. Seldom advertisement do focus on features, care and maintenance, after sales service etc. Some advertisements are misleading also, they exaggerate the quality of a product like advertisements of cream, shampoo etc.

- c. There is non availability of buying guides for judging the quality of a product, hence consumer cannot select appropriate goods.
- d. Sometimes consumers are cheated by inappropriate packaging. During festivals, mostly goods with attractive packaging are seen in the market. Many times the outer packaging is very attractive but the inner goods are inferior. The consumer gets lured by the attractive big packaging and buys the goods, but finds very less quantity of product inside it. Manufacturers repackage existing products into attractive looking and novel shapes of packs and advertise the product to be 'in a new pack', although the product quality is the same.

**vi. Incorrect weights and measures** - Many shopkeepers cheat the consumers by using incorrect weights and measures like –

- a. Not using standardized weights.
- b. Weights are made hollow from below.
- c. Weighing with stones, instead of weights.
- d. Putting magnet on the weighing scale.
- e. Instrument used for measuring liquids is raised from the bottom.
- f. Stretching elastic, ribbon etc. while measuring.
- g. Not using metre rod, putting markings on the table and then measuring cloth.

**vii. Spurious / Duplicate / Imitation products** - Some well known brands are copied and duplicate products are sold in the market. Many times their label is also copied of genuine product. It's name and packaging is like original product so consumer gets confused and buys that product.

**viii. Sales promotion schemes** - Nowadays market is flooded with products so the companies are competing with each other. They come out with many sales promotion schemes like lucky draw, free gifts, new goods in exchange of old ones etc. so that consumers buy their products. Many times consumer gets swayed by these and gets cheated.

**ix. Consumer problems with regards to services:** Consumers face problems not only with regards to consumption of products of daily use but they also face grievances when they use a wide variety of services. This includes services provided by public utilities such as MCD, water, electricity, banks, Insurance and other financial institutions. There are poor after sales services provided to the consumers. The provider of the services do not deliver what they promise under the sales contract.

Eco-friendly Production and Green Consumption Sustainability is the buzz word these days. It is essentially related to the production and consumption system. Green marketing provides consumers with products that are more in tune with nature, which creates less waste products, uses few raw materials and saves other resources.

**8. Consumer Education and Protection are tools which empower and equip consumers to protect themselves from adverse market forces. They help the consumers understand legislation and policy matters which would directly have a bearing choices as consumers.**

**9. Importance of consumer education and protection** - We are living in a "Global village and facing the challenges of global markets. The march towards 'global economy' necessitates a global outlook on the part of consumers who cannot sit back and watch. They have to emerge as a progressive force to ensure their welfare. If he is educated, careful and alert, he will find out solutions to his problems and will not be deceived. Today we can see a variety of products in the market. One has to understand the new technology and new products, and select right products. Hence consumer education and protection is very important.

**10. Consumer Protection Act (CPA) was passed in 1986. It was modified many times. New Consumer Protection Act was implemented in 2019.**

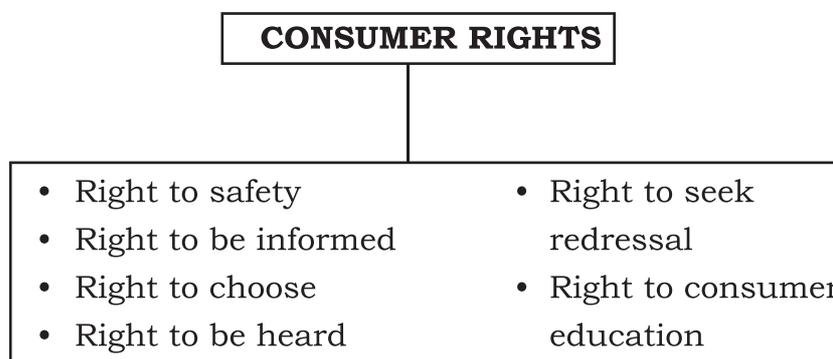
Consumer Protection Act has two implications -

- i. It gives the consumer the right to complain to an authority about his / her grievances and seek speedy redressal.
- ii. Consumer can claim compensation for any loss or injury suffered on account of the negligence of the manufacturer. It applies to all goods and services unless otherwise expressly notified by the central government.

**11. (i) Under Consumer Protection Act 1986, six consumer rights have been given. Consumer rights are those rights, which are or should be provided legally to protect consumer interests. These are rights designed to ensure that all consumers obtain goods and services of reasonable quality, at fair prices.**

(ii) **Consumer Protection Act (CPA) 2019** has replaced the three decade old CPA 1986. The new act proposed some measures and tightens the existing rules to further safeguard consumer rights. Introduction of a central regulator, strict penalties for misleading advertisements and guidelines for e-commerce and electronic service providers are some of the key highlights.

## 12. Consumer Rights



### Six Consumer Rights:-

- i. **Right to safety** - This refers to the right to be protected against hazardous effect that may be caused to the health/ life of a consumer. This right specifies that the consumer has the right to be protected against products, production processes and services which are hazardous to health or life.
- ii. **Right to be informed** - This means the right to be informed about the quality, quantity, potency, purity, standard and price of goods and services so that the consumer can protect himself against unfair trade practices.
- iii. **Right to choose** - This means that every buyer should have access to products of varying quality and quantities, prices, size and design. Consumer can choose according to his needs and wants.

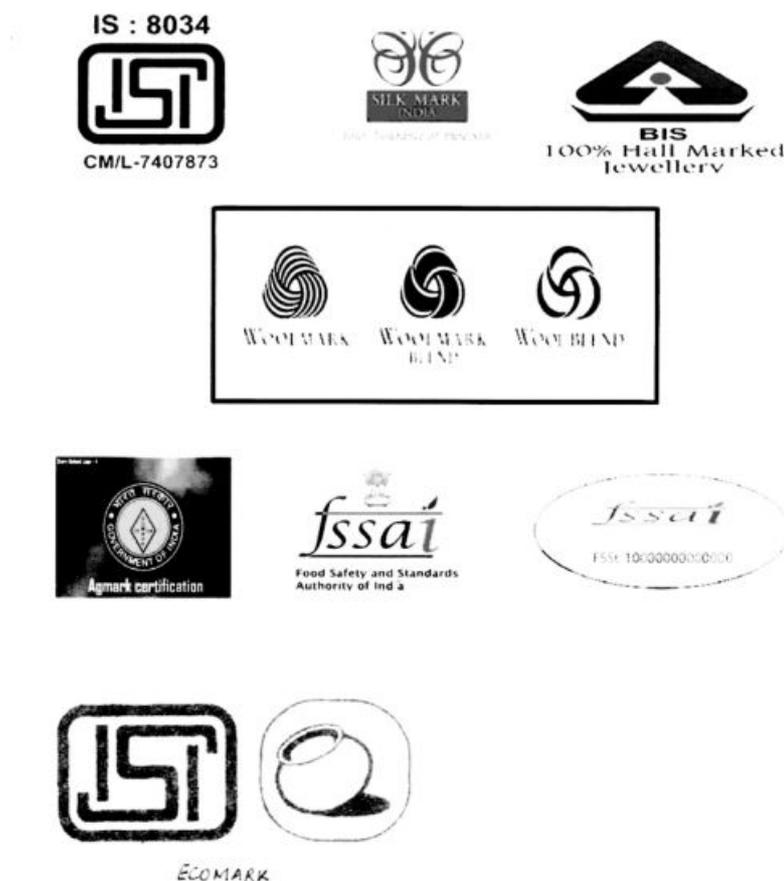
- iv. Right to be heard** - It means that consumers' interest will receive due consideration at appropriate forums. It also includes the right to be represented in various forums that are working to ensure consumer welfare.
- v. Right to seek redressal** - It means that every consumer has the right to seek redressal against unfair trade practices. If someone exploits the consumer, provides defective goods and services, then consumer can complain against him and demand compensation.
- vi. Right to Consumer Education** - It means that each consumer has right to education so that he can save himself against exploitation and solve his problems. He has the right to acquire knowledge and skill to be an informed consumer, so that he will be able to make wise decisions while purchasing goods and hiring services.

**13. Consumer Responsibilities** - As a consumer, we have certain duties which we have to perform, in order to reduce our consumer problems. They are called consumer responsibilities.

1. Consumer should regularly update his knowledge of various laws made by the government.
2. He should be honest in all his dealings of all products (goods / services).
3. Before making a purchase, consumer should do a market survey so that he can compare the prices and make a wise choice.
4. Consumer should feel free to choose from various options available, as per his needs and do not get persuaded by someone.
5. Before purchasing, he should read all the information given on the label / brochure.

6. He should purchase only goods with standardization marks, which are of good quality.
7. While buying any product, take proper bill. Keep this bill and other important documents safely.
8. In case of purchasing services like insurance, credit card, bank deposits etc., he should read and understand all terms and conditions.
9. Many national and international consumer organisations are working for the benefit of consumers. He should understand their work and activities. It would be beneficial to become member of any such organisation.

#### 14. Standardization Marks -



Standardization marks are those marks which are given by the government on good quality products and they are main requisite for attaining quality of that product.

- i. **ISI mark** - This is a certification mark of BIS (Bureau of Indian standards). BIS was earlier called ISI (Indian Standards Institution). This standard mark is found on many food products like salt, packed drinking water, processed foods, candy toffee, infant milk powders. It is also found on other products like electrical appliances, pressure cooker, soap, detergent, paints, paper, cement, iron rods etc.
- ii. **Agmark** - This mark is given by Directorate of Marketing and Inspection. It is given on agricultural products like spices, ghee, butter, oil, wheat flour, besan etc.
- iii. **F.P.O.** - Fruit Product Order mark was given by Ministry of Food Processing Industries. It was given on fruit and vegetable products like jam, pickle, chutney, juice etc. FPO also laid limits on metallic contaminants and preservatives for different fruit products.
- iv. **FSSAI** - FSSAI means Food Safety and Standard Authority of India, it is a standard mark given by Ministry of Health and Family Welfare. It is compulsory for all food products like biscuits, tea leaves, coffee, cold drinks etc. FSSAI has been established under the Food safety and standards Act 2006. This lays down science based standards for articles of food and to regulate their manufacture, storage, distribution and sale to ensure the availability for human consumption.
- v. **Woolmark** - It is a found on wool and woollen clothes. It is a standardization mark of quality of the International Wool Secretariat for wool.

vi. **Silkmark** - It is a found on pure silk garments, given by Silkmark Organisation of India (SMOI). Silkmark ensures 100% natural silk.

vii. **Hallmark** - It is given by Bureau of Indian Standards (BIS), found on pure gold, silver and platinum jewellery.

It indicates that they have been evaluated and tested at an official Assaying and Hallmarking centre and they have certified that the metal used conforms to the national/international standards of fineness/purity.

viii. **Ecomark** - This mark is given by Bureau of Indian Standards (BIS). It is found on products which do not cause pollution like soap, detergent, paint, paper, cosmetics.

The logo of Ecomark scheme is an earthen pot which signifies that this product is environment friendly and does not produce any hazardous waste, is biodegradable and can be recycled.

### STANDARDIZATION MARKS

Standard Mark	Full Name	Agency which gives it	Items having this mark
I.S.I.	Indian Standard Institute	Bureau of Indian Standards (BIS)	Mandatory -Mineral water, condensed milk, milk powder, custard powder etc Voluntary-Biscuit, tea, coffee etc.

Agmark	Agricultural Marketing	Directorate of Marketing and Inspection	Agricultural products (raw and processed) like flour, ghee, oil, besan etc.
FSSAI	Food Safety and Standards Authority of India	Ministry of Health and Family Welfare	All food products
Woolmark	Woolmark	International Wool Secretariat	Pure wool, woollen clothes, sweater, blanket.
Silk Mark	Silk Mark	Silk Mark Organisation of India (SMOI)	Pure silk products
Hallmark	Hallmark	Bureau of Indian Standards (BIS)	Gold, Silver and Platinum Jewellery
Ecomark	Ecomark	Bureau of Indian Standards (BIS)	Soap, Detergent, Paints, Paper, Cosmetics, Packing materials

**15.** Apart from statutory, semi government and non government bodies looking after consumer interests like Bureau of Indian Standards (BIS) and Directorate of Marketing and Inspection (DMI), Government of India, there are Protection Councils set up by the government at central and state levels.

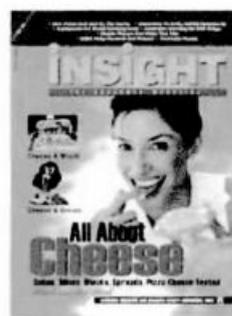
**16. Work done by Voluntary Consumer Organisations/NGO's**

- i. Educate and protect the consumers
- ii. Comparative testing of products

- iii. Creating consumer awareness about harmful and unsafe products
- iv. Disseminating information about new legislative provisions for consumers through their magazines, booklets, newsletters, buying guides, audio visual material and research reports.
- v. Give legal advice and advocacy.
- vi. Handling consumer complaints
- vii. Acting as vigilance groups
- viii. Hold public meetings, bring out publications, important role in consumer awareness, empowerment and consumer movement.

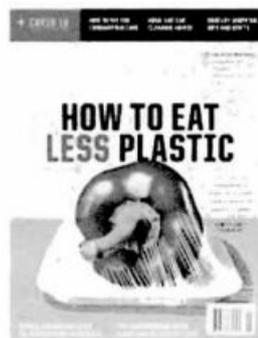
### 17. Consumer Organisations-

#### CONSUMER ORGANIZATIONS



**Consumers Union**

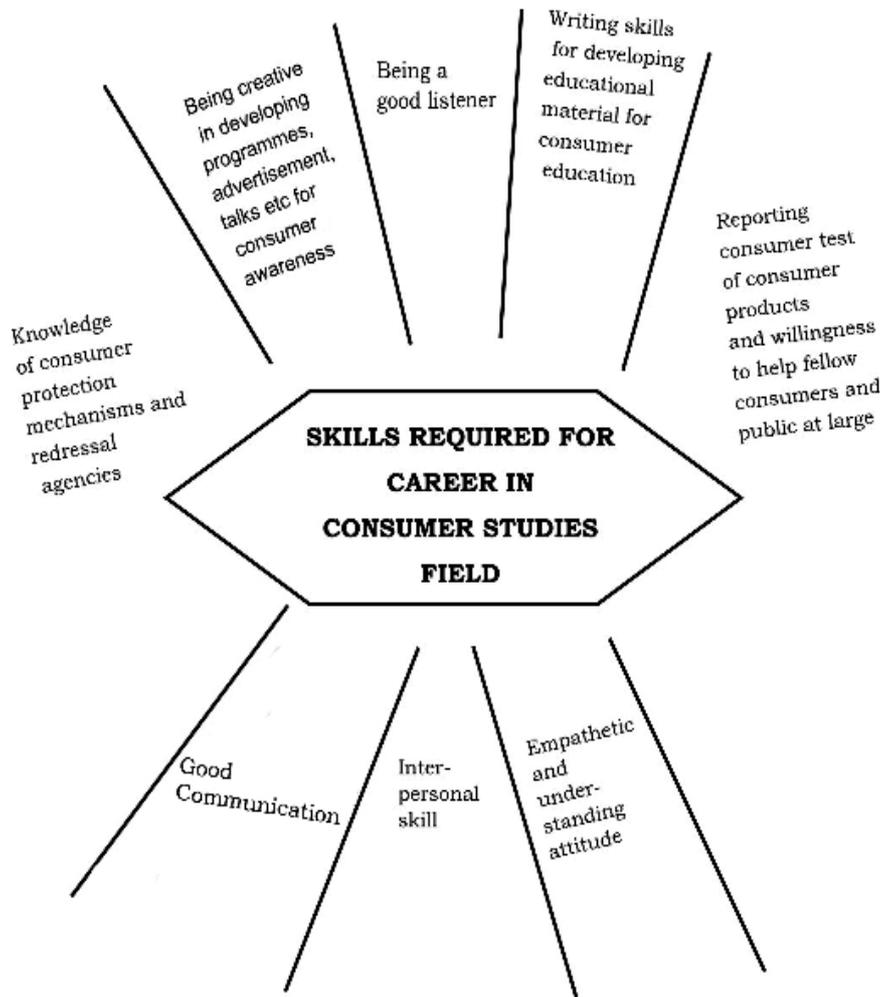
Nonprofit Publisher  
of Consumer Reports



**Few Consumer Organisations—**

S.NO.	Country	Consumer Organisation	Publication
1.	India	Voice, Delhi	Consumer Voice
2.	India	CERC, Ahmedabad	Insight
3.	America (US)	Consumer's Union	Consumer Reports
4.	England (UK)	Consumer Association	Which
5.	Australia	Australian Consumer Association	Choice

## 18. Skills required for career in Consumer Studies



## 19. Educational courses in the field of Consumer Education and Protection -

- i. B.Sc. Home Science
- ii. B.Sc. Family Resource Management
- iii. B.Sc. Home Management
- iv. B.B.A. (Bachelor of Business Administration)
- v. B.B.S. (Bachelor of Business Studies)

In different institutions, the subject may be called Consumer studies, Consumer Education, Consumer Behaviour, Consumer in the market.

## **20. Career / Scope in the Area of Consumer Education and Protection -**

- i. Work in government organisations like Bureau of Indian Standards, Directorate of Marketing and Inspection, Ministry of Consumer Affairs in various decision making, managerial and technical positions.
- ii. Work in voluntary consumer organisations for product testing, consumer education or empowerment, publication of their magazine.
- iii. Work in Consumer division of corporate houses.
- iv. Work with market research organisations.
- v. Start your own consumer organisation.
- vi. Work in National Consumer Helpline for doing consumer counselling, helping people in getting redressal of their complaints.
- vii. Work as consultants to Consumer clubs being run by schools and colleges.
- viii. Work as a freelance consultant for redressal guidance through Consumer courts.
- ix. Work with the Department of Audio-visual publicity as Content developer.
- x. Work as analyst in consumer testing laboratories for comparative evaluation of products
- xi. Become Consumer activist.
- xii. Journalism related to consumer affairs.

### Full forms of Abbreviations

1	CPA	Consumer Protection Act
2	BIS	Bureau of Indian Standards
3	ISI	Indian Standards Institute
4	FSSAI	Food Safety and Standards Authority of India
5	FSSA 2006	Food Safety and Standards Act 2006
6	AGMARK	Agricultural Marketing
7	DMI	Directorate of Marketing and Inspection
8	SMOI	Silk Mark Organisation of India
9	CERC	Consumer Education and Research Centre
10	VOICE	Voluntary Organisation in interest of Consumer Education.

### OBJECTIVE TYPE QUESTIONS (1 MARK)

#### A) Multiple Choice Questions

1. What is the number of customers / consumers who visit any given space such as a store or a mall called ?  
a) Consumer Association      b) Consumer Product  
c) Consumer Footfalls      d) Consumer Behaviour

**Ans.** c) Consumer Footfalls

2. Which standardization mark is given by SMOI?  
a) Silk Mark      b) Agmark  
c) Wool Mark      d) Hall Mark

**Ans.** a) Silk Mark



**(ii) Match the following**

- |             |                     |
|-------------|---------------------|
| A) I.S.I    | i. Sweater          |
| B) Woolmark | ii. Spices          |
| C) Agmark   | iii. Paper          |
| D) Ecomark  | iv. Pressure cooker |

**Pick the correct option -**

- a) A - i), B - ii), C - iii), D - iv)
- b) A - iv), B - i), C - ii), D - iii)
- c) A - iii), B - ii), C - i), D - iv)
- d) A - ii), B - iii), C - iv), D - i)

**Ans.** (b) A - iv), B - i), C - ii), D - iii)

**(C) Very short answer questions-**

1. Explain the term 'consumer' (NCERT)

**Ans.** Consumer is a person who buys goods and services for the satisfaction of his/her personal needs. Consumers are the primary component of a socio-economic system.

2. In which two ways does a vegetable seller deceive his customers ?

**Ans.** (i) Weighs vegetables using stones instead of weights.  
(ii) Puts magnet below the balance.

3. What do you mean by Right to choose, given to a consumer ?

**Ans.** Right to choose means that every buyer should have access to products of varying quality and quantities, prices, size and design. Consumer can choose according to his needs and wants.

4. You want to buy woollen sweater for yourself. Which standardization mark you will see on that sweater? This mark is given by which organization ?

**Ans.** We will see Woolmark standardization mark on sweater. This mark is given by Wool Secretariat.

### Case Study Based Questions (4 × 1 Mark)

*Read the passage carefully and answer the questions :*

All of us purchase a variety of goods and services to satisfy our needs and desires. Hence every human is a natural consumer. The number of products being manufactured and sold is steadily increasing in both urban and rural markets. Manufacturers are responsible for supplying good quality products and if there is a problem, consumers have the right to redressal. Manufacturers can no longer take consumers/customers for granted. With increasing number of consumers and volume of consumption of goods and services, manufacturers have begun to realise that it is important to respect and satisfy the consumer since the reputation of the company and its profits are determined by consumer opinion.

1. In the context of standardization marks, choose the correct pair :

- (a) ISI : Gold bangles
- (b) Wool Mark : Pashmina shawl
- (c) Hallmark : Iron utensils
- (d) Silk Mark : Food items

**Ans.** (b) Wool Mark : Pashmina shawl

2. Match the terms given in List-I with their explanation in List-II.

List-I (Terms)	List-II (Explanation)
A. Consumer product	1. Process through which buyers make decisions
B. Consumer footfalls	2. Place where consumers discuss products/services
C. Consumer forum	3. Article produced for sale to consumer
D. Consumer behaviour	4. Number of customers who visit any space

Choose the correct option from the following :

- (a) A-4, B-2, C-1, D-3
- (b) A-1, B-4, C-3, D-2
- (c) A-3, B-4, C-2, D-1
- (d) A-2, B-3, C-4, D-1

**Ans.** (c) A-3, B-4, C-2, D-1

**Ans.** (c) A-3, B-4, C-2, D-1

3. Given below are two statements labeled as Assertion (A) and Reason (R).

Assertion (A) : Consumer does not get complete correct information about the product.

Reason (R) : Many labels are incomplete and advertisements are exaggerating.

Select the most appropriate answer from the options given below :

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (b) Both (A) and (R) are true but R is not the correct explanation of (A)
- (c) (A) is true but (R) is false
- (d) (A) is false but (R) is true

**Ans.** (a) Both (A) and (R) are true and (R) is the correct explanation of (A)

4. Given below are two statements labeled Assertion (A) and Reason (R).

Assertion (A) : Consumer Protection Act was passed in 1988 but was never modified.

Reason (R) : CPA provided six consumer rights to ensure that all consumers obtain goods and services of reasonable quality, at fair prices.

Select the most appropriate answer from the options given below :

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (b) Both (A) and (R) are true but R is not the correct explanation of (A)
- (c) (A) is true but (R) is false
- (d) (A) is false but (R) is true

**Ans.** (d) (A) is false but (R) is true

### **Short Answer Questions (2 Marks)**

1. When your mother purchases any good from the market, what are her four expectations?

**Ans.** Refer to Points to Remember No. 6

2. Write two implications of Consumer Protection Act.

**Ans.** Refer to Points to Remember No. 10

3. Reena wants to make a career in Consumer studies. She should take which education for this? Suggest her four options.

**Ans.** Refer to Points to Remember No. 19

### **Short Answer Questions (3 Marks)**

1. Give the importance of Consumer Education.

**Ans.**

- i. To educate the consumers to take judicious decisions regarding their purchases.
  - ii. To assist them in selecting proper goods and taking right decision in purchasing goods.
  - iii. To make consumer aware of his rights and responsibilities.
  - iv. To help him be alert and well informed against malpractices and advertisements.
  - v. To demand safe, reliable and good quality products at a reasonable price.
  - vi. To take necessary action/file a complaint when they face any problem.
2. Name any three consumer organisations. Where are they operating? Name the magazine published by them.

**Ans.** Three Consumer Organisations are -

- i. VOICE, Delhi, India  
Magazine-Consumer Voice
  - ii. CERC, Ahmedabad, India  
Magazine-Insight
  - iii. Consumers Union, US  
Magazine-Consumer Reports
3. Seema had purchased an electric iron last month, which has got spoilt now. In relation to this, write her three rights and three responsibilities.

**Ans.** Three rights -

- i. Right to safety
- ii. Right to be informed
- iii. Right to seek redressal

Three responsibilities -

- i. Should have read all information given on label / brochure before purchasing.
- ii. Should have purchased iron with standardized mark (I.S.I.)
- iii. While purchasing the iron, she should have taken proper bill and kept it safely.

### Long Answer Questions (4 Marks)

1. 'Consumer has to face many problems in the market. Explain any four Consumer Problems.

**Ans.** i) Refer to Points to Remember Number-7

2. According to Consumer Protection Act 1986, consumer has been given which all rights? Make their list. Explain any one right in details

**Ans.** Refer to Points to Remember No. 12

3. Which standardization mark will be found on the following food products. Give full name of that mark too.

Milk powder, packaged drinking water, wheat flour, biscuit.

**Ans.**

Food Product	Standard Mark	Full Name
Milk powder	I.S.I.	Indian Standards Institute
Packaged drinking water	I.S.I.	Indian Standards Institute
Wheat flour	Agmark	Agricultural Marketing
Biscuit	FSSAI	Food Safety and Standards Authority of India

**NOTE-** All food products have FSSAI standardization mark, hence this is also correct option.

4. 'Every human being has not only rights but also responsibilities'. Therefore, as a consumer, what eight responsibilities you need to be aware of? (CBSE Sample Paper 2022).

**Ans.** Refer to Points to Remember Number - 13.

5. You have to give a speech on 'National Consumers Day' in your school. Mention which four consumer rights and four consumer responsibilities you will incorporate in your speech.

(CBSE Paper 2022-23)

**Ans.** Refer to Points to Remember Number 12, 13

6. (i) Prakash is working in a semi government consumer organisation. State four important roles his organisation should be performing in the interest of consumers.
- (ii) Name any one consumer organisation based each in Delhi and Ahmedabad. Also name the magazines which they publish.

(CBSE Paper 2022-23)

**Ans.** Refer to Points to Remember Numbers 16, 17.

7. Amrita is a pure vegetarian, purchased, frozen cheese balls from the grocery store, later on she found some colouring ingredient in it. Neither the advertisement nor the packaging of the product has shown that it contained any permitted food colour. She asked shopkeeper to return but he refused.

- (i) Give two rights which were not fulfilled/violated in the above situation.
- (ii) Explain her any four responsibilities she must have followed before buying any commodity.

(CBSE Sample Paper 2023-24)

**Ans.** (i) Two rights:

- Right to be informed,
- Right to be heard

(ii) Responsibilities : Refer to Points to Remember Number 13.

### **Long Answer Questions (5 Marks)**

1. Dinesh wants to make a career in the field of Consumer studies Which skills he should have for this ? Also enumerate which type of knowledge he should have in this field?

**Ans.** Refer to Points to Remember Number 18

2. Raj has an interest in journalism related to consumer aspects, but is not aware of other career options related to consumer education and protection field. Help him by making list of various career options available in this field.

OR

You have taken training in consumer education and protection. What four job opportunities will be available to you? (CBSE Sample Paper 2022)

**Ans.** Refer to Points to Remember Number-20

3. Explain the following terms in 2-3 lines. (NCERT)
- Consumers
  - Consumer rights
  - Consumer responsibilities
  - Consumer Protection Act
  - Consumer problems

**Ans.** a. Refer to Points to Remember number-1  
b. Refer to Points to Remember number-11  
c. Refer to Points to Remember number-13  
d. Refer to Points to Remember number-10  
e. Refer to Points to Remember number-7

4. List the following. (NCERT)
- Any three consumer rights
  - Any three consumer responsibilities
  - Any five consumer problems
  - Any three standardization marks

**Ans.** a. Refer to Points to Remember number-12  
b. Refer to Points to Remember number-13  
c. Refer to Points to Remember number-7  
d. Refer to Points to Remember number-14

5. Discuss in brief the basic concepts of Consumer Education and Protection. (NCERT)

**Ans.** Refer to Points to Remember number 1-5

# 13. DEVELOPMENT

## COMMUNICATION AND JOURNALISM

### Points to Remember

#### 1. Importance of Development Communication and Journalism

- i. Effective communication is a two-way process. Communication also refers to the use of various forms of media such as print, radio, television, new media etc.
- ii. Communication is used as an empowerment tool to facilitate people's participation in various developmental activities.
- iii. Communication provides information about the available technologies, leading to the advancement of the society.
- iv. It sensitises, students to the process of development and trains them to write / or to speak about issues related to an equitable and fair society.
- v. Development communication connects government institutions, non-governmental institutions (NGO) and individuals.
- vi. Development communication and Journalism aims to enhance the knowledge of students, current and future journalists, campaigners, and media professionals on development issues and strengthen practical skills.

#### 2. Development

- i. Development is an indicator of change. This change is to improve the situation.
- ii. Development means a permanent positive change / or to bring improvement in the socio-economic and cultural life of most individuals without exploitation or violence.

Development in most parts of the world requires intensive efforts to address the problems of widespread illiteracy, population, malnutrition, poor health, and pollution etc.

### **3. Development Journalism**

- i. Development journalism is a social activity.
- ii. The journalist conveys the sentiments of the community to the community through several means. The importance of journalism is that the people have the right to express their views. Journalism is an indivisible part of any democratic system.
- iii. Development journalism focuses on the success of individuals who have adopted new technologies, tested new methods, and helped the society.
- iv. Development journalism promotes human development focuses on empowering people to help meet their basic needs, articulate their concerns, and manage their development and improve poverty and inequality.

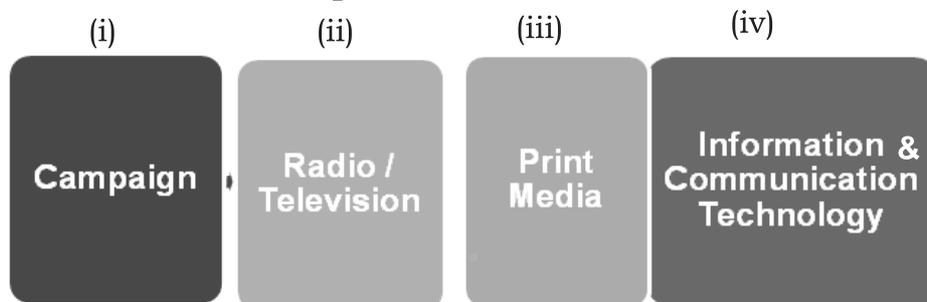


### **4. Development Communication**

- i. It facilitates socio-economic development and peace and happiness of individuals and the public community.
- ii. The objective is to inform and educate the community. It is about using communication to change or improve the way a citizen of a country is living. It uses a variety of messages to improve people's socio-economic status or their quality of life.
- iii. For greater impact, it connects suitable mass communication tools and interpersonal communication channels. It is based on the characteristics of the audience and their surroundings.

- iv. The term 'Development Communication' was first used in 1972 by renowned social scientist and communication expert Nora C. Quebral. She is known as "mother of Development Communication". According to Quebral, it is the 'art and science of human communication' used for facilitating development of a disadvantaged society in a planned manner to ensure equity and achievement of individual potential.
- v. Development communication is a means of development and is very essential for a developing nation like ours.

### 5. Methods of development communication



#### 5.1 Campaign



- i. Mixed use of various communication methods and materials such as meetings, excursions, newspaper articles, leaflets, and exhibitions on a subject for a pre-defined period.

- ii. It is a focused and well-organised activity, like 'election campaign'. During the election, every party or candidate explains about itself to people using various communication methods such as public meetings, print material, advertisements on radio and television, etc. The campaign starts before the election and ends on the date given by the Election Commission.
- iii. A campaign creates public awareness and provides specific message.
- iv. It lasts in the memory of the people and stimulates action. It creates conducive environment for adoption of practices.
- v. Similarly, print media, radio and television, drama, short film, etc., are used to make the public aware of a subject and ensures attention and interest..
- vi. Campaigns are sometimes time-bound schedules for a certain period. For example, a special Sunday in the month for polio immunization.

**(a) Swachh Bharat Abhiyaan**

To accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation the Prime Minister of India had launched the **Swachh Bharat Mission** on 2nd October 2014. The mission was implemented as a nationwide campaign/JanAndolan which aimed at eliminating open defecation in rural areas during the period 2014 to 2019 during mass scale behaviour change, construction of house hold owned and community-owned toilets and establishing mechanisms for monitoring toilet construction and usage.

**(b) Red Ribbon Express-**

- i. There was a countrywide campaign to create awareness about HIV/ AIDS.
- ii. A specially designed train traversed over 9,000 kilometers a year.

- iii. It covered 180 districts/halt stations and held programmes and activities in 43,200 villages.
- iv. It comprised of seven coaches, equipped with educational material, primarily on HIV/AIDS,
- v. It also had interactive touch screens and 3-D models, services in the context of HIV-TB co-infection, an LCD projector and platform for folk performances, counselling cabins and two doctors' cabins for providing counselling and treatment.
- vi. The exhibition train provided information about the symptoms and prevention of the disease through Information Education Communication (IEC) activities such as street plays/ Nukkad Natak/Folksong, Stories by artists and through group counselling sessions, videos etc.
- vii. The project was implemented by National AIDS Control Organisation (NACO), Nehru Yuva Kendra Sangathan and international agencies like UNICEF and UNAIDS etc. in cooperation with Indian Railways.



viii. Objectives of Red Ribbon Express-

- Dissemination of information about primary redressal services, creating awareness about AIDS.
- By creating an understanding of the disease, not treating AIDS as a stigma, reducing discrimination against the victims.

- To provide information on prevention of disease.
- To increase people's knowledge about prevention of diseases, health habits and lifestyles.

### 5 (ii) Radio/Television

- **Radio**

- Radio is the most popular, cheapest, and convenient mass media, which is used for the purpose of development.
- Radio remains the most accessible source of information, education, and entertainment for many people in our country.
- It is a mobile medium i.e., it can move with the listener at work or rest.
- Radio broadcasting is more beneficial than journalism i.e., print media, as it can be used for more persons, especially those with poor literacy levels.



#### (a) Public Service Announcement (PSA)

- This is a brief 10-60 second message between programme, generally in the form of rhyme or jingles.
- It provides information or suggestion for action.

- iii. Basically, these are advertisements of an idea or a message for the betterment of the people, such as 'Follow traffic rules', 'Say no to tobacco', 'One step towards cleanliness' and more.
- iv. In general, they are highly effective because of their catchy slogans and repeated broadcasts.

**(b) Community Radio**

- i. The earlier limitation of radio (of not receiving feedback) is overcome with newer interactive format and local radio stations and community radio which have been successfully used as people's medium. Owing to the popularity of radio as a medium of communication, Ministry of Information and Broadcasting has introduced new concept of local radio station called Community Radio (CR) where the local people have an important role to play.
- ii. With small investment and training of few local people by NGOs working for capacity building to support CRS, a radio station can be set up with broadcasting possible in a limited area.
- iii. It is run and managed by local people and the contents are for local use in their local dialects.
- iv. The local radio station generally supports local programs of development.
- v. It gives opportunity to people to participate and express their views and also display their talents.
- vi. Radio thus becomes the voice of the people, a catalyst for people's development and encourages youth to prepare for a career in Development Communication Journalism (DCJ).

- vii. Participatory content development and appraisal along with rapid rapport formation and with the community become important prerequisites for a successful community radio initiative. NGOs and educational institutions can seek license to set up a local Community Radio Station (CRS).



**Community Radio Station (CRS )**

- viii. This powerful media is also used as information dispenser about government policies, entitlements, programs, schemes and services.
- ix. Some successful examples or attempts in using community radio are Vanasthali Vidyapeeth (Rajasthan) Self Employed Women's Association (SEWA) (Gujarat), Delhi University (DU) FM in North Delhi and many such others that are helping communities in voicing their problems and finding solutions.

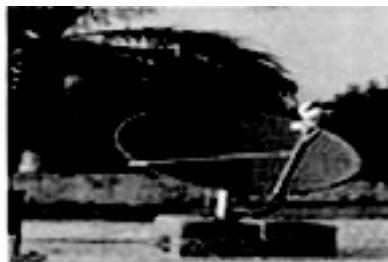
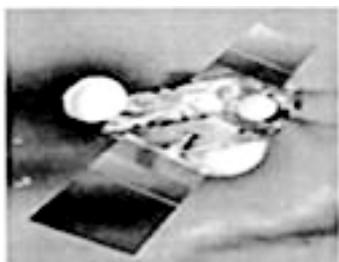
• **Television –**

- (i) It offers programmes through multiple channels, international, national and local levels. Some of these programmes give individuals an opportunity to participate in the form of talk shows, reality shows and competitions etc.

- (ii) New horizons of information are opened for television viewers
- (iii) Many government and non-governmental institutions are showing programmes of educational importance and public interest on various channels. Programme of immense educational value like 'Kyun ki Jeena isi ka naam hai' Main Kuch Bhi Kar Sakti hoon' are telecasted on private channels.
- (iv) Television is currently the most prominent means of development communication which is providing entertainment as well as educational and social awareness.

**(c) Edusat-**

- i. In September 2004, India launched the education satellite EDUSAT developed by Indian Space Research Organisation (ISRO).
- ii. It was the first Indian satellite to be specially built to serve the educational sector. It is also known as GSAT-3.
- iii. The main objective was to meet the demand for interactive satellite-based distance learning system for the country.
- iv. It strongly demonstrates India's commitment to use space technology for national development. It was used as an alternative medium for the development and dissemination of education, especially of population in far flung and rural places.



**EDUSAT**

### 5 (iii) Print Media-

- i. There are many daily newspapers at the national and regional level all over the country, but there are very few regional newspapers which write and print about the problems related to rural areas and agriculture. Nevertheless, it is a medium of continuing education.
- ii. The contribution of the print media in providing information and transfer of knowledge is noteworthy. Even after the advent of electronic media, print media has not lost its charm or relevance.
- iii. Printing mediums make a long and profound impact on the mind of the reader.
- iv. Journalists in the printing medium collect news of various events and send them to the editors of various daily times. Their working day may involve interview with individuals to prepare stories or news stories, attend a press conference or contact through telephone and send e-mails etc.



- v. The power of Print media
  - The Print media educates the public.
  - The Print media helps democracy function effectively, giving the public information about government policies and programmes.
  - This helps people to voice their feelings and help the government make the necessary changes to those policies or programmes.
  - The number of development communication journalism professionals who write with zeal and sensitivity for the rural poor is still low. Despite the neglect of the rural areas, the power of the pen or the power of the press cannot be ruled out.

**(a) Development Journalism Experiment: “Our Village Chattera”**

- i. The Chattera Village Project commenced in 1969.
  - ii. In this project, the editor of Hindustan Times focused on Chattera, a small village in North West Delhi.
  - iii. Enterprising reporters of the Hindustan Times newspaper began to print a fortnightly column regularly describing the lives of the people of the village Chattera.
  - iv. A team of reporters understood the situation in the village sensitively and began to give detailed stories about it.
  - v. This drew the attention of government departments and other institutions to the village and then many problems in the village get solved.
- Village Chaupal formed
  - Bridges, and roads constructed.
  - Bank branch opened in village.
  - New income-generation schemes created.
  - Electricity, and water problems solved.

## **5 (iv) Information and Communication Technology**

- i. Information and communication technology is an umbrella term that includes computer hardware and software (machine and process material), digital broadcast and telecommunication technologies such as radio, television, mobile phones, etc.
- ii. ICTs have been used for informing and disseminating knowledge to people, with the effect of which many sectors like agriculture, health, education have seen a lot of change.
- iii. ICTs has proven to be economically, socially, and politically transformative.
- iv. Today the use of Information and Communication Technology (ICT) has become an active tool of Development Communication. Example: Electronic governance (e-governance) is the distribution of public services and information at the doorstep of the people with the help of computer. E-governance can play a catalytic role for sustainable inclusive growth.
- v. A more direct way of using Information and Communication Technology is to improve the lives of poor people by the setting up of telecentres. Launched in June 2000, 'e-Chaupal' is a major initiative among all internet-based interventions in rural India.



## **Information and Communication Technology (ICT)**

### **(a) The Sustainable Access in Rural India (SARI)**

The Sustainable Access in Rural India (SARI) project in the state of Tamil Nadu: Some 80 tele-center kiosks were set up offering a range of services including basic computer education, e-mail, web browsing and various e-government services including the provision of certificates.

### **(b) SEWA - Self-Employed Women's Association**

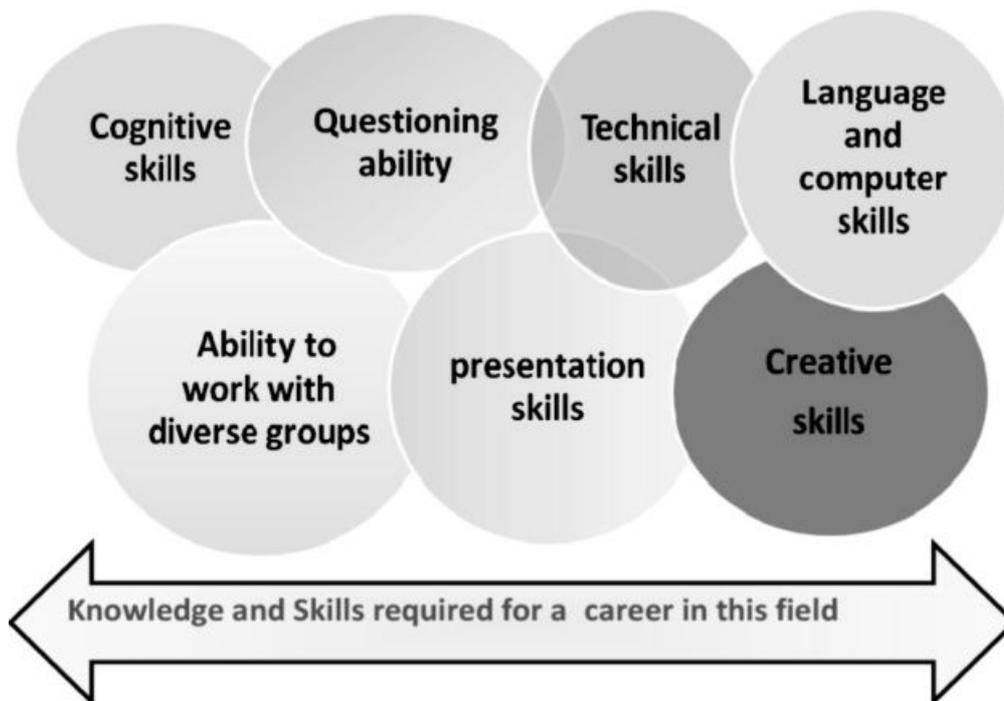
- i. It is the empowerment of women at the grassroot level.
- ii. The objective of the Association is to provide full employment and self-sufficiency to women workers. To

provide them with work and support in other related sectors such as income, food and social security (health, childcare and shelter) activities.



- iii. They run programmes that enable women's capacity to grow for use in computers, radio, television, video, telephone, fax machines, mobile phones and satellite communications.
- iv. Community Learning Centers (CLCs) have been set up in rural areas and emphasis has been given on training of information technology to enhance the capacity of members including areas such as electrical, mechanical and information technology engineering.

## 6. Knowledge and Skills for Career



### i. Cognitive Skills

- Before writing or presenting effectively about a problem, it is necessary to understand the problem thoroughly and to present it in a constructive manner (which can attract the attention of others and influence them).

### ii. Creative Skills

- There is also a need to have creative skills.
- A person working in a mass media house or advertising agency with the skills in media designing, production and operation of technical instrument handling along with cognitive and creative skills will have an advantage while undertaking assignments or jobs. He will always be in a position to benefit from others.

### **iii. Technical Skills-**

- Development communication and journalism professionals need to learn the technical skills to operate equipment correctly to optimise their presentations.
- Those interested to work as a development filmmaker, need to know camera techniques and video production apart from content development and implementation.
- They should be aware of all laws and regulations so that they know what they can and cannot do.
- They need to learn about the computers used to operate the station, basic radio production skills using suitable software and how to write a creative brief that effectively communicates.

### **iv. Presentation Skills**

- For a career in DCJ, a combination of journalistic and presentation skills is required.
- Interest in current affairs and local conditions, hands-on experience in radio, the ability to communicate and knowledge of music are useful.

### **v. Questioning ability**

- The ability to question helps to know the subtle details of any problem. Passion for adventure and travel are added advantages.

### **vi. Ability to work with diverse groups.**

- DCJ professionals needs to be people centric to understand people's viewpoint on issues affecting their lives and find solutions which will work for them.
- It is important to know the principles of social work.
- Leadership skills and excellent intra-personal skills.
- Should be a good listener to write with sensitivity.

### vii. Language and computer skills

- Command in any one language is important and includes speaking, writing, and reading with an ability to write technical reports and documents.
- Knowledge of the basic skills of the computer is desirable for success, which include various computer software and applications- such as Google Doc, Google Sheet Microsoft Office such as Word, Excel and Power Point etc.

## 7. Scope and Career opportunities in Development Communication



### Full forms of Abbreviations

1	DCJ	Development Communication Journalism
2	RRE	Red Ribbon Express
3	IEC	Information Education Communication
4	AIDS	Acquired Immune Deficiency Syndrome.
5	NACO	National AIDS Control Organisation
6	NYKS	Nehru Yuva Kendra Sangathan

7	UNICEF	United Nation International Children's Fund
8	UNAIDS	United Nation Programme on HIV / AIDS
9	AIR	All India Radio
10	PSA	Public Service Announcement
11	SEWA	Self-employed Women's Association
12	EDUSAT	Education Satellite
13	ICT	Information and Communication Technologies
14	SARI	The Sustainable Access in Rural India
15	CLC	Community Learning Centre
16	CRS	Community Radio Station

### OBJECTIVE TYPE QUESTIONS (1 MARK)

#### A) Multiple choice questions

1. What services were provided in the Sustainable Access in Rural India (SARI) project?
- a) Employment Services                      b) Agricultural Services  
c) e-government Services                      d) Community Services

Answer- c) e-government Services

2. Implementation of Red Ribbon Express (RRE) project was not supported by which of the following?

(CBSE Sample Paper 2022-23)

- (a) UNICEF                                      (b) UNESCO  
(c) NYKS                                        (d) NACO

Answer- (b) UNESCO

3. Which of the following medium are examples of weekly newspapers, magazines, leaflets?

- a) Literature                                      b) Print media  
c) Training medium                              d) Digital medium

Answer- b) Print media



**(ii) Match the following**

A. Swachh Bharat Mission Launched	i) 1969
B. Chatera Village Project.	ii) 2004
C. Development Communication 'Term'	iii) 1972
D. First Education Satellite	iv) 2014

**Pick the correct option -**

- a) A - iii), B - iv), C - i), D - ii)
- b) A - iv), B - i), C-iii), D - ii)
- c) A - ii), B- iv), C-i), D - iii)
- d) A - iv), B - iii), C- ii), D - i)

**Answer b) A - iv), B - i), C-iii), D - ii)**

**C) Very Short answer question -**

- 1 What services have been made easily accessible using mobile phones? Give two examples.

Answer- Banking and financial transactions, marketing and distribution, employment, social business, and public services

(Any other, any two)

- 2 What kind of institution or organization can a development communication expert choose for his career?

Answer: Government and Non-Governmental Institutions or Mass Communication Organizations

(Any other, any two)

- 3 What centers have been set up in rural areas by the Self-employed Women's Association (SEWA)?

Answer: Community Learning Centre (CLC)

- 4 What two developmental problems can be studied by students doing research in research institutions?

Answer- Study of gender and development problems such as environment, consumption, health, agriculture and livelihood problems. (Any other, any two)

**Case Study Based Multiple Choice Questions (4 × 1 Mark)**

*Read the passage carefully and answer the following questions:*

Most of the University Departments offering a Post-Graduate or Under-Graduate program in Mass Communication and Journalism generally have Development Communication as one of their main subjects. Some Universities, Colleges and Media Institutions also offer specialization in Development Communication. Jamia Millia Islamia, New Delhi offers a unique one-year Post-Graduate Diploma Program in Development Communication which familiarizes the students about various concurrent development initiatives taking place at Global and Domestic level. The eligibility to take admission in these courses is generally a Bachelor's in any stream having some understanding of socio-economic issues. There should also be good knowledge of current happenings in development sector. The selection is based on written test followed by a personal interview.

1. Select the correct pair in the context of development communication media.
- (a) ICT : Self-Employed Women's Association
  - (b) Project village Chhatra : North-West Mumbai
  - (c) Campaign : EDUSAT
  - (d) SARI Project : Odisha

**Answer-** (a) ICT : Self-Employed Women's Association

2. Match the modes of communication given in List I with the appropriate Features given in List II.

List I (Mode of communication)	List II (Features)
A. Radio	1. Economic activity
B. Campaign	2. Most popular
C. Press	3. Pillar of Democracy
D. ICT	4. Election rallies

Choose the correct option from the following :

- (a) A-3, B-4, C-2, D-1                      (b) A-4, B-3, C-2, D-1  
(c) A-2, B-4, C-3, D-1                      (d) A-1, B-2, C-3, D-4

**Answer-**(c) A-2, B-4, C-3, D-1

3. Given below are two statements labelled as Assertion (A) and Reason (R).

Assertion (A) : Community radio helps amplify local voices and supports grass roots-level participation.

Reason (R) : Community radio is designed to replace national broadcasting services in rural areas in India.

Select the most appropriate answer from the options given below :

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)  
(b) Both (A) and (R) are true but R is not the correct explanation of (A)  
(c) (A) is true but (R) is false  
(d) (A) is false but (R) is true

**Ans.** (b) Both (A) and (R) are true but R is not the correct explanation of (A)

4. Given below are two statements labeled Assertion (A) and Reason (R).

Assertion (A) : Development communication plays a vital role in promoting awareness and participation in social change across India.

Reason (R) : Its primary focus is only on urban mass media campaigns for marketing commercial products.

Select the most appropriate answer from the options given below :

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A)  
(b) Both (A) and (R) are true but R is not the correct explanation of (A)  
(c) (A) is true but (R) is false  
(d) (A) is false but (R) is true

**Ans.** (c) (A) is true but (R) is false

**Short Answer Questions (2 Marks)**

1. What is development communication and what is its role in development? (NCERT)

OR

What do you understand by the term 'Development Communication'. Write any four essential features of it.

**Ans.** Development Communication: It is the 'art and science of human communication' used for facilitating development of a disadvantaged society in a planned manner to ensure equity and achievement of individual potential.

Four essential features of Development Communication :

- It is oriented to socio-economic development and happiness of the people and community at large.
  - It aims at giving information and educating the community.
  - It combines suitable mass media and interpersonal communication channels for greater impact.
  - It is based on the audience characteristics and their environment.
2. How is community radio different from All India Radio? (NCERT)  
Answer –
    - Community Radio is a new, local and interactive format compared to AIR which is more successful as people's medium than traditional radio and that is for the community, by the community and about the community.
    - This new concept of 'local radio station' is not designed to earn profit.
    - It enables the community to eradicate poverty, reduce gender inequality, health, sanitation, etc. and ensure public participation at all potential levels.(Any other, Any two)

- 3 What is a campaign? Make a slogan for the campaign on the problem of your choice.

**Answer–** Mixed use of various communication methods and materials such as meetings, excursions, newspaper articles, leaflets, and exhibitions on a subject to make awareness for a pre-defined period called a campaign.

Slogan for any Campaign

‘Be the solution not the problem

Join the campaign (Name) today and bring change.’

4. (a) What do you understand by the term ‘Community Radio’?  
(b) Describe its two important roles in the development of the country. (CBSE Paper 2022-23)

**Answer- (a) Community radio is/has-**

1. an initiative of Ministry of Information and Broadcasting
2. also known as local radio
3. by the community, for the community and about the community
4. interactive format
5. run and managed by local people/usually trained by NGO
6. people’s medium
7. used for local community/people
8. local dialect/language
9. participatory content development
10. set up with small investment
11. not for profit
12. used for broadcasting in limited areas

**(b) Its two important roles :**

1. support local programmes of development
2. give opportunity to participate and express people’s views/becomes the voice of people
3. promote social change
4. give opportunity to display their talents
5. catalyst for people’s development
6. Develop career/creates employment opportunities in DCJ
7. help communities in voicing their problems and finding solutions

- 5 'Information communication technologies are the future vessels of development'. Comment. (NCERT)

**Answer-**Information and communication technology is an inclusive term that includes computer hardware and software, digital broadcasting, and telecommunication technology.

- i. All countries in the world are using information and communication technology today to access information and providing information and knowledge to their public.
- ii. The growing use of mobile phones all over the world has made it more convenient for the common man to access the market and public conveniences and services. A variety of services such as banking, shopping, health related, business transactions, etc., are readily available on mobile phones through internet.
- iii. Information communication technologies are also the future vessel of development because through this, it will also be possible to improve the quality of life of the poor and backward people.
- iv. The use of information and communication technology has brought about a number of significant changes in the economic, social and political spheres.

(Any other, any two)

### **SHORT ANSWER QUESTIONS (3 Marks)**

1. Explain the term Campaign with the help of an example. How is it an effective tool of communication? Support your answer.

**Ans.** Campaign : It is a combination of the usage of different communication methods and materials such as meetings, tours, newspaper articles, leaflets and exhibitions about a theme for a predefined period of time.

Example:

Swachh Bharat Mission

Red Ribbon Express (RRE)

(Any other)

Campaign is an effective tool of communication

Reason :

- Ensures attention and interest.
- It lasts in the memory of the people and stimulates action.
- It creates conducive environment for adoption of practices.

2. 'ICT is used as an empowerment tool of development communication'. What are its six uses?

Answer: ICT is a way to communicate with people mainly through computers, videos, telephones, fax machines, mobile phones, radios, televisions, and satellite communications.

- (i) The use of mobile phones has made the world smaller. They have enabled and facilitated markets, social trade, and public services during the Covid-19 pandemic conditions.
- (ii) Corona information was first provided by the government through mobile phones.
- (iii) The ICT has also eased the use of economic services such as banking and financial transactions, marketing, distribution, employment, and public services through various means.
- (iv) Educational material is now available in any form through internet and mobile phone.
- (v) School and college teachers are also using the benefits of ICT and conducting students' exams online on computer or mobile phones.
- (vi) ICT is proving to be economically, socially, and politically transformative. People are not just using their phones to connect with people around the world but are also making bill payments through their phones and taking online health sessions.

(Any other, any six)

3. What are the essential features of development communication?  
(NCERT)

**Answer:** (i) It is mainly helpful in making people informed, educated, and aware.

(ii) This is helpful for improving the standard of living of the people belonging to backward, weak, and neglected society / community.

(iii) The use of information on available technologies is helpful for the advancement of public community in education, health, agriculture, environment etc.

(iv) It is helpful in sensitizing people to the process of development and training them on issues related to an equal, just, and fair society.

(v) Strengthens and provides persistence to governmental organizations, non-governmental organizations (NGOs) and people-to-people affiliations.

(vi) It aims to increase knowledge and strengthen practical skills of students, current and future journalists, campaigners, and media professionals on development issues.

(Any other, any six)

**Long Answer Questions (4 Marks)**

1 The Red Ribbon Express was launched in India on World AIDS Day, December 1, 2007. It was a nationwide communication campaign to create awareness about HIV/AIDS. Through various information education communication (IEC) methods, information about dangerous diseases was disseminated to the population. Answer the following questions in regard to Red Ribbon Express.

A) What was the primary objective of this programme?

B) IEC was used to spread information about diseases. List the activities undertaken.

C) Which national and international agencies were involved in this programme?

**Answer-**

A) Objectives of Red Ribbon Express-

- Spread information regarding primary prevention services.
- Develop an understanding of the disease, to reduce stigma and discrimination against people with AIDS
- Enhance people's knowledge about preventive measures, health, habits and lifestyle.

B) Information Education Communication (IEC) activities such as street play / Nukkad Natak, Folk Songs, Stories and Group Counseling Sessions

C) National and International Agencies Involved

- National AIDS Control Organisation (NACO),
- Nehru Yuva Kendra Sangathan
- UNICEF and UNAIDS etc. (international agencies)
- Indian Railways.

(Any Other)

2 'Radio holds higher importance than print media or television as a source of Development communication'? Review the role of radio in this field.

**Answer:**

Refer Points to Remember number 5(ii) and 5(ii) (a)

**Long Answer Questions (5 Marks)**

1 Explain in detail any five skills needed for career in the field of development communication journalism.

**Answer:** Refer Points to Remember Number 6(i) to (vii)

2 What are the different methods of development communication? Describe any two methods?

**Answer:** Refer Points to remember number 5 (i) to (iv)

**CBSE PAPER (2023-2024)**  
**HOME SCIENCE (Theory) (064)**

Time: 3 Hours

Maximum Marks: 70



**General Instructions :**

Read the following instructions carefully and strictly follow them :

- (i) **All questions are compulsory.**
- (ii) **This question paper contains 35 questions.**
- (iii) **The question paper is divided into four sections – Sections A, B, C and D.**
- (iv) **Section A has questions no. 1 to 14 (Multiple Choice Questions) of 1 mark each.**
- (v) **Section B has questions no. 15 to 18 (Case study-based questions) and are of 1 mark each.**
- (vi) **Section C has questions no. 19 to 25 of 2 marks each and questions no. 26 to 29 of 3 marks each.**
- (vii) **Section D has questions no. 30 to 33 of 4 marks each and questions no. 34 and 35 of 5 marks each.**
- (viii) **Internal choices are given in some questions.**
- (ix) **Support your answers with suitable examples wherever required.**

**SECTION A**

1. Beti Bachao Beti Padhao Yojana was started by the Government of India with which of the following objectives ? 1
  - (A) To enrol girls in a bridge course to prepare them for admission to a school
  - (B) To promote gender biased selection process
  - (C) To ensure survival, protection and education of the girl child
  - (D) To provide employment to all
  
2. Who does the actual cleaning of guest rooms and bathrooms in a hotel ? 1
  - (A) Bellboy
  - (B) Doorman
  - (C) Room attendant
  - (D) Floor supervisor
  
3. Which of the following material is **not** suitable for making agitators in washing machines ? 1
  - (A) Plastic
  - (B) Aluminium
  - (C) Bakelite
  - (D) Iron



4. Use of \_\_\_\_\_ is important for designing tools, machines and workstations to reduce stress and health problems of the workers at the workplace. 1
- (A) Entrepreneurship (B) Ergonomics  
(C) Anthropometry (D) Physiology
5. What capacity of washing machine would be suitable to handle a large load of clothes for washing in one cycle in a big hotel ? 1
- (A) 100 kg (B) 5 – 10 kg  
(C) 20 – 30 kg (D) 15 kg
6. Which of the following is a Food Supplementation Programme ? 1
- (A) National Nutritional Anaemia Prophylaxis Programme  
(B) National Food for Work Programme  
(C) Annapurna Scheme  
(D) Mid-day Meal Programme

**OR**

- POSHAN Abhiyaan was launched in March 2018 at which of the following places ? 1
- (A) Panipat, Haryana (B) Jhunjhunu, Rajasthan  
(C) Kanyakumari, Tamil Nadu (D) Mysuru, Karnataka
7. What is the full form of NACO ? 1
- (A) National Arthritis Control Organisation  
(B) New AIDS Control Organisation  
(C) National AIDS Control Organisation  
(D) National Alzheimer Community Organisation
8. The Government of India offers preschool education in urban and rural areas through : 1
- (A) Creches (B) Montessori schools  
(C) Day care centres (D) Anganwadis
9. Find the **incorrect** statement from the following : 1
- (A) Canning was developed by Nicolas Appert.  
(B) Food fortification is removing of nutrients from the foodstuffs.  
(C) Lactose-free milk is an example of medical food.  
(D) Temperature range between 5 – 60°C is known as danger zone.



10. Select the correct pair. 1
- |                           |                                |
|---------------------------|--------------------------------|
| (A) Warli – Maharashtra   | (B) Channapatna Dolls – Kerala |
| (C) Shola Craft – Gujarat | (D) Bamboo Craft – Punjab      |

11. Match List-I with List-II. 1

<i>List-I</i> (Ways of market segmentation)	<i>List-II</i> (Basis of segmentation)
i. Demographic	1. Opinion on specific products or services
ii. Psychographic	2. Regions, climate
iii. Geographic	3. Similar lifestyles, interests
iv. Behavioural	4. Age, population

Choose the correct option from the following :

- (A) i – 1, ii – 2, iii – 4, iv – 3  
(B) i – 3, ii – 1, iii – 4, iv – 2  
(C) i – 4, ii – 3, iii – 2, iv – 1  
(D) i – 2, ii – 1, iii – 4, iv – 3

12. Match List-I with List-II. 1

<i>List-I</i> (Related to ECCE)	<i>List-II</i> (Age)
i. Toddler	1. 8 – 12 months
ii. Early childhood	2. Birth – 6 years
iii. Fear of unknown people	3. 2 – 3 years
iv. Integrated Child	4. Birth – 8 years

Development Services (ICDS)

Choose the correct option from the following :

- (A) i – 4, ii – 2, iii – 1, iv – 3  
(B) i – 1, ii – 3, iii – 2, iv – 4  
(C) i – 3, ii – 1, iii – 4, iv – 2  
(D) i – 3, ii – 4, iii – 1, iv – 2



**13.** With advancement in food and pharmaceutical industry, which nutritional supplements are being used for nourishing patients ? 1

- (i) Nutraceuticals
- (ii) Polychlorinated biphenyls
- (iii) Phytochemicals
- (iv) Food preservatives

Choose the correct option from the following :

- (A) (i) and (ii) (B) (i) and (iii)
- (C) (iii) and (iv) (D) (ii) and (iii)

**OR**

India is often referred as the 'Diabetes capital' of the world. Identify two possible causes of a chronic disease such as diabetes. 1

- (i) Taking diet prescribed by medical nutrition therapist
- (ii) Less physical activity
- (iii) Increase in sugar and fat consumption
- (iv) Increase in fibre consumption

Choose the correct option from the following :

- (A) (i) and (ii) (B) (ii) and (iv)
- (C) (ii) and (iii) (D) (iii) and (iv)

**14.** The objectives of Swachh Bharat Mission campaign are : 1

- (i) Prevention of HIV/AIDS
- (ii) Encouraging deforestation
- (iii) Elimination of open defecation
- (iv) Construction of household and community owned toilets

Choose the correct option from the following :

- (A) (iii) and (iv) (B) (i) and (iii)
- (C) (ii) and (iv) (D) (i) and (ii)



## SECTION B

### (Case Study-Based Questions)

Read the passage carefully and answer the questions no. 15 to 18.

Health and nutrition are intimately interlinked. In some diseases, nutrition plays a major role in its management and treatment, and for some it complements the medical treatment. Nutritional status and support, prior to and after illness, plays an important role in determining prognosis, recovery and even duration of hospitalization. Nutritional assessment is required to obtain information on the patients' nutritional status and nutritional needs. A dietitian can develop a nutrition care plan by analyzing the nutritional requirements in state of disease and also provide appropriate diet counselling and guidance.

15. Which of the following is an **incorrect** pair ? 1
- (A) Soft diet : Semi-solid foods
  - (B) Liquid diet : Fluids high in fibre and fats
  - (C) Regular diet : Normal foods, all food groups included
  - (D) Mechanical soft diet : Mashed and pureed foods
16. Which of the following statements is correct with respect to Clinical Nutrition and Dietetics ? 1
- (A) It is also called Public Nutrition Therapy.
  - (B) It is the specialised area of nutrition which deals with nutrition during illness.
  - (C) It addresses the problems of the community at large.
  - (D) It improves the sanitary condition of rural households.
17. Given below are two statements labelled as Assertion (A) and Reason (R). 1
- Assertion (A):* In tube feeding, nutritionally complete feeds are delivered to a patient through a tube.
- Reason (R):* Oral feeding means that the patient is nourished with special solutions which are given through a drip in a vein.
- Select the most appropriate answer from the options given below :
- (A) Both (A) and (R) are true and (R) is the correct explanation of (A).
  - (B) Both (A) and (R) are true, but (R) is **not** the correct explanation of (A).
  - (C) (A) is true, but (R) is false.
  - (D) (A) is false, but (R) is true.



18. Given below are two statements labelled as Assertion (A) and Reason (R). 1
- Assertion (A)* : Fish is high in Omega-3 fatty acids which are essential components of cells.
- Reason (R)* : They can protect the heart from abnormal heart rhythm.
- Select the most appropriate answer from the options given below :
- (A) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (B) Both (A) and (R) are true, but (R) is **not** the correct explanation of (A).
- (C) (A) is true, but (R) is false.
- (D) (A) is false, but (R) is true.

### SECTION C

19. Name any four self-employment avenues in the field of food processing that can be taken up as a household or cottage scale activity. 2
20. (a) What is meant by CARA ? Highlight its one function to meet the needs of vulnerable children. 2
- OR**
- (b) What is meant by NSS ? Write its one aim in the development of youth in India. 2
21. How do Indian consumers tend to get swayed by enticing sales promotion gimmicks and fall prey to them ? 2
22. In a training programme, Jatin has learnt how life skills help to become successful in professional life. Which four core life skills would he now suggest to his team members at his work place ? 2
23. As per the National Curriculum Framework (NCF) – 2005 Position Paper on Early Childhood Education, mention any two basic objectives of Early Childhood Care and Education (ECCE). 2



24. (a) Classify colours on the basis of Munsell's colour wheel. Provide an example of any one type of colour. 2

**OR**

- (b) Differentiate between Structural and Applied design. 2
25. Various job options are available in food industry with respect to food safety and quality control. Get information on any four career avenues available in this field from your brother who has completed his Masters in Food Microbiology. 2
26. 'Consumers must purchase products with standardization marks.' Justify this statement by giving two reasons. ISI Mark is the certification mark of which organisation ? 3
27. (a) To an aspiring professional in the field of Development Communication, suggest any three knowledge and skills required to be successful in this field. 3

**OR**

- (b) Compare print media with television as a method of Development Communication. 3
28. Commercial laundries are organised in different sections which deal with specific jobs.
- (a) Make a list of any four jobs done in various sections for an entrepreneur who wants to set up his own commercial laundry.
- (b) What do you understand by system of code tags in a commercial laundry ? 2+1=3
29. (a) Food has been preserved using various methods since prehistoric times.
- (i) Make a list of four old methods of food preservation, which are still being used today.
- (ii) Name any one institute in India offering specialised courses in Food Processing and Technology. 2+1=3

**OR**



- (b) (i) Discuss briefly the significance of food processing and technology as a discipline.
- (ii) By whom are standards for fortification of staple foods like salt, milk, oils laid down in India ? 2+1=3

#### SECTION D

- 30.** HACCP involves identification of food hazards during each stage in the food chain.
- (a) Give full form of HACCP.
- (b) Mention three reasons why implementing HACCP in food industry is important. 1+3=4
- 31.** (a) Shaurya has checked into a hotel. Which department's staff will first greet and welcome him ? List any other three services provided by this department. 4

#### OR

- (b) The phrase 'A home away from home' is often used in hospitality industry, to denote that guests are provided with comforts and facilities similar to their homes. In this context, mention any four types of establishments who offer hospitality services. 4
- 32.** Anil is designing a bridal lehenga :
- (a) How can he create rhythm in it ? Suggest two ways, with examples.
- (b) Which colour scheme or colour harmony would he use if he wants to design the lehenga in a single hue ?
- (c) Name any one technique that can enhance the texture of the lehenga through surface ornamentation. 2+1+1=4



- 33.** It is important to recognise the elderly as a human resource and their rich experience should be used for national development.
- (a) To ensure a healthy and secure life for the elderly, which initiative was taken by the Government of India in the year 1999 ?
  - (b) State three reasons why the elderly are considered to be a vulnerable group.
  - (c) List any three facilities provided in multi-service centres for older persons.  $1+1\frac{1}{2}+1\frac{1}{2}=4$
- 34.** (a) Hitika has joined as a visual merchandise designer in a reputed fashion store which deals with only ready-to-wear clothing lines.
- (i) List three job responsibilities which are expected of her to attract more customers.
  - (ii) Which terms are used in France for the following ?
    - (1) Ready-to-wear clothing
    - (2) Art of dress making  $3+2=5$
- OR**
- (b) Reema is a fashion designer and runs a fashion designing institute.
- (i) How will she explain the five stages of 'Fashion Cycle' to the new students pursuing this course ?
  - (ii) Draw a labelled 'Fashion Cycle' graph/diagram to be displayed in her institute.  $2\frac{1}{2}+2\frac{1}{2}=5$
- For Visually Impaired Candidates***
- (ii) No need to draw Graph/Diagram.
- 35.** (a) 'India is facing the double burden of malnutrition.' Justify this statement by giving two reasons.
- (b) Indian health care services help to promote, maintain, monitor or restore health of people. Discuss how these health services are provided to people at three different levels.  $2+3=5$

## CBSE PAPER (2023-2024)

CLASS XII HOME SCIENCE(064)

### MARKING SCHEME

Q. No.	EXPECTED ANSWERS / VALUE POINTS	Marks
<b>SECTION A</b>		
1.	(C) To ensure survival, protection and education of the girl child	1
2.	(C) Room attendant	1
3.	(D) Iron	1
4.	(B) Ergonomics	1
5.	(A) 100 kg	1
6.	(D) Mid-day Meal Programme <b>OR</b> (B) Jhunjhunu, Rajasthan	1 <b>OR</b> 1
7.	(C) National AIDS Control Organisation	1
8.	(D) Anganwadis	1
9.	(B) Food fortification is removing of nutrients from the foodstuffs.	1
10.	(A) Warli - Maharashtra	1
11.	(C) i - 4, ii - 3, iii - 2, iv - 1	1
12.	(D) i - 3, ii - 4, iii - 1, iv - 2	1
13.	(B) (i) and (iii) <b>OR</b> (C) (ii) and (iii)	1 <b>OR</b> 1
14.	(A) (iii) and (iv)	1
<b>SECTION B (CASE STUDY-BASED QUESTIONS)</b>		
15.	(B) Liquid diet: Fluids high in fibre and fats	1
16.	(B) It is the specialised area of nutrition which deals with nutrition during illness.	1
17.	(C) (A) is true, but (R) is false.	1
18.	(A) Both (A) and (R) are true and (R) is the correct explanation of (A).	1
<b>SECTION C</b>		
19.	<p><b>Name any four self-employment avenues in the field of food processing that can be taken up as a household or cottage scale activity.</b></p> <p><b>Self-employment avenues in the field of food processing that can be taken up as a household or cottage scale activity-</b></p> <ul style="list-style-type: none"><li>❖ Dehydrated products / Papad / Wadi</li><li>❖ Murrabba / Candy</li><li>❖ Pickles / Jam / Jelly / Squash</li><li>❖ Roasted and Puffed snacks / Salted peanuts / Khakhra</li><li>❖ Fried snacks / Mathri / Namkeen / Namakpara / Thepla / Chips / Murukku</li><li>❖ Bakery products</li><li>❖ Sweets / Jaggery making</li><li>❖ Drinking water pouches</li></ul> <p><b>Any other, Any four</b></p>	<b>½X4=2</b>





(b)	<p><b>Differentiate between Structural and Applied design.</b></p> <table border="1"> <thead> <tr> <th>S.No.</th> <th>Structural Design</th> <th>Applied Design</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Refers to the basic cut or silhouette of the garments / apparel.</td> <td>Refers to the ornamentation of the garments /apparel.</td> </tr> <tr> <td>2.</td> <td>Depends on the form, not superimposed ornamentation.</td> <td>It is superimposed on the basic structure.</td> </tr> <tr> <td>3.</td> <td>It takes into account the basic processing of fibre, types of fibres and yarns, variation of weaving, knitting etc.</td> <td>It includes fabric finishes, dyeing and printing, patch work, mirror work, embroidery, fancy needle work, lace work etc.</td> </tr> </tbody> </table> <p><b>Any other, Any two differences</b></p>	S.No.	Structural Design	Applied Design	1.	Refers to the basic cut or silhouette of the garments / apparel.	Refers to the ornamentation of the garments /apparel.	2.	Depends on the form, not superimposed ornamentation.	It is superimposed on the basic structure.	3.	It takes into account the basic processing of fibre, types of fibres and yarns, variation of weaving, knitting etc.	It includes fabric finishes, dyeing and printing, patch work, mirror work, embroidery, fancy needle work, lace work etc.	<b>1X2=2</b>
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25.	<p><b>Various job options are available in food industry with respect to food safety and quality control. Get information on any four career avenues available in this field from your brother who has completed his Masters in Food Microbiology.</b></p> <p><b>Career avenues available in food industry with respect to food safety and quality control-</b></p> <ol style="list-style-type: none"> <li>1. Food Analysts</li> <li>2. Food Quality Control managers in food industry laboratories</li> <li>3. Food inspectors / Food Testing Professionals at various positions in food testing laboratories in public / private sector / voluntary organisations</li> <li>4. Food Auditors</li> <li>5. Food Microbiologists / Specialist in HACCP / BIS / Agmark etc.</li> <li>6. Quality Certification Professionals in ISO / BIS / FSSAI etc.</li> <li>7. Teaching and Academics</li> <li>8. Research and Development Professionals</li> <li>9. Scientific Writers</li> <li>10. Content Creators / Bloggers</li> <li>11. Entrepreneurs</li> </ol> <p><b>Any other, Any four</b></p>	<b>½X4=2</b>												
26.	<p><b>'Consumers must purchase products with standardization marks.' Justify this statement by giving two reasons. ISI Mark is the certification mark of which organisation?</b></p> <p><b>Standardization marks ensure-</b></p> <ol style="list-style-type: none"> <li>1. quality of the product</li> <li>2. purity of the product / product is not duplicate</li> <li>3. value for money</li> <li>4. safety / consumer protection</li> <li>5. that product is manufactured as per the guidelines given by certification bodies</li> </ol> <p><b>Any other, Any two</b></p> <p><b>ISI Mark is the certification mark of -</b> BIS (Bureau of Indian Standards)</p>	<b>1X2=2</b>  <b>1</b>												

<p>27.(a)</p> <p>(b)</p>	<p><b>To an aspiring professional in the field of Development Communication, suggest any three knowledge and skills required to be successful in this field.</b></p> <p><b>Knowledge and skills required to be successful in the field of Development Communication-</b></p> <ol style="list-style-type: none"> <li>1. Cognitive skills / Ability to comprehend an issue</li> <li>2. Creative / Presentation skills / Ability to project the concepts in a creative manner</li> <li>3. Technical skills / Camera techniques / Video production / Content development / Editing skills</li> <li>4. Questioning ability / Ability to look into the finer details of any issue / gather unique and interesting stories</li> <li>5. Ability to work with diverse groups / Understand others' viewpoint</li> <li>6. Language skills (Speaking, Writing, Reading) / Ability to write reports and documents</li> <li>7. Computer skills</li> <li>8. Knowledge of related laws and regulations</li> </ol> <p><b>Any other, Any three</b></p> <p style="text-align: center;"><b>OR</b></p> <p><b>Compare print media with television as a method of Development Communication.</b></p> <table border="1"> <thead> <tr> <th>S.No.</th> <th>Print Media</th> <th>Television</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Visual mode of communication</td> <td>Audio-visual mode of communication</td> </tr> <tr> <td>2.</td> <td>Limited for literate people</td> <td>Suitable for both literate and illiterate people</td> </tr> <tr> <td>3.</td> <td>Printed mode</td> <td>Electronic mode</td> </tr> <tr> <td>4.</td> <td>Inexpensive</td> <td>Expensive</td> </tr> <tr> <td>5.</td> <td>Mobile medium</td> <td>Fixed medium</td> </tr> </tbody> </table> <p><b>Any other, Any three differences</b></p>	S.No.	Print Media	Television	1.	Visual mode of communication	Audio-visual mode of communication	2.	Limited for literate people	Suitable for both literate and illiterate people	3.	Printed mode	Electronic mode	4.	Inexpensive	Expensive	5.	Mobile medium	Fixed medium	<p><b>1X3=3</b></p> <p><b>OR</b></p> <p><b>1X3=3</b></p>
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<p>28.</p>	<p><b>Commercial laundries are organised in different sections which deal with specific jobs.</b></p> <p><b>(a) Make a list of any four jobs done in various sections for an entrepreneur who wants to set up his own commercial laundry.</b></p> <p><b>Jobs done in various sections of a commercial laundry-</b></p> <ol style="list-style-type: none"> <li>1. Collection, Inspection and Sorting of articles</li> <li>2. Pretreatments like mending, repairing and stain removal</li> <li>3. Washing</li> <li>4. Water extraction</li> <li>5. Drying</li> <li>6. Drycleaning</li> <li>7. Pressing and Ironing</li> <li>8. Dyeing</li> <li>9. Special finishes like zari polishing, calendering etc.</li> <li>10. Packing</li> <li>11. Distribution</li> </ol> <p><b>Any other, Any four</b></p>	<p><b>½X4=2</b></p>																		

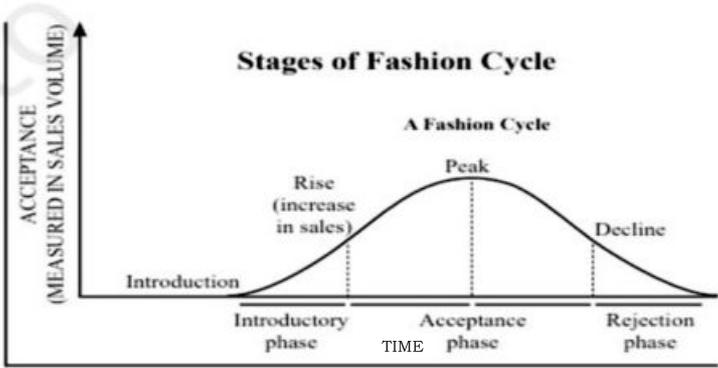
	<p><b>(b) What do you understand by system of code tags in a commercial laundry?</b></p> <p><b>In commercial laundry, system of code tags helps to –</b></p> <ol style="list-style-type: none"> <li>1. keep a record / invoice.</li> <li>2. identify / match the articles of each customer with the invoice.</li> </ol> <p><b>Any other, Any one</b></p>	<b>1</b>
<b>29.(a)</b>	<p><b>Food has been preserved using various methods since prehistoric times.</b></p> <p><b>(i) Make a list of four old methods of food preservation, which are still being used today.</b></p> <p><b>Old methods of food preservation-</b></p> <ol style="list-style-type: none"> <li>1. Sun drying</li> <li>2. Controlled fermentation</li> <li>3. Salting</li> <li>4. Pickling</li> <li>5. Candying</li> <li>6. Roasting</li> <li>7. Smoking</li> <li>8. Baking</li> <li>9. Using spices, oil, sugar etc. as preservatives</li> </ol> <p><b>Any other, Any four</b></p> <p><b>(ii) Name any one institute in India offering specialised courses in Food Processing and Technology.</b></p> <ol style="list-style-type: none"> <li>1. Central Food Technological Research Institute (CFTRI), Mysore</li> <li>2. National Institute of Food Technology and Entrepreneurship Management (NIFTEM), Sonapat</li> </ol> <p><b>Any other, Any one</b></p>	<b>½X4=2</b>
	<b>OR</b>	<b>OR</b>
<b>(b)</b>	<p><b>(i) Discuss briefly the significance of food processing and technology as a discipline.</b></p> <p><b>Significance of food processing and technology-</b></p> <ol style="list-style-type: none"> <li>1. Helps in storage and processing of agricultural and horticultural surplus.</li> <li>2. Increased demand of processed products due to changing life styles, increasing mobility and globalization.</li> <li>3. Consumers demand foods free from chemicals, pesticides, preservatives etc.</li> <li>4. Helps to increase shelf life of food products.</li> <li>5. Used to convert bulky, perishable foods into more useful, concentrated, palatable foods and potable beverages.</li> <li>6. Reduces preparation time for the cooking.</li> </ol>	<b>1X2=2</b>

	<p>7. Adds value to the resultant food products.  8. Fortification of staple food can be done to increase its nutrient content.  9. Increased prevalence of lifestyle diseases demands altering the nutrient content of foods.  10. Adds to the economic growth of the country.  11. Generates employment opportunities.</p> <p><b>Any other, Any two</b></p> <p><b>(ii) By whom are standards for fortification of staple foods like salt, milk, oils laid down in India?</b></p> <p>FSSAI (Food Safety and Standards Authority of India)</p>	1
<b>SECTION D</b>		
30.	<p><b>HACCP involves identification of food hazards during each stage in the food chain.</b></p> <p><b>(a) Give full form of HACCP.</b></p> <p>Hazard Analysis Critical Control Point (HACCP)</p> <p><b>(b) Mention three reasons why implementing HACCP in food industry is important.</b></p> <p><b>Implementation of HACCP in food industry is important as it-</b></p> <ol style="list-style-type: none"> <li>1. is a cost-effective and preventive approach to ensure food safety.</li> <li>2. enables us to detect hazards at any stage of processing or manufacturing.</li> <li>3. ensures a good quality end product, by taking appropriate action at the stage where the problem occurs.</li> <li>4. enables producers, processors, distributors and exporters to utilise resources efficiently.</li> <li>5. is important for consumer protection and international food trade.</li> <li>6. assures consistently good quality products.</li> <li>7. holds responsibility for safe food with producers and suppliers as per FSSA, 2006.</li> </ol> <p><b>Any other, Any three</b></p>	<p>1</p> <p>1X3=3</p>
31.(a)	<p><b>Shaurya has checked into a hotel. Which department's staff will first greet and welcome him? List any other three services provided by this department.</b></p> <p><b>Department responsible for greeting and welcoming guests -</b></p> <p>Front Office</p>	1

	<p><b>Services provided by Front Office Department -</b></p> <ol style="list-style-type: none"> <li>1. Organising reservation status of room availability</li> <li>2. Registering guests and allocation of rooms</li> <li>3. Maintaining records of check-in and check-out details</li> <li>4. Porter services</li> <li>5. Issuing room keys to guests</li> <li>6. Passing messages to guests</li> <li>7. Coordinating with other guest services / departments such as transport, room service, housekeeping, restaurant, accounts etc.</li> <li>8. Providing in-house and external information to the guests</li> <li>9. Preparing and settling their bills</li> <li>10. Taking feedback from the guests</li> <li>11. Keeping record of personal information of the guests</li> </ol> <p><b>Any other, Any three</b></p> <p style="text-align: center;"><b>OR</b></p> <p><b>(b) The phrase 'A home away from home' is often used in hospitality industry, to denote that guests are provided with comforts and facilities similar to their homes. In this context, mention any four types of establishments who offer hospitality services.</b></p> <p><b>Types of establishments who offer hospitality services-</b></p> <ol style="list-style-type: none"> <li>1. Hotel / A commercial establishment offering lodging, meals and other services to its guests.</li> <li>2. Motel / Provides services like a hotel and provides parking facility near the room or a room door that opens onto the parking lot.</li> <li>3. Lodge / Offers rented accommodation especially for sleeping and may or may not offer food and other services.</li> <li>4. Resort / Offers a broad range of amenities, sports facilities and leisure activities for ensuring a total vacation experience.</li> <li>5. Furnished apartments / Provides all essential amenities needed by the guests.</li> <li>6. Furnished camps / Provides hospitality to people who go for hiking, undertake adventure sports etc.</li> <li>7. Cruise lines / Operates cruise ships on oceans or rivers and provides all comforts and amenities.</li> <li>8. Guest houses / Smaller establishments that offer private rooms for rent in someone's home or apartment.</li> </ol> <p><b>Any other, Any four</b></p>	<p><b>1X3=3</b></p> <p style="text-align: center;"><b>OR</b></p> <p><b>1X4=4</b></p>
<p><b>32.</b></p>	<p><b>Anil is designing a bridal lehenga:</b>  <b>(a) How can he create rhythm in it? Suggest two ways, with examples.</b></p> <p><b>Ways to create rhythm-</b></p> <ol style="list-style-type: none"> <li>1. Repetition - of embroidery, lace, piping, colour etc. in the lehenga.</li> <li>2. Gradation / Cordation - by gradual increase or decrease in size of motifs, lines, colours and textures.</li> <li>3. Radiation - where eyes move in an organised way from a central point such as gathers in waist of lehenga.</li> <li>4. Parallelism - where elements lie parallel to each other such as tucks or pleats in lehenga. Bands of colour also create rhythm in a lehenga.</li> </ol> <p><b>Any other, Any two</b></p>	<p><b>1X2=2</b></p>

	<p><b>(b) Which colour scheme or colour harmony would he use if he wants to design the lehenga in a single hue?</b></p> <p>Monochromatic harmony / scheme</p> <p><b>(c) Name any one technique that can enhance the texture of the lehenga through surface ornamentation.</b></p> <p><b>Surface ornamentation technique-</b></p> <p>Tufting / Flock printing / Embroidery / Mirror work / Bead work / Lace work / Stone work / Applique work / Stitched effects</p> <p><b>Any other, Any one</b></p>	<p>1</p> <p>1</p>
<p>33.</p>	<p><b>It is important to recognise the elderly as a human resource and their rich experience should be used for national development.</b></p> <p><b>(a) To ensure a healthy and secure life for the elderly, which initiative was taken by the Government of India in the year 1999?</b></p> <p>National Policy for Older Persons</p> <p><b>(b) State three reasons why the elderly are considered to be a vulnerable group.</b></p> <p><b>Reasons why the elderly are considered to be a vulnerable group-</b></p> <ol style="list-style-type: none"> <li>1. Deteriorating health / Illness / Decreased physiological reserves.</li> <li>2. Ageing and weaker defence mechanisms leads to disabilities such as low vision, deafness, loss of mobility etc.</li> <li>3. Loneliness, isolation and a sense of being a burden on others leads to depression and anxiety.</li> <li>4. Financially dependent on others.</li> <li>5. Lack of family support from own children / Misbehaviour by family members.</li> <li>6. Fragmentation of the traditional family system and change in traditional value system.</li> <li>7. Inability to care for oneself.</li> </ol> <p><b>Any other, Any three</b></p> <p><b>(c) List any three facilities provided in multi-service centres for older persons.</b></p> <p><b>Facilities provided in multi-service centres for older persons-</b></p> <ol style="list-style-type: none"> <li>1. Day care (Basic facilities such as nutritious food, safe drinking water etc.)</li> <li>2. Educational opportunities</li> <li>3. Entertainment opportunities</li> <li>4. Healthcare / Medical support</li> <li>5. Companionship</li> <li>6. Counselling services</li> </ol> <p><b>Any other, Any three</b></p>	<p>1</p> <p><math>\frac{1}{2} \times 3 = 1\frac{1}{2}</math></p> <p><math>\frac{1}{2} \times 3 = 1\frac{1}{2}</math></p>

<p><b>34.(a)</b></p>	<p><b>Hitika has joined as a visual merchandise designer in a reputed fashion store which deals with only ready-to-wear clothing lines.</b></p> <p><b>(i) List three job responsibilities which are expected of her to attract more customers.</b></p> <p><b>Job responsibilities of visual merchandise designer-</b></p> <ol style="list-style-type: none"> <li>1. Designing window displays</li> <li>2. Arranging store merchandise</li> <li>3. Creating attractive props</li> <li>4. Organising clothing placement</li> <li>5. Styling mannequins</li> <li>6. Spearheading marketing campaigns</li> </ol> <p><b>Any other, Any three</b></p> <p><b>(ii) Which terms are used in France for the following?</b></p> <p><b>(1) Ready-to-wear clothing</b></p> <p>Prêt-à-porter</p> <p><b>(2) Art of dress making</b></p> <p>Couture</p> <p style="text-align: center;"><b>OR</b></p>	<p><b>1X3=3</b></p> <p><b>1</b></p> <p><b>1</b></p> <p><b>OR</b></p>
<p><b>(b)</b></p>	<p><b>Reema is a fashion designer and runs a fashion designing institute.</b></p> <p><b>(i) How will she explain the five stages of 'Fashion Cycle' to the new students pursuing this course?</b></p> <p><b>Five stages of Fashion Cycle-</b></p> <ol style="list-style-type: none"> <li>1. Introduction of a Style Designers interpret their research and creative ideas into apparel and then offer the new styles to the public.</li> <li>2. Increase in Popularity As the new fashion is purchased, worn and seen by many people, it may begin to rise in popularity.</li> <li>3. Peak of Popularity At the height of popularity, manufacturers copy fashion or produce adaptations due to increased demand.</li> <li>4. Decline in Popularity Eventually so many copies of that style are mass produced that fashion-conscious people get tired of it and begin to look for something new.</li> <li>5. Rejection of a Style or Obsolescence In this last phase, some consumers have already turned to new looks, thus beginning a new cycle.</li> </ol>	<p><b><math>\frac{1}{2} \times 5 = 2\frac{1}{2}</math></b></p>

	<p>(ii) Draw a labelled 'Fashion Cycle' graph/ diagram to be displayed in her institute.</p> <p><b>Fashion Cycle graph/ diagram</b></p>  <p><b>For Visually Impaired Candidates</b> No need to draw Graph/Diagram in part (ii)</p> <p><b>Note-</b> Marks to be awarded out of 5 for part (i)</p>	2½
35.	<p>(a) 'India is facing the double burden of malnutrition.' Justify this statement by giving two reasons.</p> <ol style="list-style-type: none"> <li>1. Coexistence of both undernutrition and overnutrition.</li> <li>2. Undernutrition / Inadequate or faulty diet / Disease or infections / Poverty / Insufficient access to food / Poor maternal and child care practices / Unsafe water / Poor hygiene / Inadequate health services / Inadequate knowledge / Discrimination against women, elderly and girls</li> <li>3. Overnutrition / Sedentary lifestyle / Dependence on faster means of transportation / Decreased outdoor activities/ Less physical work / Changes in dietary patterns due to dependence on fast food, processed food</li> </ol> <p><b>Any other, Any two</b></p>	1X2=2

	<p><b>(b) Indian health care services help to promote, maintain, monitor or restore health of people. Discuss how these health services are provided to people at three different levels.</b></p> <p><b>Health care in India is provided at three levels-</b></p> <ol style="list-style-type: none"> <li>1. Primary Health Care <ul style="list-style-type: none"> <li>❖ It is the first level of contact of the individual, family or community with the health system.</li> <li>❖ These services are provided through a network of primary health centres (PHCs) / dispensaries.</li> </ul> </li> <li>2. Secondary Health Care <ul style="list-style-type: none"> <li>❖ More complex health problems are resolved at the second level through district hospitals and community health centres.</li> <li>❖ Community health centres function as the first referral level.</li> </ul> </li> <li>3. Tertiary Health Care <ul style="list-style-type: none"> <li>❖ It is the third / highest and specialised level of health care.</li> <li>❖ It deals with the more complex health problems that cannot be dealt with at the first two levels.</li> <li>❖ Institutions at tertiary level are medical college hospitals, regional hospitals, specialised hospitals and All-India Institutes of Medical Sciences.</li> </ul> </li> </ol> <p><b>Three levels of Health Care with one point each</b></p>	<p><b>1X3=3</b></p>
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**CBSE PAPER (2024-25)**  
**HOME SCIENCE (Theory) (069)**

Time: 3 Hours

Maximum Marks: 70

**General Instructions :**

Read the following instructions carefully and strictly follow them :

- (i) **All** questions are **compulsory**.
- (ii) This question paper contains **35** questions.
- (iii) The question paper is divided into **four** sections – **Sections A, B, C and D**.
- (iv) **Section A** has questions no. **1 to 14** (Multiple Choice Questions) of 1 mark each.
- (v) **Section B** has questions no. **15 to 18** (Case study-based questions) of 1 mark each.
- (vi) **Section C** has questions no. **19 to 25** of 2 marks each and questions no. **26 to 29** of 3 marks each.
- (vii) **Section D** has questions no. **30 to 33** of 4 marks each and questions no. **34 and 35** of 5 marks each.
- (viii) Internal choices are given in some questions.
- (ix) Support your answers with suitable examples wherever required.

**SECTION A**  
**(Multiple Choice Questions)**

1. Which of the following option is most suitable for a career in the field of clinical nutrition ? 1
  - (A) Quality control manager
  - (B) Specialist in HACCP
  - (C) Diet consultant
  - (D) Sensory evaluator
  
2. Select the traditional handicraft of Odisha. 1
  - (A) Channapatna dolls
  - (B) Shola craft
  - (C) Bamboo craft
  - (D) Warli painting
  
3. Identify the Danger Zone temperature range at which bacteria grow on food stuffs. 1
  - (A) 5 – 60°C
  - (B) 5 – 60°F
  - (C) 15 – 100°C
  - (D) 15 – 100°F

4. Where was the Sustainable Access in Rural India (SARI) project started ? 1  
(A) Assam (B) Gujarat  
(C) Tamil Nadu (D) Haryana
5. (a) Annapurna scheme is under which nutrition programme operating in India ? 1  
(A) Nutrient Deficiency Control Programmes  
(B) Food Supplementation Programmes  
(C) ICDS  
(D) Food Security Programmes
- OR**
- (b) Which nutrient deficiency is targeted by National Prophylaxis Programme for Prevention of Blindness ?  
(A) Vitamin A (B) Iron  
(C) Iodine (D) Protein
6. In the interest of consumers, 'Consumer Voice' magazine is a publication of which country ? 1  
(A) Australia (B) India  
(C) United States of America (D) Nepal
7. Section 48 of which of the following Act states that creches should be maintained if more than thirty women are employed in an industry or factory ? 1  
(A) The Plantations Labour Act (B) The Maternity Benefit Act  
(C) The Factories Act (D) The Mines Act
8. Choose the correct pair of food hazard with its example : 1  
(A) Visible biological hazard : Bacteria  
(B) Invisible microbiological hazard : Worms  
(C) Chemical hazard : Bone fragments  
(D) Physical hazard : Hair
9. All India Institutes of Medical Sciences provide which level of health care services in India ? 1  
(A) Primary (B) Tertiary  
(C) Secondary (D) Intermediary

10. Which method of washing is used in a front loading washing machine for clothes ? 1
- (A) Tumbling (B) Agitation  
(C) Spinning (D) Pulsation

11. Match the organisation of food safety and quality given in List-I with its description in List-II. 1

<i>List-I</i> (Organisation)	<i>List-II</i> (Description)
i. CAC	1. Worldwide non-governmental federation
ii. ISO	2. Publishes 'Food Code' document
iii. WTO	3. Voluntary Product Certification of India
iv. BIS	4. Established in 1995 for administering trade agreements in the world

Choose the correct option from the following :

- (A) i – 4, ii – 3, iii – 2, iv – 1  
(B) i – 3, ii – 4, iii – 1, iv – 2  
(C) i – 2, ii – 1, iii – 4, iv – 3  
(D) i – 3, ii – 2, iii – 4, iv – 1
12. Match the Method of Development Communication given in List-I with its example in List-II. 1

<i>List-I</i> (Method of Development Communication)	<i>List-II</i> (Example)
i. Campaign	1. Tele-centre
ii. Community radio	2. Hindustan Times – Project Village Chhatara
iii. Information and Communication Technology	3. Jago Grahak Jago
iv. Print media	4. Banasthali Vidyapith

Choose the correct option from the following :

- (A) i – 4, ii – 3, iii – 2, iv – 1  
(B) i – 3, ii – 1, iii – 4, iv – 2  
(C) i – 2, ii – 3, iii – 1, iv – 4  
(D) i – 3, ii – 4, iii – 1, iv – 2



**SECTION B**  
**(Case Study-Based Questions)**

*Read the passage carefully and answer the questions no. 15 to 18.*

Many families in our country are unable to meet even the basic needs of their members and/or access as well as utilise the various services provided by other structures of the society due to various reasons, one of them being lack of resources, especially financial. Further, many children, youth and elderly are separated from their families and are left to cope on their own. By themselves, they find it difficult to meet their own needs.

- 15.** In the context of institutes/programmes for vulnerable groups, choose the correct pair : 1
- (A) CARA : Organising rallies  
(B) Promotion of Adventure : Child Rights Convention  
(C) Observation Home : A kind of home for Children  
(D) Promotion of National Integration : Family-based care

- 16.** Match the initiatives for children, youth and elderly given in List-I with their related year in List-II : 1

<i>List-I</i>	<i>List-II</i>
<i>(Initiative)</i>	<i>(Year)</i>
i. SOS Children's Villages	1. 2000, 2015
ii. National Youth Policy	2. 1999
iii. National Policy for Older Persons	3. 2003, 2014
iv. Juvenile Justice (Care and Protection of Children) Act	4. 1964

Choose the correct option from the following :

- (A) i – 4, ii – 3, iii – 2, iv – 1  
(B) i – 3, ii – 4, iii – 1, iv – 2  
(C) i – 2, ii – 1, iii – 4, iv – 3  
(D) i – 3, ii – 1, iii – 2, iv – 4

17. Given below are two statements labelled as Assertion (A) and Reason (R). 1  
*Assertion (A)* : Within the broad category 'Youth', there are some groups who are especially vulnerable.  
*Reason (R)* : Rural and tribal youth are vulnerable groups.  
Select the most appropriate answer from the options given below :  
(A) Both (A) and (R) are true and (R) is the correct explanation of (A).  
(B) Both (A) and (R) are true, but (R) is **not** the correct explanation of (A).  
(C) (A) is true, but (R) is false.  
(D) (A) is false, but (R) is true.

18. Given below are two statements labelled as Assertion (A) and Reason (R). 1  
*Assertion (A)* : It is necessary to provide for the economic and health needs of the elderly to create a conducive social milieu.  
*Reason (R)* : In India, Senior Citizens constitute persons in the age group of 50 years and above.  
Select the most appropriate answer from the options given below :  
(A) Both (A) and (R) are true and (R) is the correct explanation of (A).  
(B) Both (A) and (R) are true, but (R) is **not** the correct explanation of (A).  
(C) (A) is true, but (R) is false.  
(D) (A) is false, but (R) is true.

### SECTION C

#### (Short Answer Questions)

19. (a) 'Poshan Abhiyaan monitors and reviews the implementation of strategies to address the nutritional problems'. Justify this statement by giving any two short term interventions. 2

**OR**

- (b) A doctor has diagnosed a fall in haemoglobin levels of an adolescent girl. Which nutritional deficiency disorder does it indicate ? List any two other symptoms which may be seen in her in this disorder.
20. Few children of a village have become victims of a natural calamity and are without home. Besides these, which other four types of vulnerable children need care and protection ? 2

21. What is meant by food fortification ? Give its two examples. 2
22. By using different types of lines in various combinations on fabrics, name four basic groups of shapes which can be formed ? 2
23. How is ironing different from hot pressing of clothes ? Give any two differences. 2
24. A student is curious to learn about the major developments in food processing and technology that occurred before the 20<sup>th</sup> century. In this context, name two researchers who made a significant contribution in those times. Also name the process developed by each one of them. 2
25. (a) Differentiate between underweight and wasting. 2

**OR**

- (b) Write the full form of PEM and describe it briefly.
26. (a) Sumera lived in a remote village and was never sent to school. Now her parents want to admit her in a residential school. Suggest the name of the scheme by the Government of India meant for such girls. Explain any two other features of this scheme. 3

**OR**

- (b) Jacob wants to set up a suitable workplace for his employees in his own manufacturing company. Advise him to use ergonomics in designing workplaces by giving the definition of ergonomics and its two benefits.
27. Provide six reasons how a pre-school environment is beneficial for young children's development. 3
28. (a) Why is it important for DCJ professionals to be well versed in computer skills ?
- (b) In which two areas can a Development Journalist work ?
- (c) Name the umbrella term that includes computer hardware and software, digital broadcast, etc. 1+1+1=3

29. (a) Enlist six features of Hospital laundry. 3

**OR**

- (b) Mention six work operations which are performed by an automatic washing machine.

**SECTION D**  
**(Long Answer Questions)**

30. (a) Which type of diet should be given to a person who has dentures ?  
Give any two examples of this diet.

- (b) Describe any two ways of feeding a patient. 2+2=4

31. Your grandmother has purchased apples from a street vendor, who cheated her by weighing less.

- (a) By which four ways can a fruit and vegetable vendor deceive his customers using defective weights and measures ?

- (b) As an alert consumer, what are her two responsibilities in this context. 2+2=4

32. (a) (i) "Food safety challenges have changed globally as well as in India, and Food Quality and Food Safety have gained tremendous importance". In this context, highlight two significant reasons of importance of Food Quality and Safety.

- (ii) Identify two common food-borne pathogens that can spread infection in healthy individuals. 2+2=4

**OR**

- (b) (i) What is the full name of the comprehensive law that consolidated various old food laws in India ? When was it enacted ?

- (ii) A food manufacturing company is establishing a Food Safety Management System. Describe two systems the company can use to ensure food safety and quality.

33. (a) A fashion design team has been tasked with creating a new apparel collection inspired by the Golden Mean. Describe any three ways how they would integrate the principles of proportion into their design process, with a focus on Golden Mean.
- (b) They have been asked to use colour value 0 and 10 from a Grey Scale. What do these equivalent values represent ? 3+1=4

34. (a) Kartik's family has reserved a 3-night stay at a resort for their vacation.
- As the Front Office Manager, list down the actions to be taken during each stage of 'Guest cycle' to ensure good hospitality services for Kartik's family. Which two staff members/personnel would assist the Front Office Manager in this work ? 4+1=5

**OR**

- (b) 'Fresh Cake and Cafe', a new bakery and coffee shop is opened in your city. Its Food and Beverage Department has the responsibility for the sale of food and beverages.
- Name any two service departments related to it. Describe four functions/roles of any one of these service departments. 1+4=5
35. Blazer jackets, hot pants, polo shirts and baggy pants are displayed in a fashion store for sale.
- (a) Classify and differentiate them as per fashion terms used in the fashion industry.
- (b) Which three career opportunities will be available to fashion design professionals in this fashion store ? Mention any one role for each of them. 2+3=5

**CLASS XII HOME SCIENCE (2024-2025)  
MARKING SCHEME**

Q. No.	EXPECTED ANSWERS / VALUE POINTS	Marks
<b>SECTION A (Multiple Choice Questions)</b>		
1.	(C) Diet consultant	1
2.	(B) Shola craft	1
3.	(A) 5 – 60° C	1
4.	(C) Tamil Nadu	1
5. (a)	(D) Food Security Programmes	1
	<b>OR</b>	<b>OR</b>
(b)	(A) Vitamin A	1
6.	(B) India	1
7.	(C) The Factories Act	1
8.	(D) Physical hazard: Hair	1
9.	(B) Tertiary	1
10.	(A) Tumbling	1
11.	(C) i – 2, ii – 1, iii – 4, iv – 3	1
12.	(D) i – 3, ii – 4, iii – 1, iv – 2	1
13.	(A) (i) and (iv)	1
14.(a)	(B) (i) and (ii)	1
	<b>OR</b>	<b>OR</b>
(b)	(C) (iii) and (iv)	1
<b>SECTION B (Case Study-Based Questions)</b>		
15.	(C) Observation Home: A kind of home for Children	1
16.	(A) i – 4, ii – 3, iii – 2, iv – 1	1
17.	(A) Both (A) and (R) are true and (R) is the correct explanation of (A).	1
18.	(C) (A) is true, but (R) is false.	1
<b>SECTION C (Short Answer Questions)</b>		
19.(a)	<p><b>Short term interventions of Poshan Abhiyaan-</b></p> <ol style="list-style-type: none"> <li>1. Integrated Child Development Services (ICDS) to cover all vulnerable children in the age group of 0-6 years and all pregnant and lactating mothers</li> <li>2. Fortification of essential foods (salt fortified with iodine)</li> <li>3. Production and popularisation of low-cost nutritious foods</li> <li>4. Control of micronutrient deficiencies among vulnerable groups, namely deficiencies of iron, vitamin A, folic acid and iodine by supplementing these nutrients, distributing free tablets etc.</li> </ol> <p><b>Any other, Any two</b></p> <p style="text-align: center;"><b>OR</b></p>	1X2=2

<b>19(b)</b>	<p><b>Nutritional deficiency disorder-</b> Iron Deficiency Anemia / IDA / Anemia</p> <p><b>Symptoms-</b></p> <ol style="list-style-type: none"> <li>1.Shortness of breath / breathlessness</li> <li>2.Fatigue</li> <li>3.Lethargy</li> <li>4.General pallor</li> <li>5.Paleness of conjunctiva of eyes / tongue / nail beds / soft palate</li> <li>6.Cognitive functions (attention span / memory / concentration) are adversely affected</li> </ol> <p><b>Any other, Any two</b></p>	<p style="text-align: center;"><b>1</b></p> <p><b>½X2=1</b></p>
<b>20.</b>	<p><b>Vulnerable children who need care and protection -</b></p> <ol style="list-style-type: none"> <li>1.Abandoned children</li> <li>2.Street children</li> <li>3.Runaway children</li> <li>4.Missing children</li> <li>5.Abused or neglected by the guardian</li> <li>6.Mentally or physically challenged / Children with special needs</li> <li>7.Children suffering from terminal illness / incurable disease</li> <li>8.Physically or sexually abused children</li> <li>9.Children who are tortured or exploited or engaged in illegal acts</li> <li>10.Victims of drug abuse</li> <li>11.Trafficked children</li> <li>12.Victims of armed conflict, civil commotion</li> <li>13.Orphan children</li> <li>14.Children rescued from red light areas</li> <li>15.Child labourers</li> <li>16.Children of prisoners</li> </ol> <p><b>Any other, Any four</b></p>	<p style="text-align: center;"><b>½X4=2</b></p>
<b>21.</b>	<p><b>Food fortification-</b></p> <p>It is an industrial process of adding the essential nutrient/s that is lacking in the food stuffs or condiments to ensure that minimum dietary requirements are met.</p> <p><b>Any other</b></p> <p><b>Examples-</b></p> <ol style="list-style-type: none"> <li>1. Iodised salt / Salt double fortified with Iodine and Iron</li> <li>2.Folic acid added to flour</li> </ol>	<p style="text-align: center;"><b>1</b></p> <p><b>½X2=1</b></p>

	<p>3.Vitamin A and D added to milk  4.Vitamin A and D added to oils / fats  5.Iron,Vitamin B<sub>12</sub> and Folic Acid added to wheat / rice</p> <p><b>Any other, Any two</b></p>													
<b>22.</b>	<p><b>Four basic groups of shapes-</b></p> <p>1.Natural shapes  2.Stylised shapes  3.Geometric shapes  4.Abstract shapes</p>	<b>½X4=2</b>												
<b>23.</b>	<table border="1"> <thead> <tr> <th>S.No.</th> <th>Ironing</th> <th>Hot Pressing</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>It is the process of smoothening out wrinkles created with use or during washing.</td> <td>It is a process which helps to put creases in sleeves, trousers, pleated skirts, curtains etc. with heat and pressure.</td> </tr> <tr> <td>2.</td> <td>It is done on light clothes.</td> <td>It is done on both light and heavy clothes.</td> </tr> <tr> <td>3.</td> <td>It is done by back-and-forth motion.</td> <td>It applies a downward pressure by lifting up-and-down motion.</td> </tr> </tbody> </table> <p><b>Any other, Any two differences</b></p>	S.No.	Ironing	Hot Pressing	1.	It is the process of smoothening out wrinkles created with use or during washing.	It is a process which helps to put creases in sleeves, trousers, pleated skirts, curtains etc. with heat and pressure.	2.	It is done on light clothes.	It is done on both light and heavy clothes.	3.	It is done by back-and-forth motion.	It applies a downward pressure by lifting up-and-down motion.	<b>1+1=2</b>
S.No.	Ironing	Hot Pressing												
1.	It is the process of smoothening out wrinkles created with use or during washing.	It is a process which helps to put creases in sleeves, trousers, pleated skirts, curtains etc. with heat and pressure.												
2.	It is done on light clothes.	It is done on both light and heavy clothes.												
3.	It is done by back-and-forth motion.	It applies a downward pressure by lifting up-and-down motion.												
<b>24.</b>	<table border="1"> <thead> <tr> <th>Researcher</th> <th>Process Developed</th> </tr> </thead> <tbody> <tr> <td>Nicolas Appert</td> <td>Canning</td> </tr> <tr> <td>Louis Pasteur</td> <td>Pasteurization</td> </tr> </tbody> </table> <p><b>Any two researchers with the process they developed</b></p>	Researcher	Process Developed	Nicolas Appert	Canning	Louis Pasteur	Pasteurization	<b>1+1=2</b>						
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<b>25.(a)</b>	<table border="1"> <thead> <tr> <th>Underweight</th> <th>Wasting</th> </tr> </thead> <tbody> <tr> <td>A person is said to be underweight when his / her body weight is less than adequate for his / her age.</td> <td>When weight is not adequate relative to height, it is termed wasting.</td> </tr> </tbody> </table> <p><b>One difference</b></p> <p style="text-align: center;"><b>OR</b></p>	Underweight	Wasting	A person is said to be underweight when his / her body weight is less than adequate for his / her age.	When weight is not adequate relative to height, it is termed wasting.	<b>1+1=2</b>  <b>OR</b>								
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A person is said to be underweight when his / her body weight is less than adequate for his / her age.	When weight is not adequate relative to height, it is termed wasting.													

<p><b>(b)</b></p>	<p><b>Full form of PEM-</b> Protein Energy Malnutrition</p> <p><b>Description of PEM-</b></p> <ol style="list-style-type: none"> <li>1. Caused by inadequate food intake vis-a-vis the requirements i.e., insufficient intake of the macronutrients (energy and protein) / poverty / infections / chronic illnesses</li> <li>2. Types- Marasmus, Kwashiorkor</li> <li>3. Severe undernutrition due to deficiency of food and energy is termed as Marasmus and that caused by protein deficiency is termed as Kwashiorkor</li> <li>4. Symptoms - Underweight, Wasting, Stunting</li> <li>5. Children are at greatest risk but it can occur in adults, especially elderly and in some diseases e.g. T.B., AIDS etc.</li> <li>6. It is assessed by evaluating the anthropometric measurements (weight, height, head-chest circumference, etc.)</li> <li>7. Treatment - through balanced nutrition</li> </ol> <p><b>Any other, Any one</b></p>	<p><b>1</b></p> <p><b>1</b></p>
<p><b>26.(a)</b></p>	<p><b>Name of the scheme-</b> Kasturba Gandhi Balika Vidyalaya / KGBV</p> <p><b>Features-</b></p> <ol style="list-style-type: none"> <li>1. Scheme of Government of India under Sarva Shiksha Abhiyaan (SSA), now Samagra Shiksha</li> <li>2. Provide free school education to dropout girls from rural and disadvantaged sections of the society</li> <li>3. Enrolls girls in class VI (upper primary) and is till class XII (Senior Secondary)</li> <li>4. All the girls study the Bridge Course for preparing them for the entry level</li> <li>5. Schools have been opened in backward blocks of each district</li> <li>6. Helps in the implementation of 'Right to Education Act' (RTE), Government of India</li> <li>7. Aims to enhance literacy rate, empower girls, bridge gender gap, provide quality and equity in education</li> </ol> <p><b>Any other, Any two</b></p> <p style="text-align: center;"><b>OR</b></p>	<p><b>1</b></p> <p><b>1X2=2</b></p> <p><b>OR</b></p>

(b)	<p><b>Definition-</b></p> <ol style="list-style-type: none"> <li>1.Human Factors Engineering</li> <li>2.Adjustment of Human and Machine</li> <li>3.Involves application of human biological sciences combined with engineering science to achieve optimum mutual adjustment of human work, with the benefit being measured in terms of human efficiency and well-being</li> <li>4.Study of humans at work, in order to understand the complex interrelationships of people with their job requirements, methods of working, tools / equipment used and the environment</li> <li>5.Derived from two Greek words — ‘ergon’ (work) and ‘nomics’ (natural laws)</li> <li>6.Study of work with the primary goal being to adapt the work environment to the worker</li> </ol> <p><b>Any other, Any one</b></p> <p><b>Benefits of Ergonomics-</b></p> <ol style="list-style-type: none"> <li>1.Reduces risk of injury and accidents</li> <li>2.Increases productivity</li> <li>3.Reduces mistakes and need to do the work again</li> <li>4.Increases efficiency</li> <li>5.Decreases absenteeism due to ill health / accidents / stress</li> <li>6.Improves morale of workers</li> <li>7.Increases job satisfaction through comfortable working conditions</li> </ol> <p><b>Any other, Any two</b></p>	<p>1</p> <p>1X2=2</p>
27.	<p><b>Pre-school environment is beneficial due to following reasons-</b></p> <ol style="list-style-type: none"> <li>1.Child centered approach</li> <li>2.Play way method which makes learning enjoyable</li> <li>3.Children enjoy the company of others / socialization with peers</li> <li>4.Facilitates quick learning due to peers / stimulating environment</li> <li>5.Makes children independent and do their work on their own like eating on their own</li> <li>6.Beneficial for children who live in difficult circumstances or who need additional support for learning / Children with special needs (CWSN)</li> <li>7.Enhances child’s exploration to other adults and other environments and materials / enhances creativity and curiosity</li> <li>8.Prepare children for formal schooling</li> <li>9.Provides a good learning environment</li> <li>10.Facilitates sharing, cooperation, empathy</li> <li>11.Develops self-confidence and self-awareness</li> <li>12.Develops communication skills / language skills</li> <li>13.Helps to manage emotions</li> <li>14.Aids in holistic development of the child</li> <li>15.Improves concentration, memory and attention span</li> <li>16.Assists in growth and development of children outside the home</li> <li>17.Teaches self-care, healthy habits and disciplined routine</li> </ol> <p><b>Any other, Any six</b></p>	<p>½X6=3</p>

<p><b>28.(a)</b></p>	<p><b>DCJ professionals should be well versed in computer skills to –</b></p> <ol style="list-style-type: none"> <li>1.write and present technical reports and documents / prepare presentations / analyse data etc.</li> <li>2.operate the video production station or radio station and related suitable softwares</li> <li>3.design graphics</li> <li>4.edit using multimedia</li> <li>5.write emails or creative briefs for effective communication</li> <li>6.use Microsoft Office / Google / AI applications</li> <li>7.increase work efficiency</li> <li>8.use social media platforms for creating impact on masses</li> <li>9.saves time / resources</li> </ol> <p><b>Any other, Any one</b></p>	<p><b>1</b></p>
<p><b>(b)</b></p>	<p><b>Areas in which Development Journalist can work -</b></p> <ol style="list-style-type: none"> <li>1.Traditional Media - Print / TV / Radio etc.</li> <li>2.Community Media - Radio jockey / Anchor etc.</li> <li>3.Digital Media - Online news / Blog writing / Social media / Podcast etc.</li> <li>4.Teaching / Academics / Training</li> <li>5.Research</li> <li>6.International agencies / Government agencies / NGOs</li> <li>7.Freelancing / Consultancy</li> <li>8.Government / Corporate sector</li> </ol> <p><b>Any other, Any two</b></p>	<p><b>½X2=1</b></p>
<p><b>(c)</b></p>	<p>Information and Communication Technologies / ICT</p>	<p><b>1</b></p>
<p><b>29.(a)</b></p>	<p><b>Features of Hospital laundry-</b></p> <ol style="list-style-type: none"> <li>1.Takes care of hygiene, cleanliness and disinfection / sterilization</li> <li>2.Most of the articles are of cotton, only the blankets are woollen</li> <li>3.Articles are dyed (in colours specific to the hospital and department) with dyes which have excellent wash-fastness</li> <li>4.Stubborn stains may not be taken notice of</li> <li>5.Finishing like starching and whitening is not included</li> <li>6.Ironing and pressing may not be done to perfection</li> <li>7.Repair, mending and condemnation of unusable material may or may not form a part of the services required</li> <li>8.Some hospitals have started using disposables where there is a threat of infection, which are then destroyed by burning</li> </ol>	<p><b>½X6=3</b></p>

	<p>9.Large amount of work 10.Eco friendly detergents may be used 11.High-capacity washers and hydroextractors are used</p> <p><b>Any other, Any six</b></p> <p style="text-align: center;"><b>OR</b></p> <p><b>(b) Six work operations performed by automatic washing machine-</b></p> <p>1.Filling up water 2.Water Level Control 3.Regulation of Temperature of Water 4.Washing 5.Rinsing 6.Water Extraction</p>	<p style="text-align: center;"><b>OR</b></p> <p><b>½X6=3</b></p>
<b>SECTION D (Long Answer Questions)</b>		
<b>30. (a)</b>	<p><b>Type of diet-</b></p> <p>Mechanical soft diet</p> <p><b>Examples-</b></p> <p>1. Mashed fruits / vegetables 2. Pureed fruits / vegetables 3. Peeled and Grated fruits / vegetables 4. Boiled / Stewed fruits / vegetables 5. Well-cooked dal / rice / khichri / dalia 6. Smoothies / Curd / Custard / Pudding / Kheer 7.Boiled / Scrambled eggs / Tender meat / Minced meat</p> <p><b>Any other, Any two</b></p>	<p style="text-align: center;"><b>1</b></p> <p><b>½X2=1</b></p>
<b>(b)</b>	<p><b>Ways of feeding a patient -</b></p> <p>1.Oral feeding / Feeding by mouth - i. Best / most preferred way ii. Nutritionally adequate</p> <p>2.Tube feeding - i. Introduced through nose or stomach etc. ii. Preferred as long as gastrointestinal tract is functional iii. Can be given when the person is able to digest and absorb</p>	<p style="text-align: center;"><b>1X2=2</b></p>

	<p>3. Intravenous feeding -</p> <p>i. Patient is nourished with special solutions which are given through a drip in a vein</p> <p>ii. Can be used to provide nutrition to unconscious patients</p> <p><b>Any two ways with any one point of description for each</b></p>	
31. (a)	<p><b>Fruits and vegetable vendor can deceive customers by-</b></p> <ol style="list-style-type: none"> <li>1. not using -standardized weights / weights and measures with seal / weights with genuine verification stamp</li> <li>2. using weights which are hollow from below / tempering with weights</li> <li>3. using stones for weighing instead of standard weights</li> <li>4. not mentioning correct weight on packaged fruits and vegetables</li> <li>5. sticking magnet on the bottom of the pan of the weighing scale</li> <li>6. using the weighing scale where the pointer is not in the centre or missing</li> <li>7. using defective and unverified electronic weighing machines / beam scales / platform scales / non calibrated weighing machine</li> <li>8. putting additional rings on one side of the manual weighing balance</li> <li>9. weighing machine kept on the uneven / slant surface</li> </ol> <p><b>Any other, Any four</b></p>	½X4=2
(b)	<p><b>Responsibilities of consumer-</b></p> <ol style="list-style-type: none"> <li>1. Should purchase good quality products weighed by verified scale weights</li> <li>2. Be vigilant and watch carefully how the vendors are weighing goods</li> <li>3. If vendors are using defective weights and measures, tell them not to do so</li> <li>4. If vendors do not listen, inform others not to purchase from them / restrict their entry in the area</li> <li>5. Take vendors' photo or video and report to concerned authorities</li> <li>6. Insist for digital / electronic weighing scales than manual</li> <li>7. Insist for weighing prepackaged goods</li> <li>8. Participate in consumer forums</li> <li>9. Be aware of National Consumer Helpline</li> <li>10. Be aware of latest consumer laws and consumer rights</li> </ol> <p><b>Any other, Any two</b></p>	1X2=2



	<p><b>Systems for ensuring food safety and quality-</b></p> <p>1. Good Manufacturing Practices (GMP) –</p> <ul style="list-style-type: none"> <li>i. Part of quality assurance to ensure products are safe</li> <li>ii. Enables to minimise or eliminate contamination and false labelling</li> <li>iii. Helps to refine compliance and performance by manufacturers / producers</li> <li>iv. Ensures that manufacturers / processors take proactive steps to make products safe</li> <li>v. Good business tool for food operations</li> </ul> <p>2. Good Handling Practices (GHP) -</p> <ul style="list-style-type: none"> <li>i. A comprehensive approach from the farm to the store / consumer</li> <li>ii. Identifies potential sources of risk</li> <li>iii. Indicates what steps and procedures are taken to minimize the risk of contamination</li> <li>iv. Ensures that all persons who handle food have good hygiene practices</li> <li>v. Reduces the risk of cross-contamination during food handling</li> </ul> <p>3. Hazard Analysis Critical Control Points (HACCP) -</p> <ul style="list-style-type: none"> <li>i. It is a preventive approach to ensure food safety</li> <li>ii. Identifies critical control points in the production process to prevent, eliminate or reduce food safety hazards</li> <li>iii. Assesses chances of occurrence of hazards during each step / stage in the food chain – raw material procurement, manufacturing, distribution, usage of food products and defining measures for hazard control</li> <li>iv. Ensures good quality end product</li> <li>v. Utilises resources efficiently and in a cost-effective manner</li> <li>vi. Important for consumer protection and international food trade</li> </ul> <p><b>Any two systems with any one point of description for each</b></p>	<p><b>1X2=2</b></p>
<p><b>33. (a)</b></p>	<p><b>Ways of integrating proportion in the dress-</b></p> <p>1. Garment Proportion-</p> <ul style="list-style-type: none"> <li>i. Proportion of golden mean which is represented by ratios like 3:5:8, 5:8:13 and so on.</li> <li>ii. In a skirt and blouse, the blouse should represent 3 parts, the skirt should represent 5 parts and combined effect represents 8.</li> <li>iii. In a shirt-pant, the shirt should represent 5 parts and pant should represent 8 parts and combined effect represents 13.</li> </ul> <p>2. Proportion of Colour-</p> <ul style="list-style-type: none"> <li>i. By using golden mean, different colours can be used to create proportion of colour in apparel.</li> <li>ii. Different colour proportions can be created for saree and blouse / shirt and pant / skirt and blouse etc.</li> </ul>	<p><b>1X3=3</b></p>

	<p>3. Proportion of Texture-</p> <p>i. This is achieved when different textures of the material used to make the garment increase or decrease the size of the person wearing the garment.  ii. Heavy and bulky textures should be avoided for a thin and short person.  iii. Clinging textures should be avoided for a stout person.</p> <p>4. Proportion of Shape and Form-</p> <p>i. The size and positioning of motifs or prints in a dress are in proportion to the size of the wearer.  ii. Small child's dress should have small prints whereas adults' dress may have big prints.  iii. A high waist bodice used in maternity clothes camouflages the fullness of the abdomen.  iv. Equal divisions make a person look shorter and wider, whereas unequal horizontal divisions make a person look slimmer.</p> <p><b>(b) Any three ways with one point of description for each</b></p> <p><b>(b) They have been asked to use colour value 0 and 10 from a Grey Scale. What do these equivalent values represent?</b></p> <p><b>When using the Grey Scale, the values 0 and 10 represent-</b></p> <p>Value 0- Black  Value 10- White</p>	$\frac{1}{2} \times 2 = 1$
<p><b>34.(a)</b></p>	<p><b>Kartik's family has reserved a 3-night stay at a resort for their vacation. As the Front Office Manager, list down the actions to be taken during each stage of 'Guest cycle' to ensure good hospitality services for Kartik's family. Which two staff members / personnel would assist the Front Office Manager in this work?</b></p> <p><b>Actions to be taken during each stage of 'Guest cycle'-</b></p> <p>1.Pre-arrival Stage-</p> <p>i. Quoting room rates to guest  ii. Checking room availability  iii. Reserving a room  iv. Providing information regarding the resort</p> <p>2.Arrival Stage-</p> <p>i. Registering guests on arrival / check-in  ii. Welcoming guests  iii. Allocating rooms and handing over keys  iv. Maintaining record of check- in  v. Handling luggage / providing porter services</p> <p>3.Occupancy -</p> <p>i. Providing various services as per the guest's requirements  ii. Ensuring security of the guest  iii. Coordination of various guest services  iv. Ensuring guest satisfaction and retaining customer loyalty</p>	$1 \times 4 = 4$

	<p>4. Departure -</p> <ol style="list-style-type: none"> <li>i. Check-out from the resort</li> <li>ii. Clearance of bill</li> <li>iii. Handing over the resort room key</li> <li>iv. Handling baggage</li> <li>v. Maintaining up-to-date record of the room occupancy</li> <li>vi. Maintaining guest history</li> <li>vii. Taking feedback from the guest</li> </ol> <p><b>Four stages with any one action for each</b></p> <p><b>Staff members / personnel who would assist the Front Office Manager-</b></p> <ol style="list-style-type: none"> <li>1.Front Office Supervisor</li> <li>2.Front Office Cashier</li> <li>3.Telephone Operator / Information Assistant</li> <li>4.Assistant Manager- Front Office</li> <li>5.Lobby Manager</li> <li>6.Receptionist (Front Office Agent)</li> <li>7.Bell Captain</li> <li>8.Bellboy</li> <li>9.Doorman</li> </ol> <p><b>Any other, Any two</b></p> <p style="text-align: center;"><b>OR</b></p> <p><b>(b) Various service departments-</b></p> <ol style="list-style-type: none"> <li>1.Kitchen</li> <li>2.Restaurant</li> <li>3.Kitchen Stewarding</li> <li>4.Coffee shop</li> <li>5.Online order / Take away</li> </ol> <p><b>Any other, Any two</b></p> <p><b>Functions of these service departments-</b></p> <ol style="list-style-type: none"> <li>1.Kitchen- <ol style="list-style-type: none"> <li>i. Place where food is prepared</li> <li>ii. Kitchen may be divided into various sections for food preparations, such as bakery and confectionery, hot beverages etc.</li> <li>iii. Following staff in the kitchen perform different roles: <ul style="list-style-type: none"> <li>❖ Executive Chef (Chef-de-cuisine) is the head of the kitchen- Planning, organising and controlling the kitchen operations</li> <li>❖ Deputy Chef - Supports Executive Chef</li> <li>❖ Chef-de-partie - Supervises some sections of the kitchen</li> </ul> </li> </ol> </li> </ol>	<p><math>\frac{1}{2} \times 2 = 1</math></p> <p><b>OR</b></p> <p><math>\frac{1}{2} \times 2 = 1</math></p> <p><b>1X4=4</b></p>
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	<ul style="list-style-type: none"> <li>❖ Cook - Prepares the common food items</li> </ul> <p>2. Restaurant / Coffee shop-</p> <ul style="list-style-type: none"> <li>i. A commercial facility that provides food and beverages to the customers</li> <li>ii. Equipped with dining tables, chairs and other required furniture with crockery, cutlery, linen and décor, varying in quality as suited to the objectives, concept and standards of the establishment</li> <li>iii. Restaurant personnel coordinate closely with the kitchen for the supply of food orders to guests</li> <li>iv. Standard of cleanliness, hygiene and service to be maintained</li> <li>v. Staff has to be smiling, courteous to the guests and possess good manners and etiquette</li> <li>vi. Staff should have thorough knowledge of the ways of serving the food</li> <li>vi. Following staff in the restaurant perform different roles: <ul style="list-style-type: none"> <li>❖ Restaurant Manager - Responsible for overall functioning of the restaurant.</li> <li>❖ Senior Restaurant Supervisor-Supervises functioning of restaurant</li> <li>❖ Head Waiter-Lead a team of waiters / stewards who actually serve the food</li> <li>❖ Assistant Waiter - Clears the table</li> </ul> </li> </ul> <p>3. Kitchen Stewarding-</p> <ul style="list-style-type: none"> <li>i. Concerned with the storage, maintenance, cleanliness and issue of cutlery, crockery and glassware to the restaurant and kitchen</li> <li>ii. Maintain cleanliness in the kitchen and to wash used pots and pans</li> <li>iii. Following staff in the stewarding perform different roles: <ul style="list-style-type: none"> <li>❖ Executive Kitchen Steward</li> <li>❖ Kitchen Steward</li> <li>❖ Dishwasher</li> <li>❖ Pot washer</li> <li>❖ Utility workers to clean the kitchen</li> </ul> </li> </ul> <p>4. Online order / Take away-</p> <ul style="list-style-type: none"> <li>i. Allows customers to order food and beverage online</li> <li>ii. Allows food and beverages to be delivered to customers residence / office etc.</li> <li>iii. May offer schemes / discounts etc.</li> </ul> <p><b>Any other, Any four functions / roles of any one service department</b></p>	
<p><b>35.(a)</b></p>	<p><b>Classification as per fashion terms-</b></p> <ul style="list-style-type: none"> <li>1. Classic / Style</li> <li>2. Fads</li> </ul>	<p><b>½X2=1</b></p>

	<b>Differentiation-</b>	<b>½X2=1</b>				
	<table border="1"> <thead> <tr> <th><b>Classic / Style</b></th> <th><b>Fads</b></th> </tr> </thead> <tbody> <tr> <td>A timeless style that never becomes completely obsolete, but instead remains more or less accepted for an extended period.</td> <td>Temporary fashions that are short lived and go in a single season.</td> </tr> <tr> <td>It is characterised by simplicity of design, which keeps it ever lasting.</td> <td>They lack the design strength to hold consumer attention for long.</td> </tr> </tbody> </table>		<b>Classic / Style</b>	<b>Fads</b>	A timeless style that never becomes completely obsolete, but instead remains more or less accepted for an extended period.	Temporary fashions that are short lived and go in a single season.
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It is characterised by simplicity of design, which keeps it ever lasting.	They lack the design strength to hold consumer attention for long.					
<b>(b)</b>	<p><b>Any other, Any one difference</b></p> <p><b>Career opportunities available to fashion design professionals-</b></p> <p>1.Visual Merchandise Designer-</p> <ul style="list-style-type: none"> <li>i. Designing window / in-store displays</li> <li>ii. Arranging store merchandise</li> <li>iii. Creating props and accents</li> <li>iv. Organising clothing placement</li> <li>v. Styling mannequins</li> <li>vi. Spearheading marketing campaigns</li> </ul> <p>2.Fashion Designer-</p> <ul style="list-style-type: none"> <li>i. Create designs for clothing and apparel</li> <li>ii. Working with popular fashion designers / manufacturers</li> <li>iii. Managing own fashion labels</li> <li>iv. Fashion forecasting</li> <li>v. Fashion stylists</li> </ul> <p>3.Interior Designer-</p> <ul style="list-style-type: none"> <li>i. Combining form with function</li> <li>ii. Introducing interior concepts that will increase the beauty, safety and functionality of a particular space or area</li> <li>iii. Create settings of fashion stores</li> </ul> <p><b>Any other, Any three career opportunities with one role of each</b></p>	<b>1X3=3</b>				











