

DIRECTORATE OF EDUCATION
Govt. of NCT, Delhi

SUPPORT MATERIAL
2023-2024

Class : XII

HOME SCIENCE

Under the Guidance of

Shri Ashok Kumar

Secretary (Education)

Shri Himanshu Gupta

Director (Education)

Dr. Rita Sharma

Addl. DE (School & Exam.)

Coordinators

Mr. Sanjay Subhas Kumar
DDE (Exam)

Mrs. Ritu Singhal
OSD (Exam)

Mr. Raj Kumar
OSD (Exam)

Mr. Krishan Kumar
OSD (Exam)

Production Team
Anil Kumar Sharma

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अशोक कुमार, भा.प्र.से
सचिव (शिक्षा)
ASHOK KUMAR, IAS
Secretary (Education)



सत्यमेव जयते

राष्ट्रीय राजधानी क्षेत्र, दिल्ली सरकार
पुराना सचिवालय, दिल्ली-110054
दूरभाष : 23890187 टेलीफैक्स: 23890119
Government of National Capital Territory of Delhi
Old Secretariat, Delhi-110054
Phone : 23890187, Telefax : 23890119
e-mail : secyedu@nic.in

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Dated : 24.11.2023 / 2018/1095

Message

"Children are like wet cement, whatever falls on them makes an impression."

Haim Ginott

Embracing the essence of this quote, the Directorate of Education, GNCT of Delhi is unwavering in its commitment to its core mission of delivering high-quality education to all its students. With this objective in mind, DoE annually develops support materials meticulously tailored to suit the learning needs of students from classes IX to XII.

Every year, our expert faculty members shoulder the responsibility of consistently reviewing and updating the Support Material to synchronize it with the latest changes introduced by CBSE. This continuous effort is aimed at empowering students with innovative approaches and techniques, fostering their problem-solving skills and critical thinking abilities. I am confident that this year will be no exception, and the Support Material will greatly contribute to our students' academic success.

The support material is the result of unwavering dedication of our team of subject experts. The Support Material has been specially curated for our students, with the belief that its thoughtful and intelligent utilization will undoubtedly elevate the standards of learning and will continue to empower our students to excel in their examinations.

I wish to congratulate the entire team for their invaluable contribution in creating a highly beneficial and practical Support Material for our students.

I extend my best wishes to all our students for a promising and bright future.


24.11.23
(Ashok Kumar)

HIMANSHU GUPTA, IAS

Director, Education & Sports

No. PS/DE/2023/349

Date: 29/11/2023



Directorate of Education
Govt. of NCT of Delhi
Room No. 12, Civil Lines
Near Vidhan Sabha,
Delhi-110054
Ph.: 011-23890172
E-mail : diredu@nic.in

MESSAGE

It brings me immense pleasure to present the support material for students of classes IX to XII, meticulously crafted by our dedicated subject experts. Directorate of Education is committed to empower educators and students alike by providing these resources free of cost for students of all government and government aided schools of Delhi.

The support material is an appreciable effort to align the content with the latest CBSE patterns. It has been carefully designed as a resource to facilitate the understanding, acquisition and practice of essential skills and competencies outlined in the curriculum.

The core of this support material lies in providing a framework for adopting an analysis-based approach to learning and problem-solving. It aims to prompt educators to reflect on their teaching methodologies and create an interactive pathway between the child and the text.

In the profound words of Dr A.P.J. Abdul Kalam, **“Educationists should build the capacities of the spirit of inquiry, creativity, entrepreneurial and moral leadership among students and become their role model.”**

The journey of education is ongoing; it's the process, not just the outcome, which shapes us. This support material endeavours to be that catalyst of change for each student of Directorate of Education.

Let us embark on this transformative journey together, ensuring that every student feels equipped not only with the knowledge but also, with the skills and mindset to thrive in the 21st century.

I wish you all the best for all your future endeavours.


(HIMANSHU GUPTA)

Dr. RITA SHARMA
Additional Director of Education
(School/Exam)



Govt. of NCT of Delhi
Directorate of Education
Old Secretariat, Delhi-110054
Ph.: 23890185

D.O. No. DE.5/228/Exam/Message/SM/
2018/1096
Dated:24.11.2023.....

MESSAGE

The persistent efforts of the Directorate in making the course material more accessible and student-friendly are evident in the conscientious preparation of the Support Material. Our team consistently adapts to the evolving educational landscape, ensuring that the Support Material for the various subjects of classes 9 to 12 align with the latest CBSE guidelines and syllabi prescribed for the annual examinations.

The Support Material encapsulates crucial subject-specific points and facts, tailored to suit the students, all presented in a lucid language. It is our firm belief that these resources will significantly augment the academic prowess of our students, empowering them to excel in their upcoming examinations.

I extend my heartfelt congratulations to the diligent officials and teachers whose dedication and expertise have played a pivotal role in crafting this invaluable content/resource.

I convey my best wishes to all our students for a future brimming with success. Remember, every page you read is a step towards an enlightened tomorrow.

Rita Sharma

(Dr Rita Sharma)

DIRECTORATE OF EDUCATION
Govt. of NCT, Delhi

SUPPORT MATERIAL
(2023-2024)

HOME SCIENCE

Class : XII

NOT FOR SALE

PUBLISHED BY : DELHI BUREAU OF TEXTBOOKS

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 है, 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.

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 ¹[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 ²[राष्ट्र की एकता
और अखंडता] सुनिश्चित करने वाली बंधुता
बढ़ाने के लिए

दृढ़संकल्प 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 ¹**[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 ²[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 2023-2024
List of Members who Prepared
Support Material for
Home Science

Class XII

Team Leader

1.	Ms. Poonam Khurana Vice Principal/HOS Emp ID-19940623	Govt. Girls Sr. Sec., School Ashok Nagar, New Delhi. School I.D.-1514018
Subject Experts		
2.	Ms. Pratibha Goel Lecturer Home Science Emp ID-19935177	SKV Malka Ganj, Delhi. School ID- 1207035
3.	Ms. Manju Sharma Lecturer Home Science Emp ID-20036317	SKV, Basai Darapur, New Delhi. School ID-1516019
4.	Ms. Anju Dara Lecturer Home Science Emp ID-19946006	GGSSS, Kirti Nagar, New Delhi. School ID-1516025
5.	Ms. Monika Sachdeva Lecturer Home Science Emp ID-19940648	Govt.Co-Ed.SSS B-3, Paschim Vihar, New Delhi. School ID-1617137
6.	Ms. Neeru Sharma Lecturer Home Science Emp ID-19941125	G.Co.Ed SSS No 1, Roop Nagar. Delhi, School ID- 1207039

COVER PAGE DESIGNED BY - PRATIBHA GOEL,
LECTURER HOME SCIENCE, SKV, MALKA GANJ
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CBSE Syllabus

Home Science (Code No.064)

(Class-XII)

(2023-2024)

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 (2023-24)

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
	THEORY	70	126
	PRACTICAL	30	28
	GRAND TOTAL	100	154

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 occupation 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 disorders
- 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 test 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	5 Marks
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.	5 Marks
3	Identify adulterant using chemical test in any one of the following- pure ghee, tea leaves, whole black pepper, turmeric powder, milk, asafoetida.	2 Marks
4	Prepare a sample using applied textile design techniques tie and dye/batik/block printing.	4 Marks
5	Remove any one of the stain from white cotton cloth -Ball pen, curry, grease, ink, lipstick, tea, coffee.	2 Marks
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	5 Marks
7	File	5 Marks
8	Viva	2 Marks

**QUESTION PAPER DESIGN 2023-24
HOME SCIENCE (CODE NO.064)
CLASS-XI & XII**

TIME: 3 HOURS

MAX. MARKS: 70

S.NO.	TYPOLGY OF QUESTIONS	TOTAL MARKS	% WEIGHTAGE
1	Knowledge and understaing 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 of intergrate unique of information from a variety of sources)	21	30%
	Total	70	100

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)



Puppetry Art
(Rajasthan)



Warli Painting
(Maharashtra)



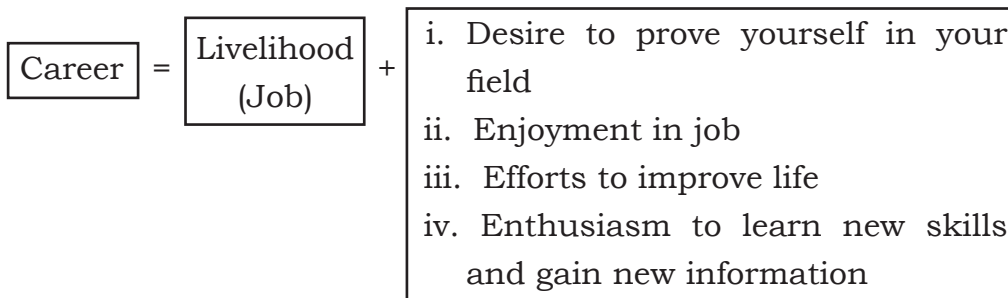
Puppetry Art
(Rajasthan)

- 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: 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

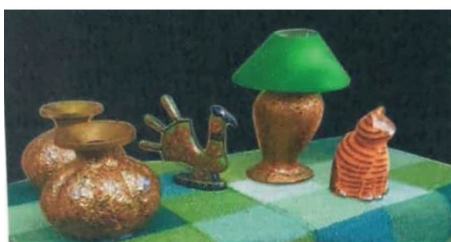
iv. Weaving and embroidery



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 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 traditional foods and 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 colour fully 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

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.

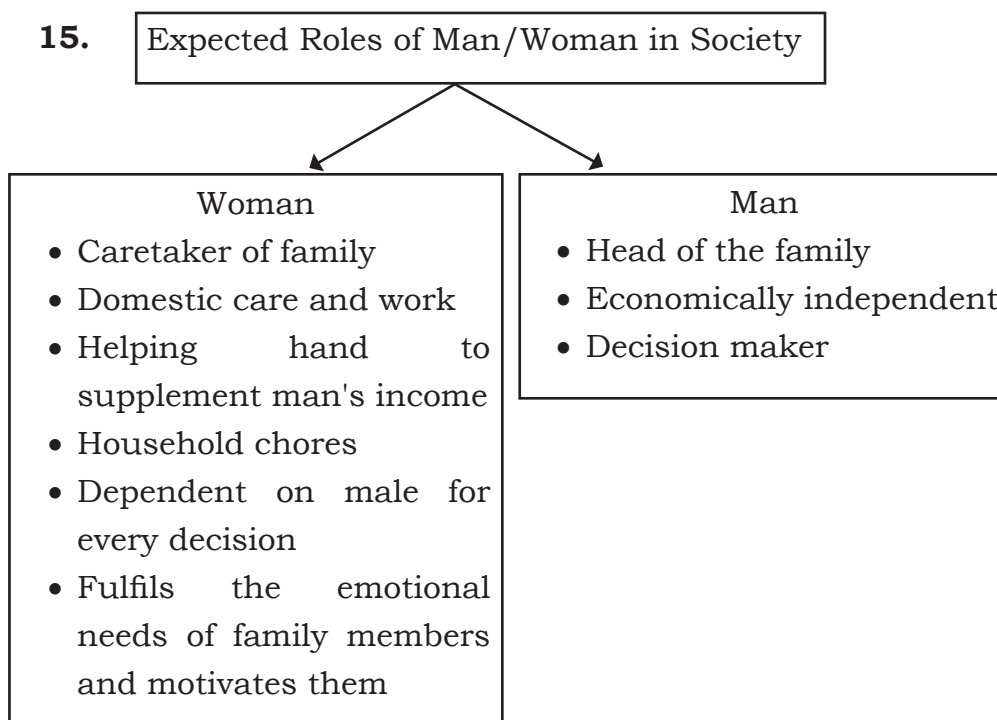
13. Work, Age and Gender

- 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.



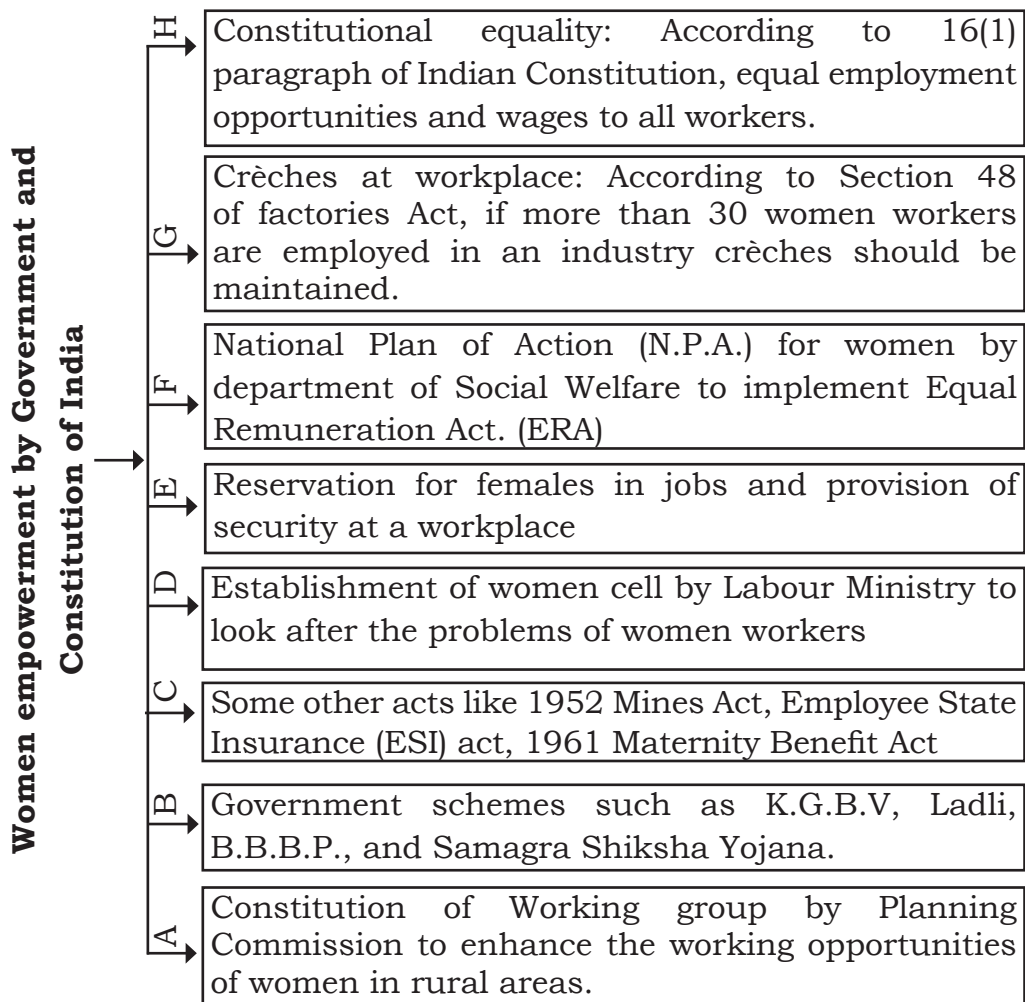
16. Issues Related to Women and work

- (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

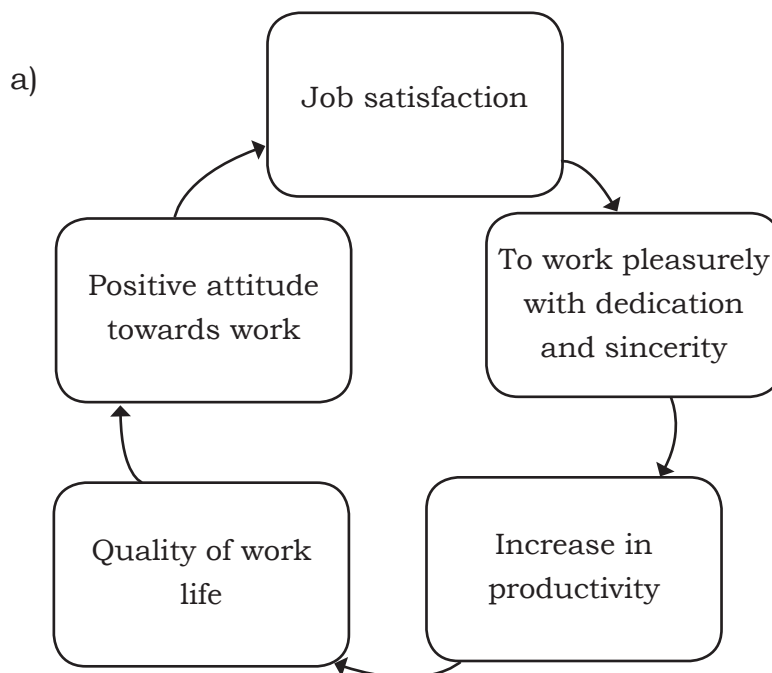
20. Beti Bachao Beti Padhao Yojana (B.B.B.P.)

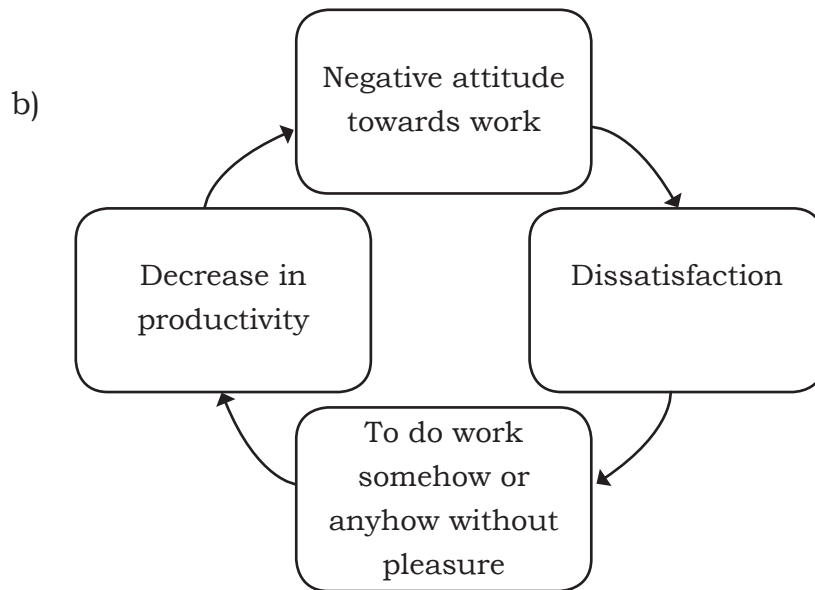
- i. It was launched on 22nd January 2015 by Prime Minister of India, Sh Narendra Modi, at Panipat.
- ii. It was started by a joint initiative of three ministries
 - Ministry of Women and Child Development (M.W.C.D.)
 - Ministry of Health and Family Welfare (M.H.F.W.)
 - Ministry of Human Resource Development(M.H.R.D.)
- 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

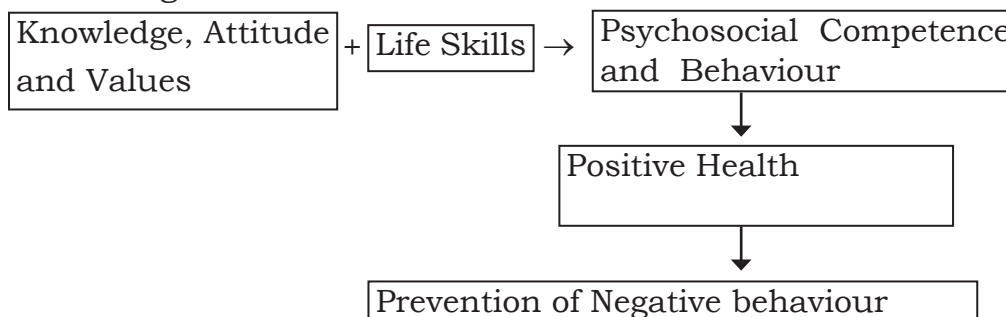




22. Life skills for livelihood

- 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

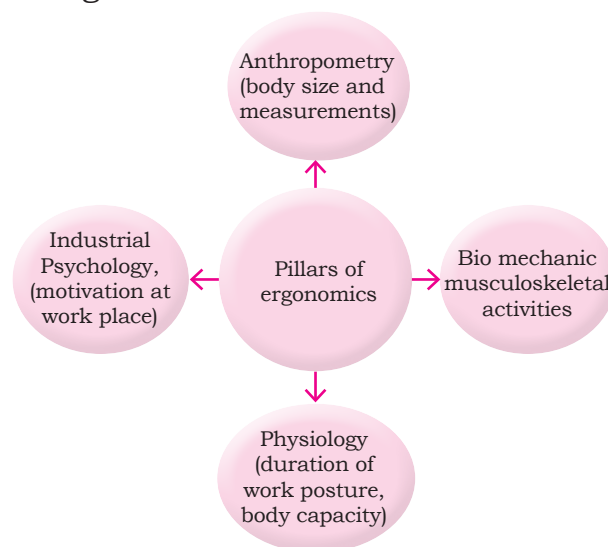
24. Essential Soft skills at workplace

- 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. Which is not amongst the four pillars of Ergonomics?
(CBSE Sample Paper-2022)
- (a) Nutraceuticals
 - (b) Biomechanics
 - (c) Anthropometry
 - (d) Physiology and Industrial Psychology

Ans a Nutraceuticals

7. 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)

8. Which of the following is not a life skill?
(a) Communication (b) Creative thinking
(c) Empathy (d) Lack of confidence

Ans d lack of confidence

9. _____are the behavioral abilities which enable people to work in challenging situations of life.
(a) Values (b) Attitude
(c) Life skills (d) Negative behavior

Ans c Life skills

10. Following are the popular traditional handicrafts of India Which option is incorrect ? (CBSE Smaple Paper 2022)
(a) Coconut craft-Kerela (b) Warli Painting - Maharashtra
(c) Shola craft-Karnataka (d) Bamboo craft-Assam

Ans c Shola craft-Karnataka

11. After graduation Reena got the job in MNC but she is findig it difficult to cope with her working life. (CBSE Smaple Paper 2022)
Here are few tips to improve work life

- i. Be empathetic
- ii. Thinking in monotonous way
- iii. Encourage partnership
- iv. Be rigid

Choose the correct option.

- a. i and ii
- b. ii and iv
- c. i and iii
- d. ii and iii

Ans. c. i and iii

12. 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

13. 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 Picture based question

1. Identify the art in the picture and tell with which state it is associated.



Ans Puppetry craft of Rajasthan

D 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.

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. The success of Social Entrepreneurship is judged by
- a. Financial benefit
 - b. Social impact
 - c. Popularity
 - d. Knowledge of entrepreneur

Ans b Social impact

2. What is not important for an entrepreneur to attain his goal?
- a. Positive attitude
 - b. Ego
 - c. Satisfaction
 - d. Financial benefit

Ans b Ego

3. Which of the following is not an example of an entrepreneur?
- a. Mr. Narayan Murthy
 - b. Mr. Dhirubhai Ambani
 - c. Mr. Morarji Desai
 - d. Mr. J.R.D. Tata

Ans c Mr. Morarji Desai

4. Which of the following statement is not correct
- a. An entrepreneur should have the courage to take calculated risk.

- b. Good communication skills are necessary for the success of an entrepreneur.
- c. An entrepreneur should be goal oriented.
- d. Successful entrepreneurs are not realistic.

Ans d) Successful entrepreneurs are not realistic

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) Inefficient 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.

Short answer questions (3 marks)

1. How can the traditional occupations of India be improved?

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)**

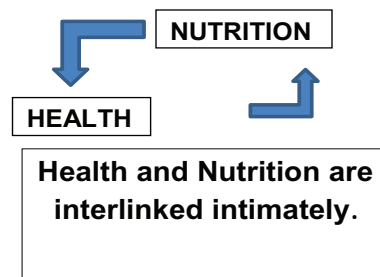
Ans Refers to ‘Points to remember’ No 17 (A)

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 as well as
 - Managing chronic diseases
- iii. Effect of Inadequate Nutrition/Poor Nutrition
 - Maintaining immune defences thus makes existing problems worse
 - Difficulty in Healing wounds
 - Delay in treatment
 - Difficulty in smooth functioning of various organs causes new health problems
- iv. Diet and good nutrition (as well as a healthy lifestyle) can control and delay the age of onset of chronic diseases



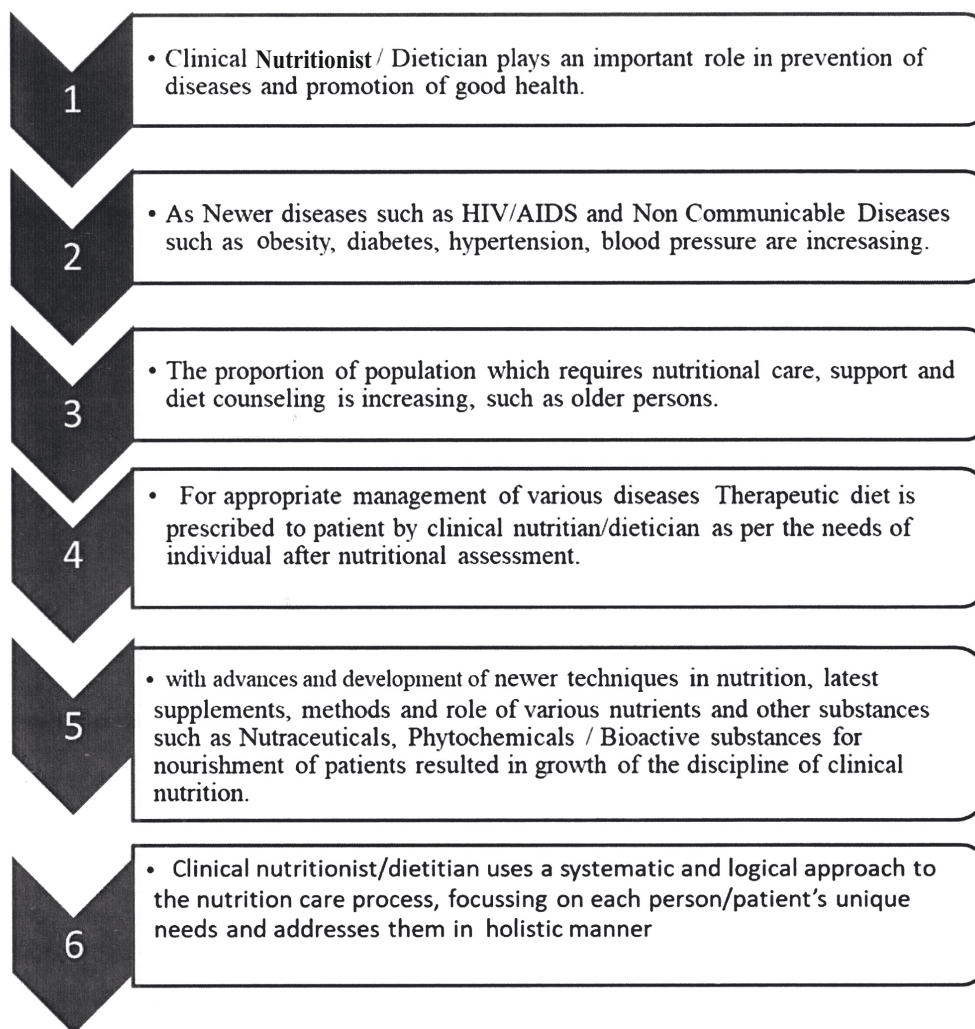
2. Clinical Nutrition:

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

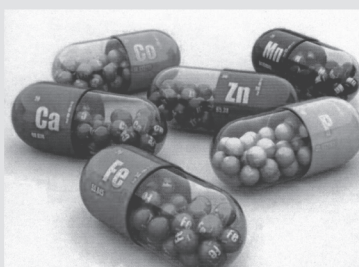
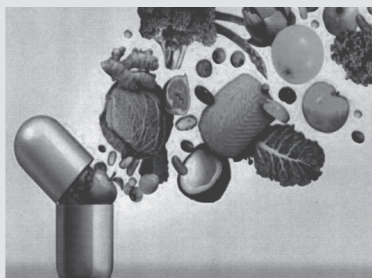


5. Advances in the field of clinical nutrition:

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,

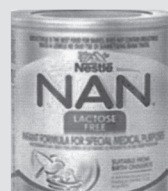
This may contain one or more of the following ingredients, namely:

- 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

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

Assessing nutritional status.

Planning and prioritising nutrition intervention(s).

Diagnosis of nutritional problems.

Monitoring and evaluating nutritional care outcomes and making changes as per needs.

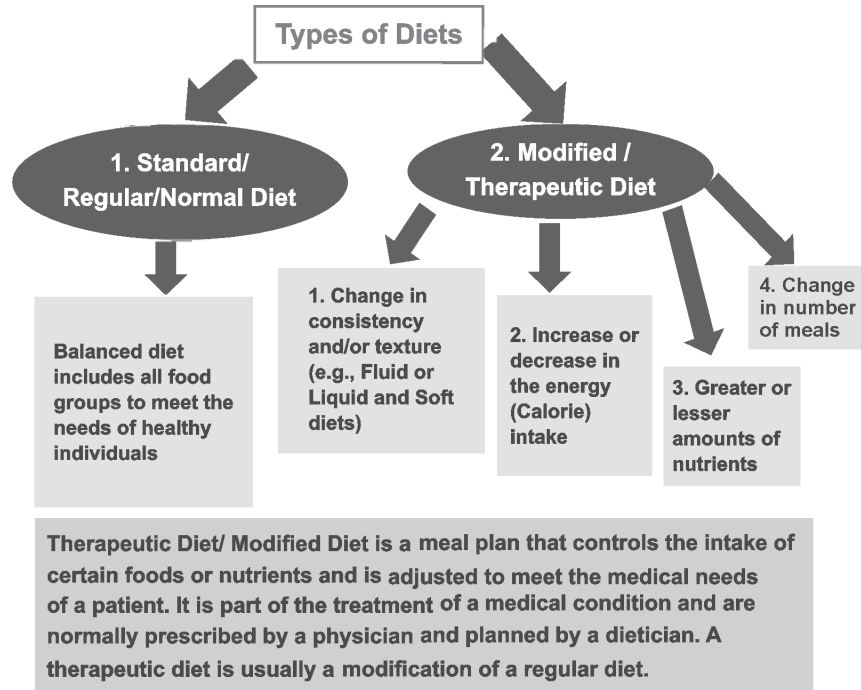
6(iii) b. Nutrition Assessment-

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



(in A B C D order)

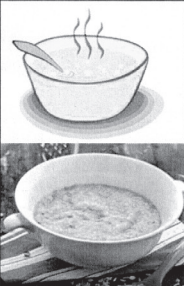

- Anthropometric measurements
 - i. Height, weight and other physical measurements
- Biochemical Assessment
 - ii. Relating the information on biochemical testing (blood, stool, etc.) and physical measurements with the above and the physician's diagnosis
- Clinical Assessment
 - iii. To get detailed 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:**

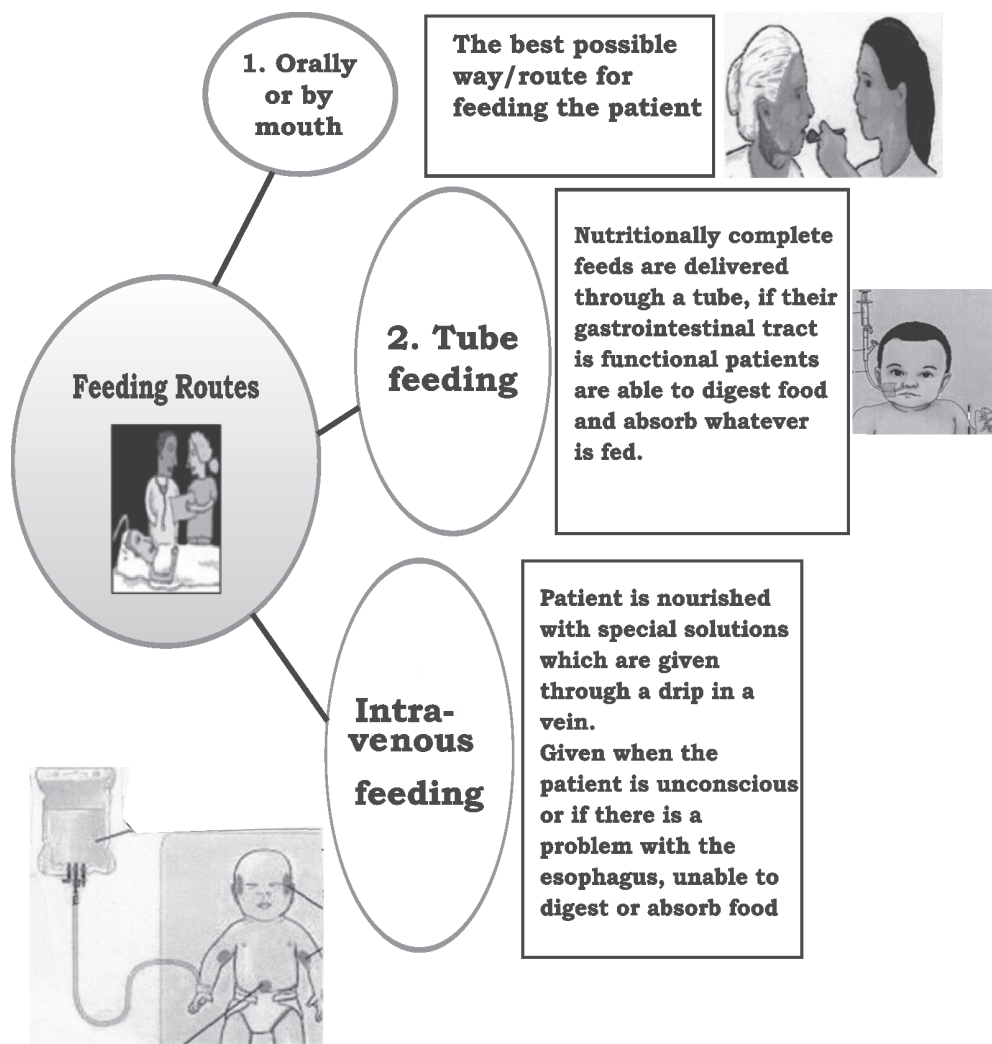
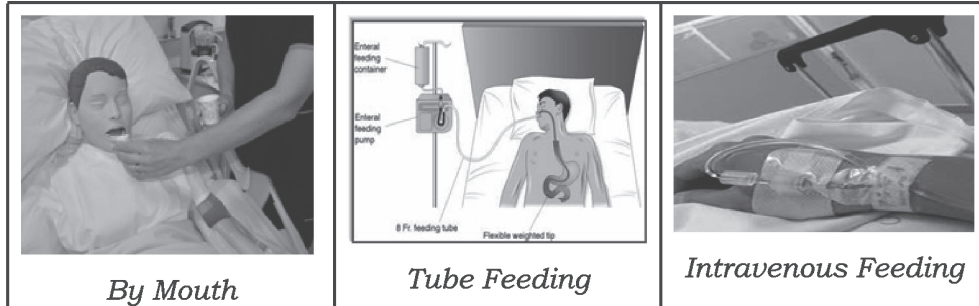


6(iv) Types and examples of Modified Diets -

1.Change in consistency and/or texture	
(i) Liquid diets: 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- <ul style="list-style-type: none"> • Nutrients are easily absorbed if the gastrointestinal tract is functioning normally. • Such a diet is advised for persons who are unable to chew or swallow normally. e.g., post operative patients. 	 Liquid diet Fruit, Vegetable Juice
(ii) Clear Liquid diet- 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.	 Clear liquid diet- Clear /Strained Soup

(iii)	<p>Soft diets 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"> • Foods included should minimise the risk of indigestion, abdominal distention, nausea, cramping or any other gastrointestinal problems. • 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. 	 <p>Soft Diet khichdi /Sabudana Kheer</p>
(iv)	<p>Mechanical soft diet- 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>Mechanical soft diet pureed foods, mashed fruits and vegetables.</p>
2. Increase or decrease in the energy (Calorie) intake		
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>	
3. Greater or lesser amounts of one or more nutrients		
<p>Examples</p> <ol style="list-style-type: none"> 1. Increase in protein intake in case of surgery 2. Lower protein intake in case of kidney failure 3. High or low intake of fibre 4. Lower fat intake in Jaundice 5. Restriction in sodium intake in High blood pressure 6. Restriction in fluid intake, 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. 		
<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 -

- 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:

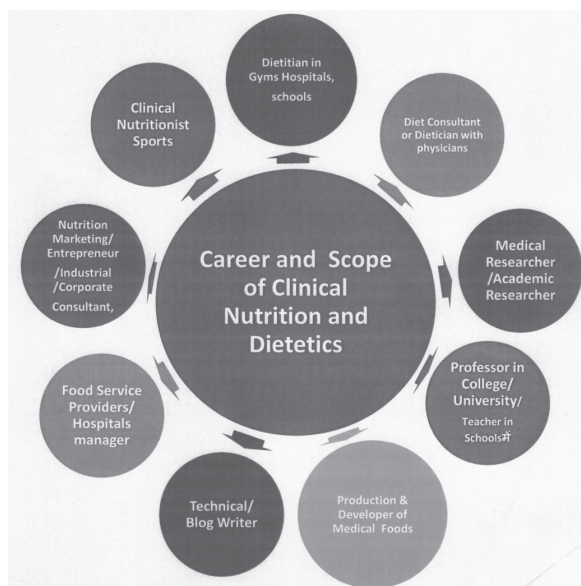
- Assessing the nutritional status of patients using clinical & biochemical criteria
- Diet planning customised to requirements of individual patients
- Communication skills for diet counselling.
- Adapting to cultural milieu, food taboos
- Laboratory research and conducting experimental designs with 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 conducted by National Testing Agency and Pursue Ph.D.

8. Career options and Scope of Clinical Nutrition and Dietetics



Full name of abbreviations.

1	HIV	Human Immunodeficiency Virus
2	AIDS	Acquired Immune Deficiency Syndrome.
3	OPD	Out Patient Department
4	IV	Intravenous
5	MNT	Medical Nutrition Therapy
6	RDA	Recommended Dietary Allowances
7	RD	Registered Dietitian
8	Ph.D	Doctor of Philosophy
9	UGC	University Grants Commission
10	NET	National Eligibility Test

OBJECTIVE TYPE QUESTIONS (1 MARK)

a) Multiple-choice questions

1. _____ come under a anthropometric measurement.

- i. Blood and urine test
- ii. Height and Weight measurements
- iii. Head circumference and BMI measurements
- iv. Stool and sputum

Choose the correct option

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

Answer (d) (ii) and (iii)

2. The science that deals with the food, nutrients, and other substances as well as their digestion, absorption and utilisation by the body is called_____.

- a. Public nutrition
- b. Clinical nutrition
- c. Medical nutrition therapy
- d. Nutrition

Answer- d) Nutrition

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

(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) |

b) (ii) Match the following

- | | |
|------------------------|---|
| A. Omega-3 fatty acids | i) Antioxidant |
| B. Cardiac Arrhythmias | ii) Scientific study of Disease emergence, distribution and control |
| C. Selenium | 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)

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)
- Nutraceuticals
 - Medical foods
 - Antioxidants
 - 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)
- Low protein diet and mechanical soft diet
 - High protein diet and mechanical soft diet
 - Low fibre diet and liquid diet
 - High fibre diet and regular diet

Answer- a) Low protein diet and mechanical soft diet

C. Very Short Answer Questions

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

Answer- i. Dieticians 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)

Case study based questions (4 × 1 mark)

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. Ingredients or non-nutrients constituents present in foods that have physiological or biological activity and influence health is called _____
 (a) Non-dietary components (b) Nutraceuticals
 (c) Medical foods (d) Phytochemical

Answer (d) Phytochemical

2. What are some parts of natural foods or manufactured food products which are added to specific substances for health benefits called?
 (a) Mechanical soft diet (b) Complementary diet
 (c) Nutraceuticals (d) Bioactive substances

Answer - Nutraceuticals

3. Filtered thin soups or juices (without pulp) are examples of _____
 (a) Liquid diet (b) Clear Liquid
 (c) Normal (d) Soft

Answer (b) Clear Liquid

4. Which of the following statements is incorrect?
 (a) Eating fruits, vegetables and pulses reduces the risk of heart disease.
 (b) ORS and lactose-free milk are examples of medical foods.
 (c) Highly refined foods are beneficial for health.
 (d) Vitamin E and vitamin C play a protective role in the body.

Answer - c) Highly refined foods are beneficial for health.

Short Answer Questions (2 marks)

1. What are the roles performed by a dietician? How does a dietitian from a team in patient care with other health care professionals? (NCERT)

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

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
- (Any other, any two)

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- Refer to Points to Remember No.-6 (i) 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)

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-
 - (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 -

- a) As a successful professional dietician, two important skills she should be having- Refer to Points to Remember No.-7
 - b) Study of clinical nutrition and dietetics enable medical nutrition professional to- 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 up to 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)

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.

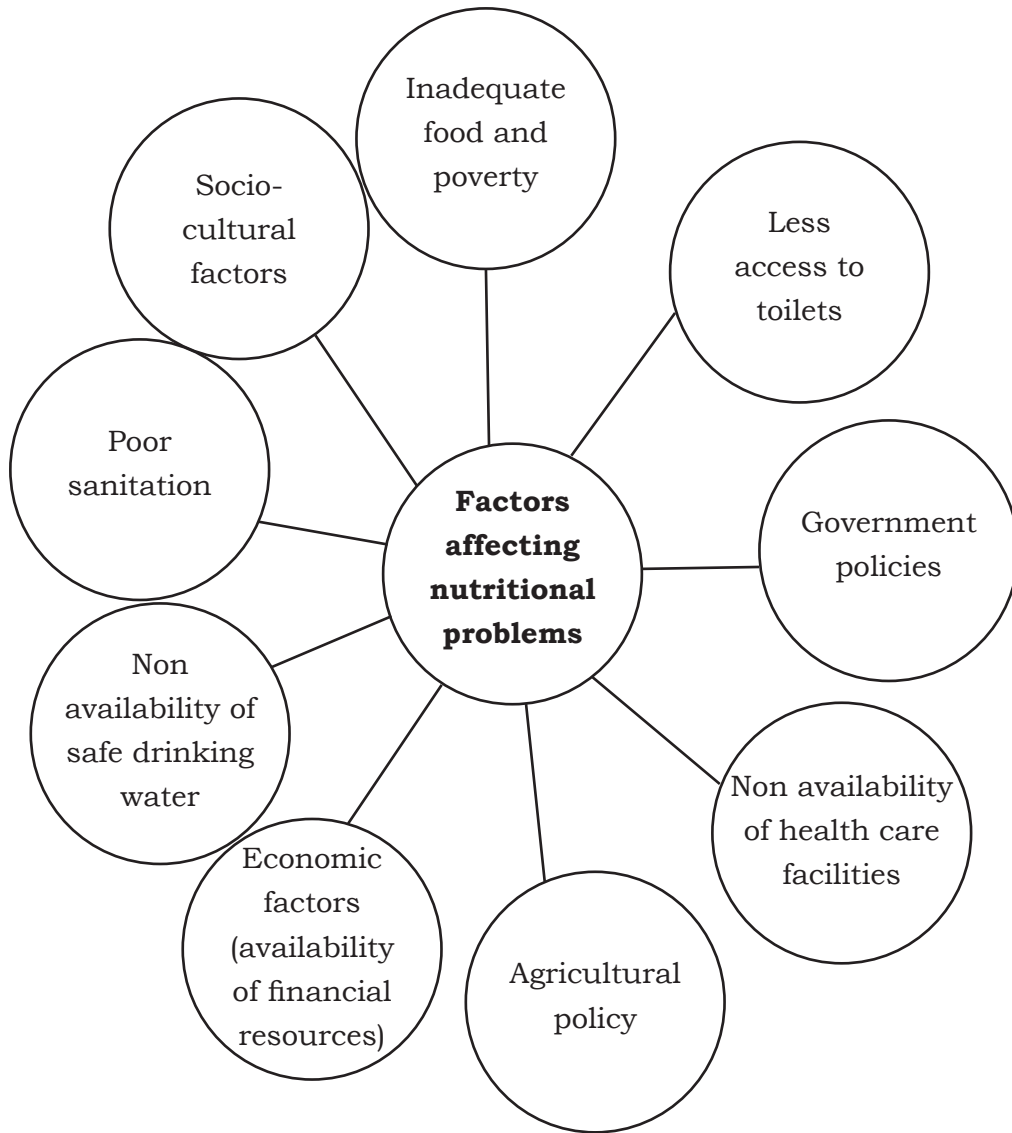
4. Reasons of overnutrition in India-

- 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.

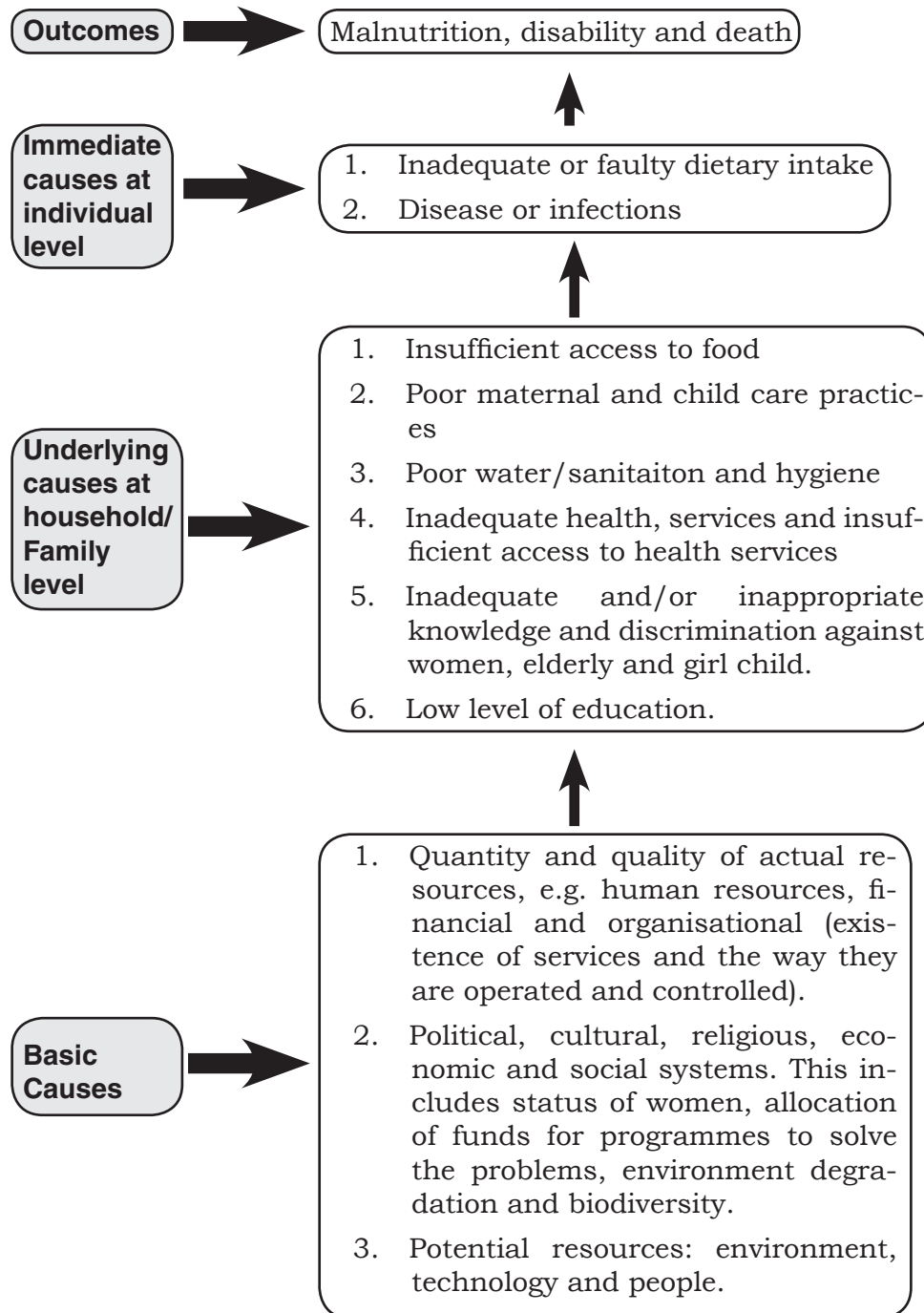
5. Ill-Effects of overnutrition-

- 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)





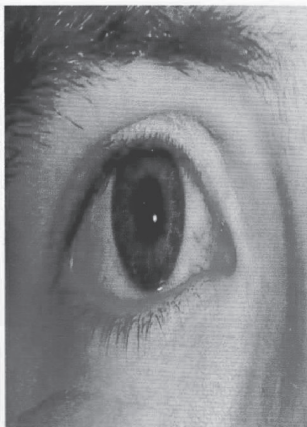
MARASMUS



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 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
Medicinal or Nutrient Based			
Nutrient Supplementation	Therapeutic treatment Prevention programmes for specific nutrient and specific target groups	Timely Sustainability	More costly than otha measures Narrow scope of coverage

Food Based or Diet Based Strategies			
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.

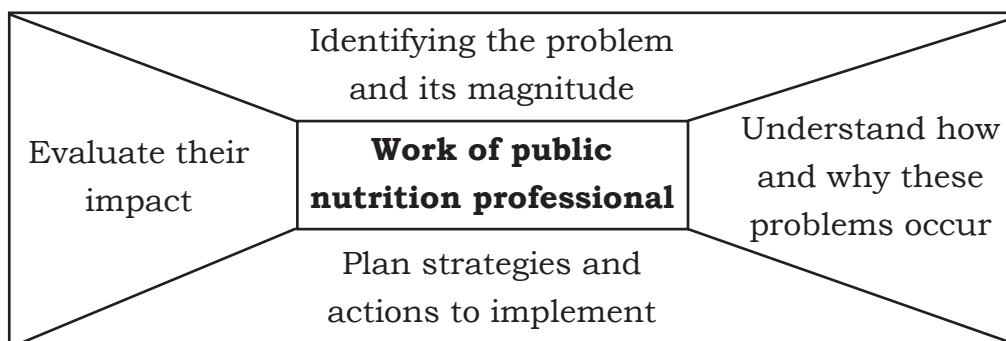
20. Wasting-

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.

<p>Full forms of Abbreviations</p> <p>IDA - Iron Deficiency Anaemia</p> <p>PEM- Protein Energy Malnutrition</p> <p>VAD - Vitamin A Deficiency</p> <p>IDD - Iodine deficiency disorder</p> <p>ICDS - Integrated Child Development Services</p>



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. The problem of overnutrition is due to
 - a. Sedentary lifestyle
 - b. Faulty dietary patterns
 - c. exercise
 - d. Walking
 - a) (i) and (iii)
 - b) (ii) and (iv)
 - c) (i) and (ii)
 - d) (iii) and (iv)

Ans. c) Sedentary lifestyle and faulty dietary patterns

3. Which of the following is not a micronutrient?
 - 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. She will -
 - a. Identify the problem of poor nutrition
 - b. Understand the reason and plan strategies
 - c. Not take actions and evaluate their impact
 - d. stay away from problem

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

Ans. a) (i) and (ii) both

5. Name the condition that occurs when there is low level of haemoglobin in blood.

- a. goitre b. Anaemia
c. Scurvy d. Night blindness

Ans. (ii) Anaemia

6. Micro nutrient deficiencies are referred as

- a. Goitre b. Hidden hunger
c. Protein energy malnutrition d. Anaemia

Ans.(b) Hidden Hunger

7. Which of the following is immediate cause of under nutrition?

- a. Inadequate dietary intake b. Inadequate education
c. Inadequate health services d. Poor sanitation and hygiene

Ans. (a) Inadequate dietary intake

8. When the height of the child is less than adequate for age, this is termed as

- a. Underweight b. Stunting
c. Wasting d. Protein energy malnutrition

Ans. (b) Stunting

9. Following are nutrition programmes and their examples operating in India. Select the incorrect option. (CBSE Sample Paper 2021 -22)

- a. Food supplementation programme-mid day meal
b. Food security programme-Public distribution system
c. ICDS-Annapurna scheme
d. Nutrient deficiency control programme-National prophylaxis programme

Ans. (c) ICDS-Annapurna scheme

10. To tackle with nutritional problems poshaan Abhiyaan was started.

Following interventions were initiated-

(CBSE Sample Paper 2021-22)

- (i) Food fortification
- (ii) Ensuring food security
- (iii) Poverty alleviation
- (iv) Production of low cost nutritious food

Which of these are direct short term interventions to take nutritional problems?

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

Ans. c) (i) and (iv)

(B) (i) Match the following

- | | |
|-------------|---------------------|
| A Iron | (i) Night blindness |
| B Vitamin A | (ii) Goitre |
| C Protein | (iii) Anaemia |
| D Iodine | (iv) Kwashiorkor |

Pick the correct option

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

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

B(ii) Match the following

- | | |
|------------------------|--------------------------|
| A. High blood pressure | (i) long term strategy |
| B. Marasmus | (ii) over nutrition |
| C. ICDS | (iii) under nutrition |
| D. Food safety | (iv) short term strategy |

Pick the correct option

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

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

(D) Picture based question

1. Name the disease this picture represent and also name the nutrient whose deficiency cause this disease.



Ans. Marasmus. This is caused due to deficiency of protein

(D) Very Short Answer Questions

1. Name 2 types of protein - energy malnutrition.

Ans. Marasmus, Kwashiorkor

2. Name the policy adopted by government of India in March 2018 to solve nutritional problems

Ans. Poshan Abhiyan

3. Iodine deficiency during pregnancy has several adverse effects on fetus. What are they?

Ans. Iodine deficiency results in mental retardation and congenital abnormalities of the fetus.

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

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. Which hormone is produced in insufficient quantity due to iodine deficiency?
- a. Thyroxine b. Metatonin
c. Dopamine d. Prolactin

Ans. a. Thyroxine

2. Deficiency of iodine causes _____.
- a. Anaemia b. Goitre
c. Night blindness d. Marasmus

Ans. b. Goitre

3. Thyroxine is synthesised by _____ gland.
- a. Pineal gland b. Thyroid gland
c. Prostate gland d. Thymus gland

Ans. b. Thyroid gland

4. Government has started _____ programme to prevent goitre.
- a. Dietary Supplement Programme
b. National Iodine deficiency disorder Control programme
c. National Nutritional Anaemia Prophylaxies Programme
d. National Disease Prevention Programme.

Ans. b. National Iodine deficiency disorder Control programme

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 weigh 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 of 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) (iii), (iv)

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

Ans. Refer to Points to remember No. 9

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 are 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. Yeasts | iv. Moulds |

Factors influencing microbial growth are-

- i. Nutrient availability

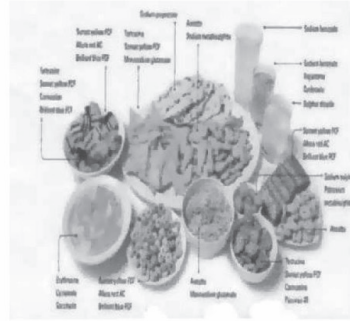
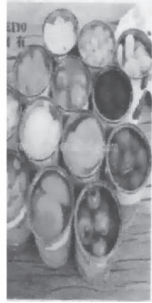
- ii. Moisture
- iii. pH, oxygen levels
- iv. Presence or absence of inhibiting substances. e.g. antibiotics.

(b) Basic concepts in food processing methods to prevent food spoilage are

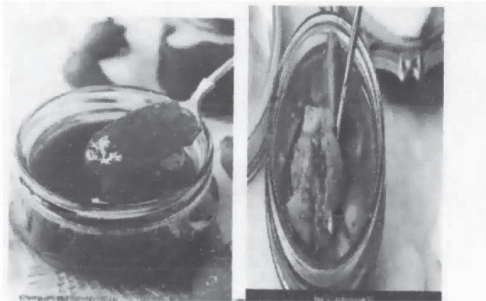
- i. Application of heat
- ii. Removal of water moisture
- iii. Lowering of temperature during storage.
- iv. Reduction of pH
- v. Controlling the availability of oxygen

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.

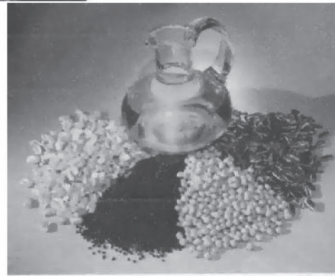


Preserved Foods



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

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

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

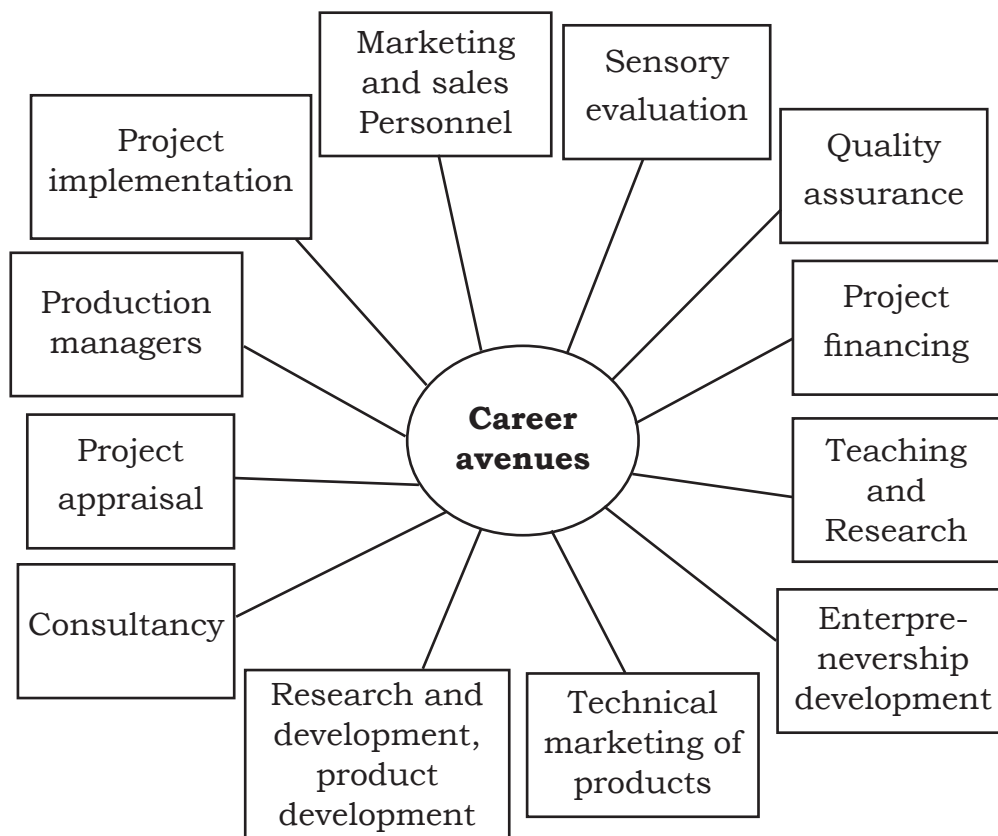
18. Various departments where expertise of food technologists are used-

- 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. (ii) 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 not a cause of food spoilage?
- Pests attack
 - Extreme moisture content
 - Application of salt
 - Micro organisms

Ans. c Application of salt

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(i). 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) (ii) Match the following

- | | |
|-----------------------|-------------------------|
| A. Preserved food | (i) Pickles |
| B. Manufactured foods | (ii) Canned fruits |
| C. Formulated foods | (iii) Lactose-free milk |
| D. Medical foods | (iv) Cake |

Pick the correct option

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

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

D. Very Short answer questions

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

Ans. Minimally processed foods.

2. 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. There have been food processing activities in India since the beginning. Which of the following is example of this?
 - a. Pickles
 - b. Coke
 - c. Pastry
 - d. Cake

Ans. (a) Pickles

2. What is the reason for improvement in production of raw materials?
- a. growth in agriculture and horticulture
 - b. industrial growth
 - c. Increase in production
 - d. Technology advancement

Ans. (a) growth in agriculture and horticulture

3. How does the government give encouragement and support to those people who want to set up their own enterprise?
- a. by providing finances
 - b. by training
 - c. by not providing marketing facilities
 - d. by advertising
- a. (i) and (iii)
 - b. (i) and (iv)
 - c. (ii) and (iii)
 - d. (i) and (ii)

Ans. (d) (i) and (ii)

4. Which of the following statement is incorrect?
- a. Many banks do not provide financial support for women entrepreneurs.
 - b. State government contribute by providing space to entrepreneurs.
 - c. A self employment venture in food technology may be highly technology-oriented and investment-intensive.
 - d. India has progressed from to an agro-deficit to an agro-surplus country.

Ans. (a) Many banks do not provide financial support for women entrepreneurs.

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 Point 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?

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?

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 of remember No. 1

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

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

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

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

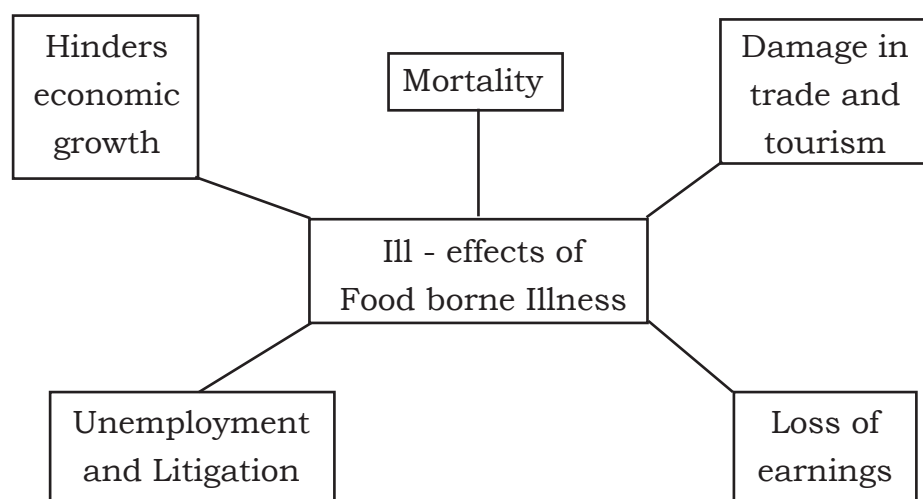
4. Explain briefly the significance of Food Technology. How has it affected the life of modern housewives specially working women? (NCERT)

Ans. Refer to Points to Remember No. 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

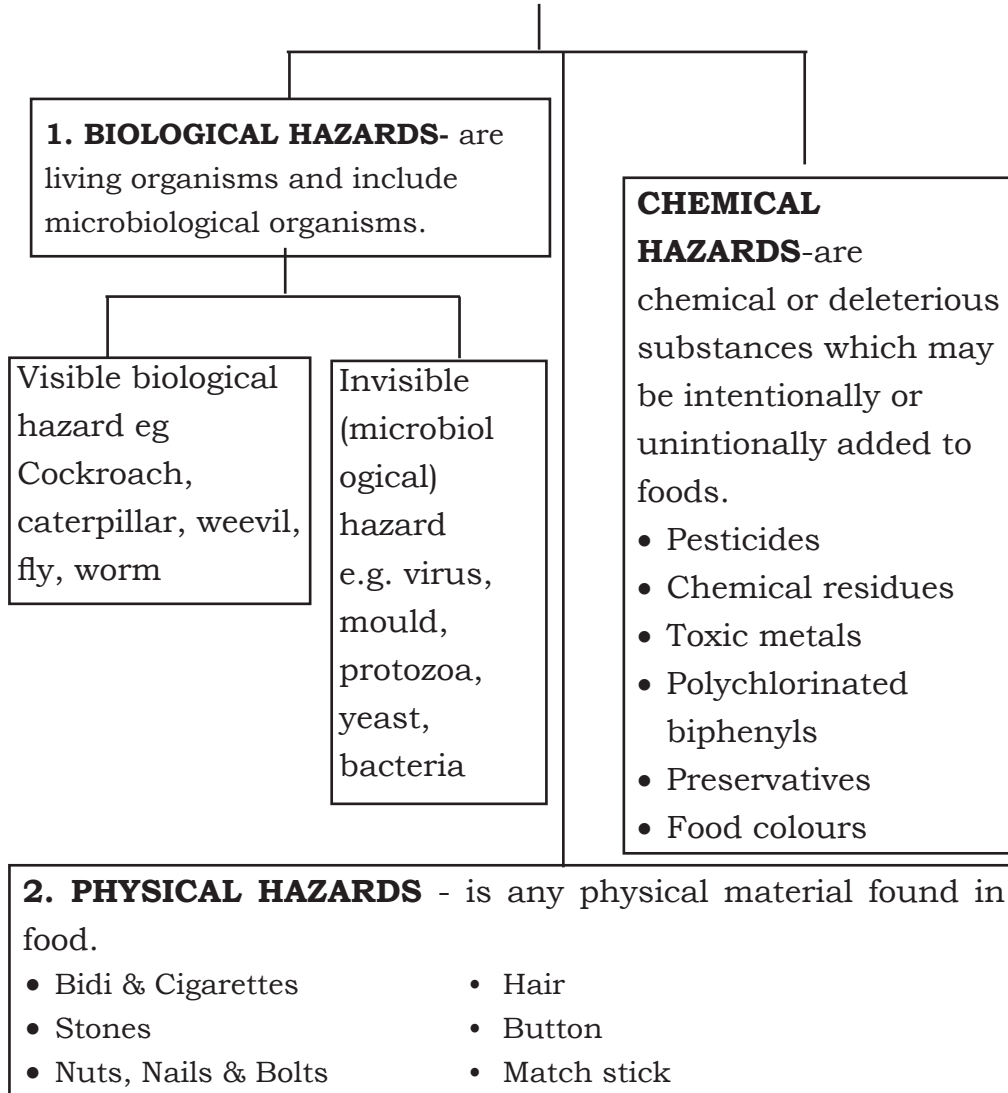
- i. With fast changing lifestyles and eating habits, more people are eating outside their homes.
- ii. Processed and packaged foods are more in trend
- iii. The demand of various types of spice powder and mixes has increased.
- iv. There is a long gap between processing and consumption of food, hence 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

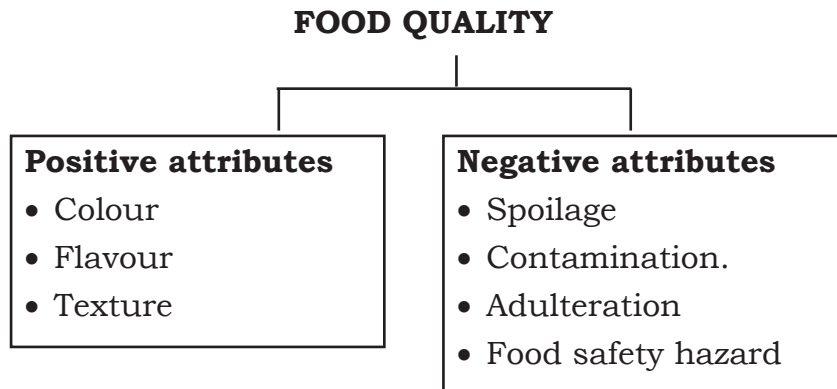
efforts in the area of food safety, microbial food borne pathogens are still a serious concern and new pathogens continue to emerge.

- i. Human host, animal hosts and their interactions with humans & the pathogen it self 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 allows 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 & 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:

Fruit and Vegetable Product Order: Specifications for fruit and vegetable products are laid down.

Meat Food Products Order: Processing of meat products is licensed under this order.

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 (FSS) Act, 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 published in 1995.
- The main objective of WTO is to help trade flow smoothly freely, 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

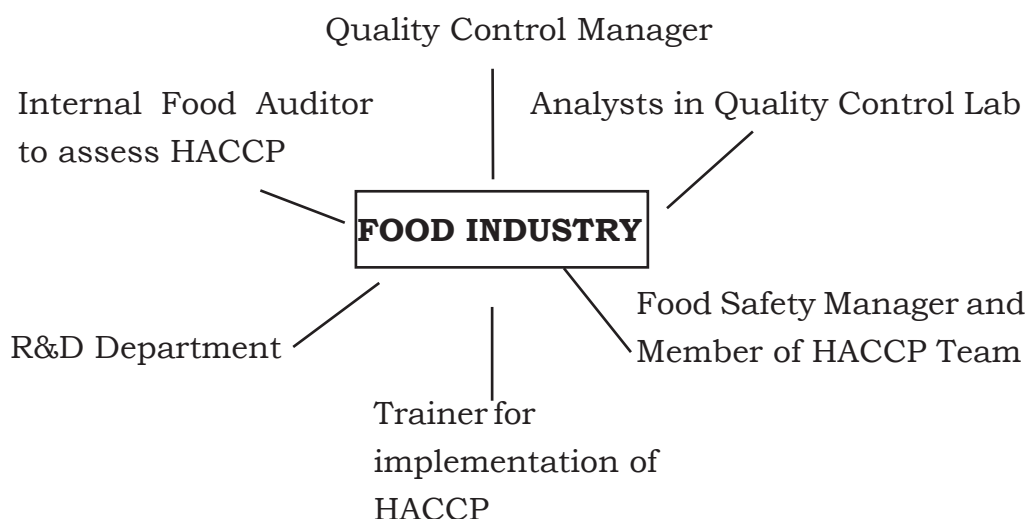
- i. It is a preventive approach to ensure food safety.
- ii. HACCP enables us to detect hazards at any stage of processing or manufacture in order to ensure a good quality product, by taking appropriate action at the stage where the problem occurs.
- iii. This is important for consumer protection and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

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, which food infection can result in such case?

Ans. Cross-Contamination.

3. Define Food Hazard.

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

Case Study Based Question (4 × 1 Mark)

Factors that are important in the emergence of pathogens include human host, animal host and their interactions with humans, the pathogen itself and the environment including how food is produced, processed handled and stored. For example, changes in host susceptibility due to malnutrition, age and other -conditions can allow for the emergence of new infections to vulnerable populations.

1. Among the various food hazards, which of the following is main reason of food-borne illnesses ?
 - a) Biological hazards
 - b) Physical hazards
 - c) Chemical hazard
 - d) Electricity hazard

Ans. a. Biological hazards

2. Which of the following medium will not expose humans to new pathogens?

- a) Changes in eating habits
- b) Climate
- c) Food processing
- d) Food quality

Ans. d. Food quality

3. New _____ , _____ and new geographical areas can allow pathogens to emerge.

- a) Climate
- b) Population
- c) Food quality
- d) Both 'a.' and 'b.'

Ans. d. Both 'a' and 'b'

4. Which of the following statement is wrong?

- a) Salmonella exists in the intestinal tract of animals.
- b) Cooking at home has decreased due to shortage of time.
- c) The food we eat should not be nutritious.
- d) The importance of food safety and quality has increased.

Ans. c. The food we eat should not be nutritious.

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.

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

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 Point to Remember No. 20 (iii)

Long Answer Question (5 marks)

1. Which salient points are to be borne in mind by food producers & 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-

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.

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. Child between two to three years old is called _____.
 - a) Toddler
 - b) Infant
 - c) Adolescent
 - d) School going child

Ans. a. Toddler

4. According to psychologist _____, children have a need for a concerned, caring and knowledgeable adult.

- (a) Piaget (b) Maria Montessori
(c) Vygotsky (d) Prang

Ans. (c) Vygotsky

5. Which is the key sector of ICDS to provide preschool education in remote areas? (CBSE Sample Paper 2022)

- a) Anganwadis b) Training institutes
c) Creche d) Day care centres

Ans. a. Anganwadis

6. Anita has just completed her schooling. She wants to be an early childhood professional. Suggest her a suitable course from the following which will help her in fulfilling her dream. (CBSE Sample Paper 2022)

- a) Diploma in dietetics b) PG diploma in ECCE
c) Diploma in ECCE d) Diploma in HR

Ans. c. Diploma in ECCE

7. Sheena wants to work in famous play school of the town. What qualities she must possess? (CBSE Sample Paper 2022)

- i. An interest in child
ii. Health status of child
iii. Skills for creative activities
iv. Cooking skills Choose the correct option

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

Ans. (d) (i) and (iii)

8. Mrs Verma wants to open up a 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 tasks
- 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) is 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)

B) (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 (iii)

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 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 (4 × 1 mark)

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. Early childhood is divided into which two parts ?
 - (a) Birth to 3 years, 3 to 6 years
 - (b) Birth to 3 years, 3 to 8 years.
 - (c) Birth to 2 years, 2 to 6 years.
 - (d) Birth to 2 years, 2 to 8 years.

Ans. b. Birth to 3 years, 3 to 8 years

2. Which of the following is not a suitable means of substitute care ?
 - a) Grandparents
 - b) Creche
 - c) Day care centre
 - d) Elder sister (10 year old)

Ans. d. Elder sister (10 year old)

3. Which of the following is a career related to E.C.C.E. ?
 - a) Teacher in nursery school
 - b) Dietitian
 - c) University spokesperson
 - d) Hotel manager

Ans. a. Teacher in a nursery school

4. Which of the following is incorrect statement?
 - a) To care for her younger siblings, elder sister will have to leave her studies.

- b) Ten year old sister cannot properly care her younger siblings.
- c) Younger siblings are safe with ten year old sister.
- d) Ten year old sister cannot handle emergency situations.

Ans. c. Younger siblings are safe with ten year old sister.

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.

3. Rita is searching a creche for her two year old daughter. Which four facilities she should look for in a good creche?

Ans. Four facilities in a good creche -

- (i) Feeding facilities.
- (ii) Resting facilities.
- (iii) Recreational facilities.
- (iv) Informal education.

4. 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.

5. 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

6. 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

7. 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.

8. 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. Career opportunities in Early Childhood Care and Education-

- (i) Teacher in nursery school.
- (ii) Caregiver in day care centres and Creches.
- (iii) Team members for programmes for young children (like Integrated Child Development Services)
- (iv) Professions 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.
- (vi) Research in this field.

Educational Qualifications-

- (i) Nursery Teacher Training
- (ii) Graduation in Child/Human Development or Child Psychology.

OR

Diploma and then post graduation.

- (iii) Educational programme from open university.

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.

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.

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.

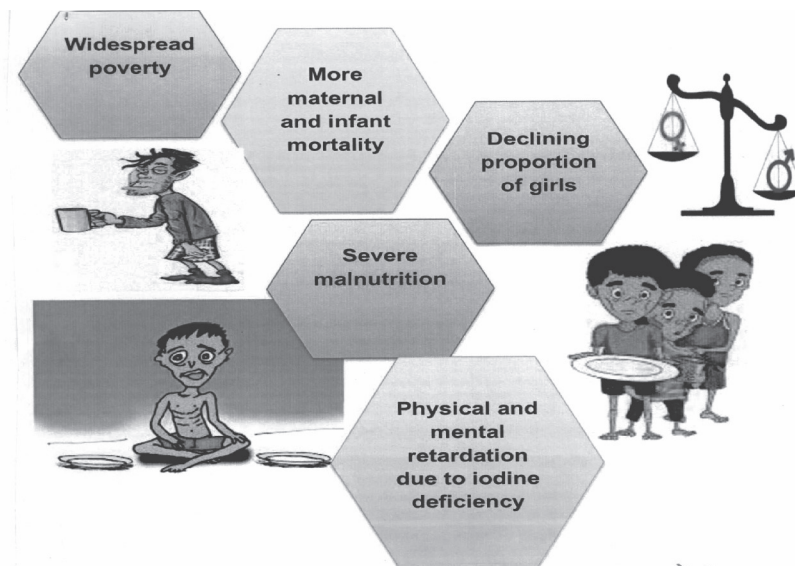
7. Management of Support Services, Institutions and Programmes for Children, Youth and Elderly

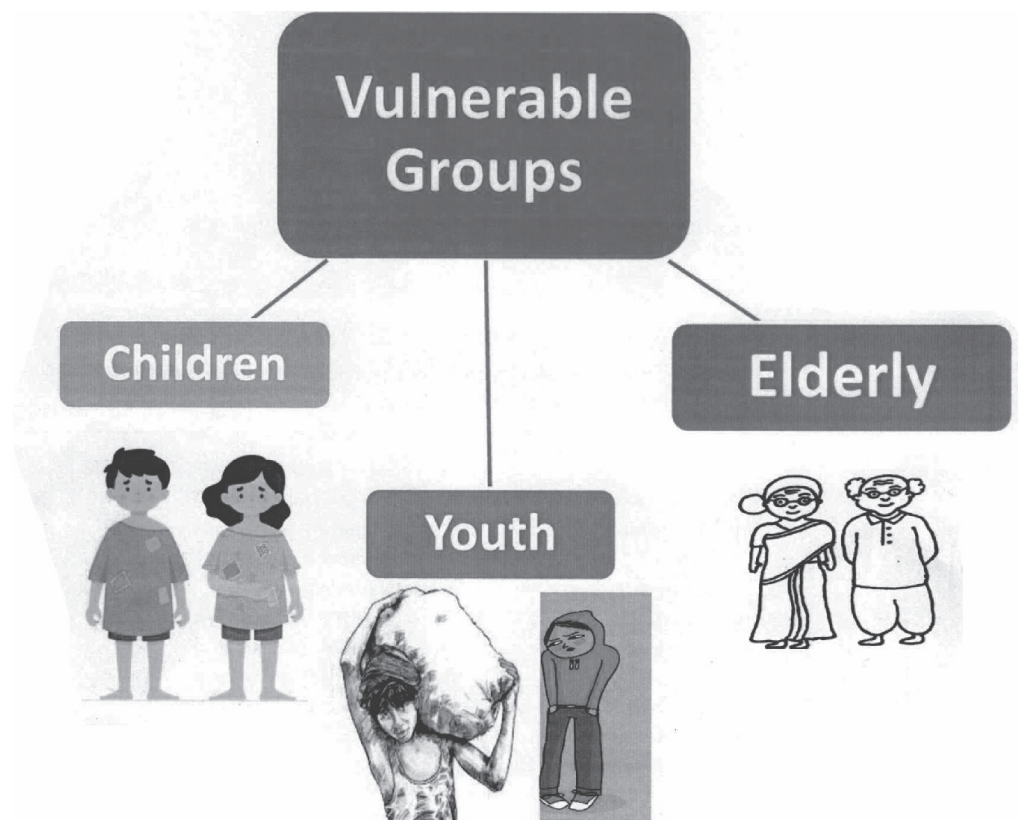
‘Points to Remember’

- 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

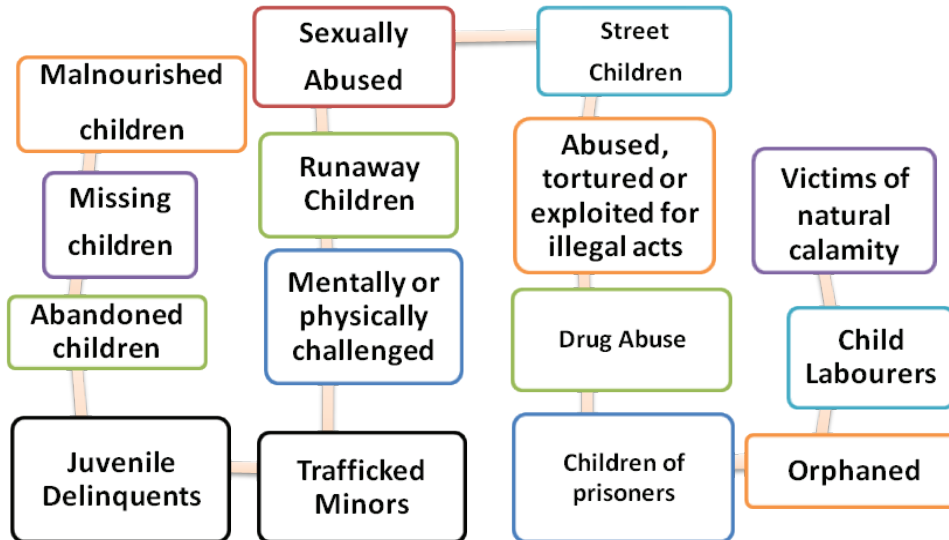
that their needs of food, shelter, health, care, love, rearing are met in a holistic manner. Adverse experiences can have a lasting impact on the development of the child.

- 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-

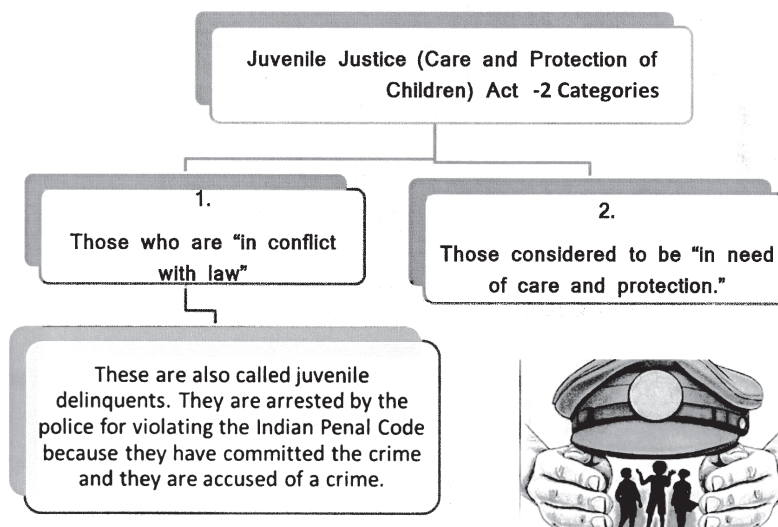
- i. Two-thirds of children under the age of five are malnourished. Malnutrition greatly affects their development.
- ii. About 30 lakh children live on the roads without any shelter.
- iii. Only one in three pre-school children gets an opportunity to participate in elementary education.
- iv. In India, 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.

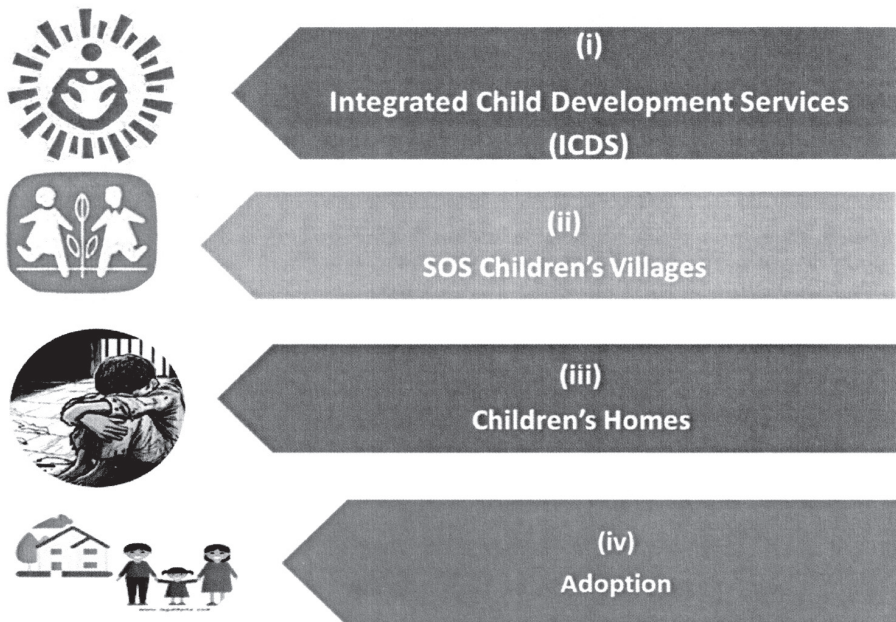
- ii. The Act is concerned with two categories of children–
 - Those who violate the law and
 - Those who need care and protection.
- iii. The Act provides for adopting a child-friendly approach in the adjudication and disposition of matters in the best interest of children and for their ultimate rehabilitation 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

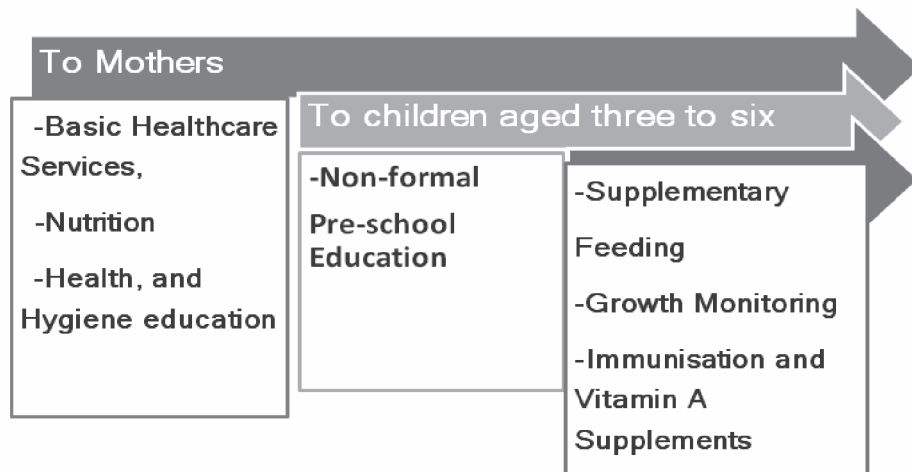
Several programs and various services are being provided by the government and non-governmental organizations in the country to cater to the needs of sensitive children.



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.

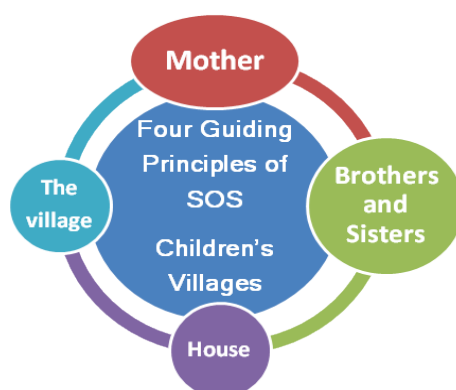
- Basic healthcare services and nutrition for pregnant and lactating mothers
- It is the world's largest Early Childhood Program. Currently 41 crore children are benefiting from this program. These services are provided in an integrated manner at a care centres called Anganwadis.



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—

ICDS	SOS Children village
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:—

Observation Homes	Special Homes	Juvenile/ Children's Homes
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 16 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.

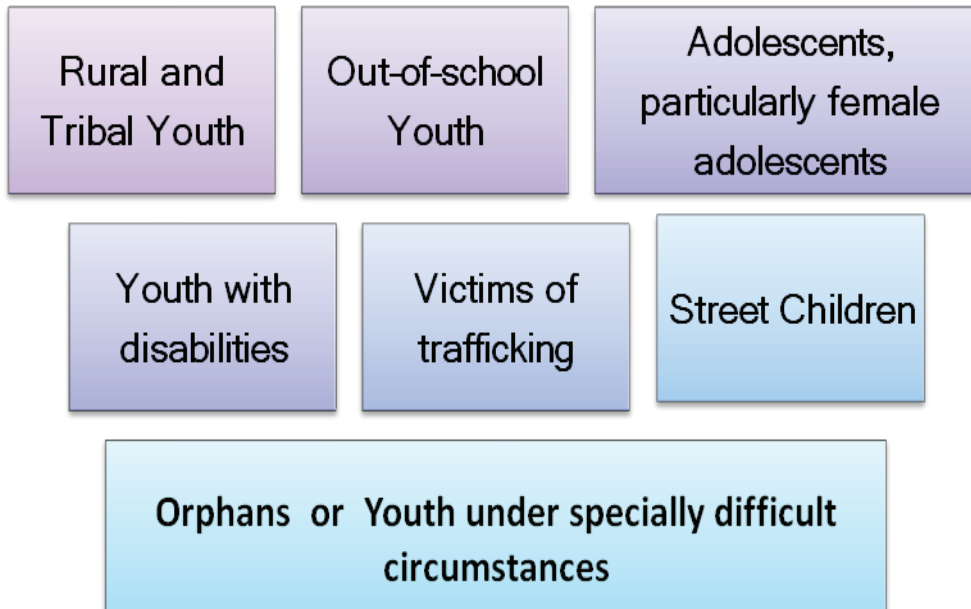
Now the practice of adopting children from outside the family has been made institutional and legal.

- 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. In the National Youth Policy-2003, 'Youth' was defined as a person aged 13-35. These youth were further subdivided into two broad subgroups: 13–19 years old (called adolescents) and young adults aged 20–35 years.
- ii. According to the new National Youth Policy, 2014, 'Youth' is defined as persons aged between 15 to 29 years.
- iii. 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.
- iv. 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

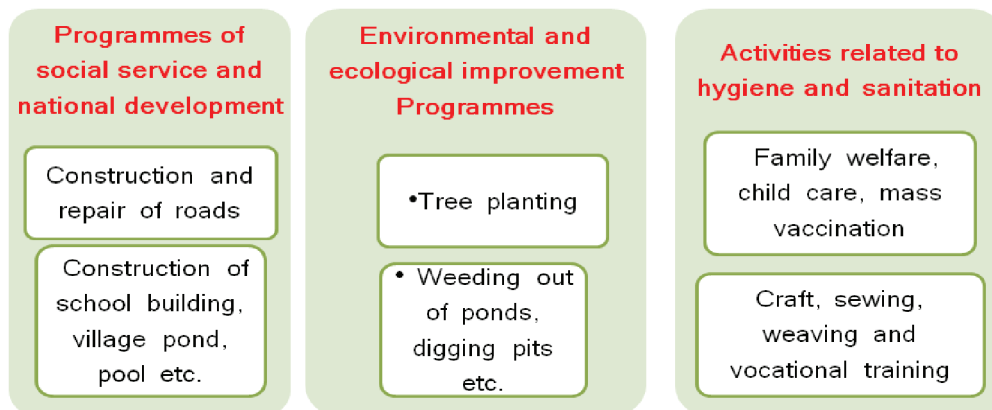
Government of India

- (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.

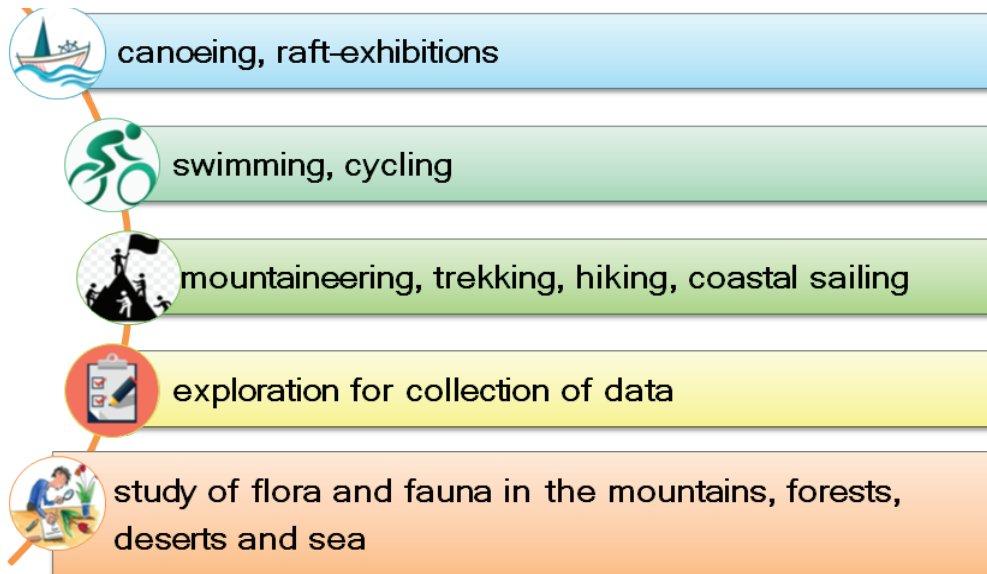
- (ii) In the year 1987-88, the Nehru Yuvak Kendra Sangathan (NYKS) was established as an autonomous body under the Ministry of Youth Affairs and Sports. It is the largest grassroots voluntary organization of its kind in the world.
- (iii) It gives the right direction to the youth of 13-35 years of age 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.

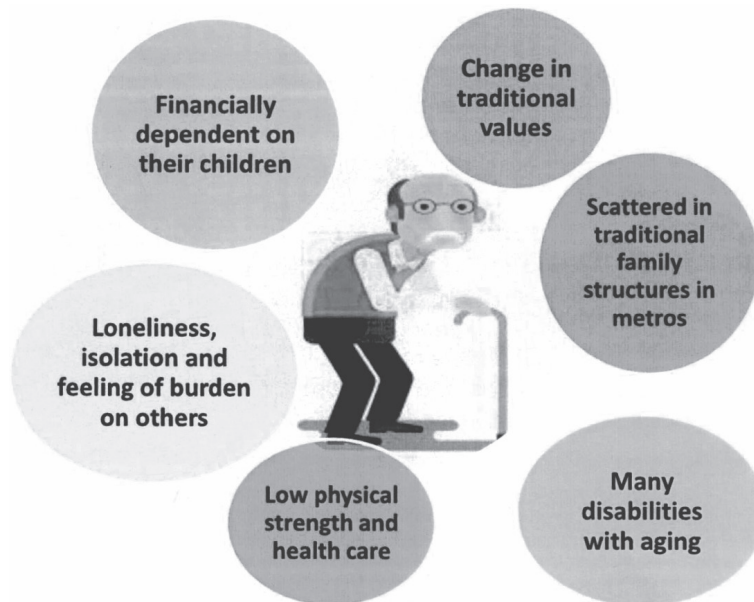
14. Characteristics of population of Elderly in India

- 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-

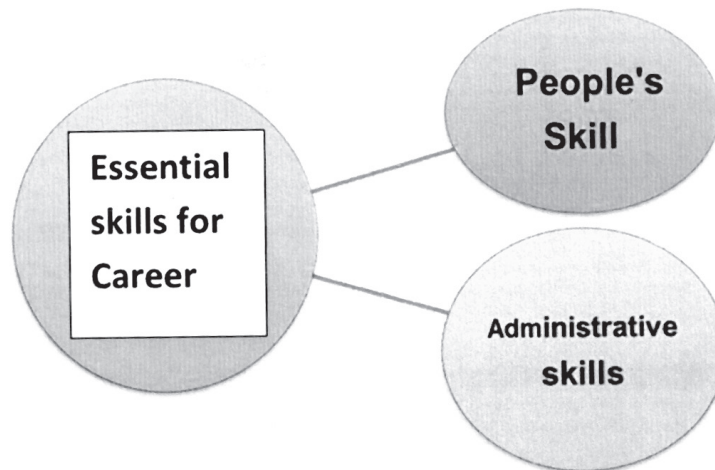
-  • Mobile medical care units for the elderly living in rural and remote and backward areas.
-  • Developing and strengthening inter-generational relationships, especially between children/youth and the elderly.
-  • Food, shelter and health care for abandoned elderly
-  • Mult-service centers for the 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 (daily care center) for patients with Alzheimer's disease/dementia)

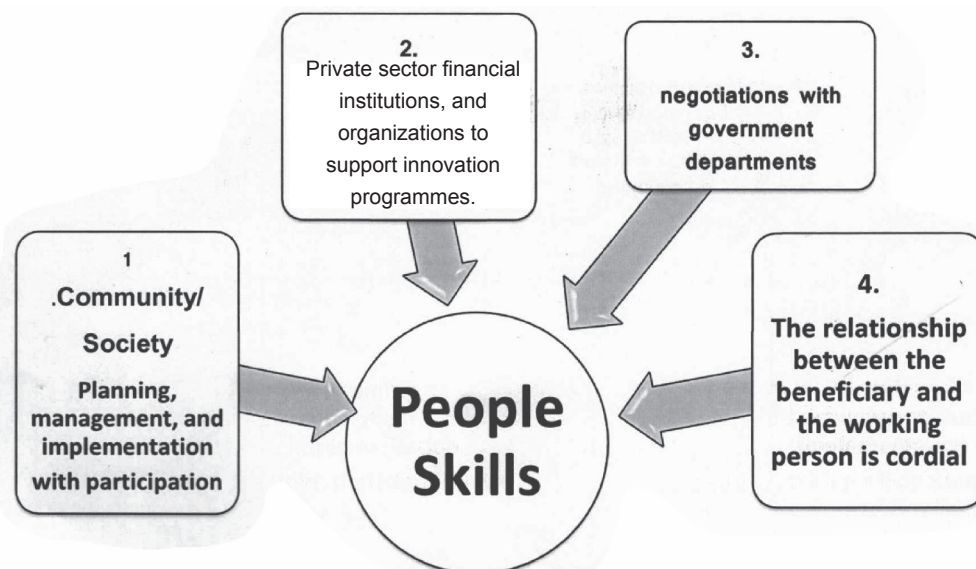
18. Preparing for career

- 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.**

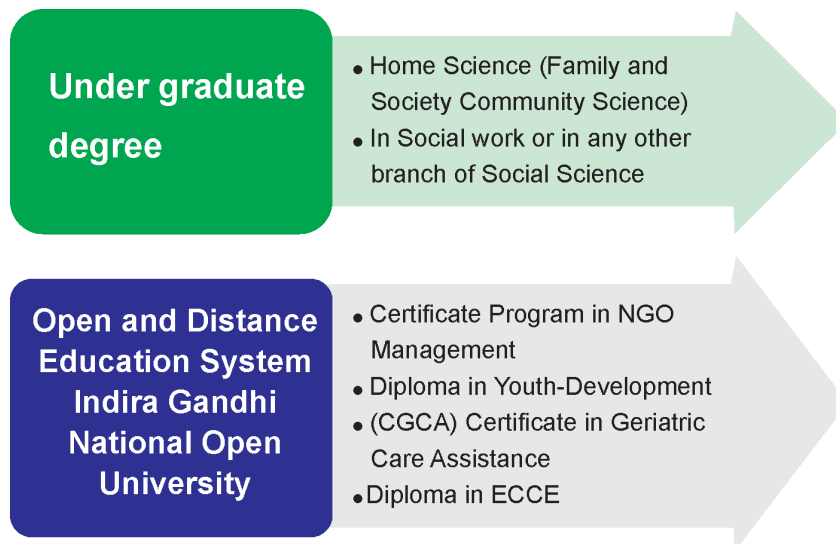


ii. Administrative skills –

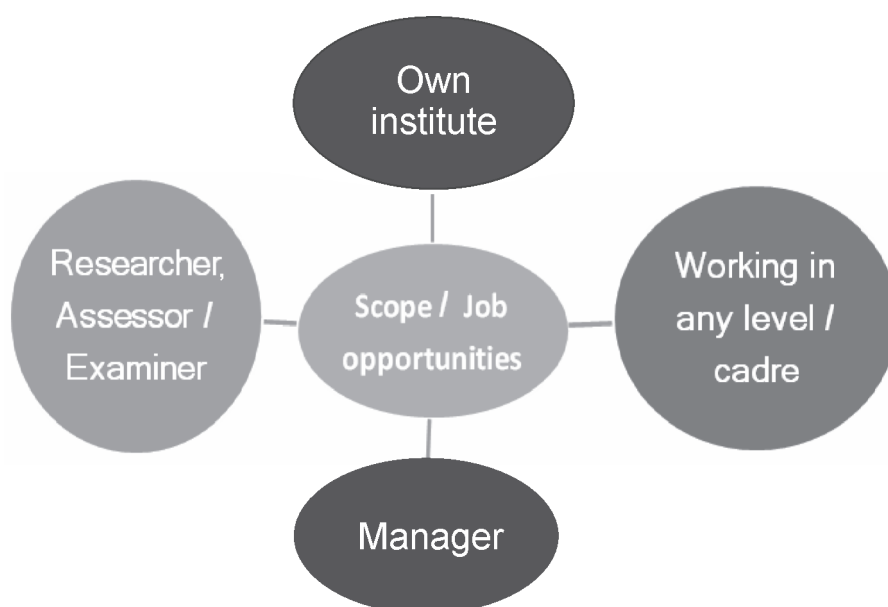
A fundamental understanding of each issue must be there in running or managing an organisation or programme.



20. Study programmes/ courses to enter the employment market of the region



21. Scope/ Career Avenues



Full names 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
	IGNOAPS	Indira Gandhi National Old Age Pension Scheme
12	IGNOU	Indira Gandhi National Open University
13	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 Institute (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 should be 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
- iv. Nuclear family system

understanding in Commonwealth countries. (Any other, any one)

Case Study Based Questions (4 X 1Mark)

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. New National Youth Policy adopted by the Ministry of -----
----- in the year 2014.
 - (a) Women and Child Development
 - (b) Rural Development
 - (c) Social Justice and Empowerment
 - (d) Youth Programmes and Sports

Answer – d) Youth Programmes and Sports

2. What are the important roles of youth?
 - (i) Earning a livelihood
 - (ii) Marrying
 - (iii) Remaining active on social media
 - (iv) Watching movies

Choose the correct option-

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

Answer (d) (i) and (ii)

3. The government provides financial assistance to send the youth living in one state on a tour to other state through _____

- a) Promotion of national integration
- b) Promotion of adventure
- c) Promotion of youth clubs
- d) Promotion of Indian Railways and other traffic

Answer - a) Promotion of national integration

4. Which of the following statements is false?

- a) When the family is unable to provide positive support to the teenagers, then some teenagers begin to consume alcohol or drugs.
- b) Loyalty and spirit of patriotism is not encouraged among boys and girls through training of scouts and guides
- c) Students of National Service Scheme are involved in national development works like removing weeds from ponds, digging pits, construction, and repair of roads etc.
- d) In order to be socially fruitful and economically productive, youth need proper education, training and personal development.

Answer- b) Loyalty and spirit of patriotism is not encouraged among boys and girls through training of scouts and guides

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. Which groups of youth are considered more vulnerable?

Answer - Refer to Points to remember No. 10

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 trainign 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 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

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

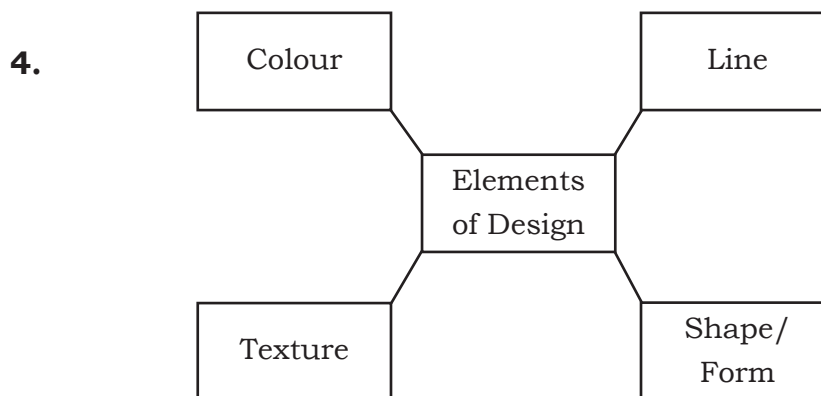
Points to remember

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.

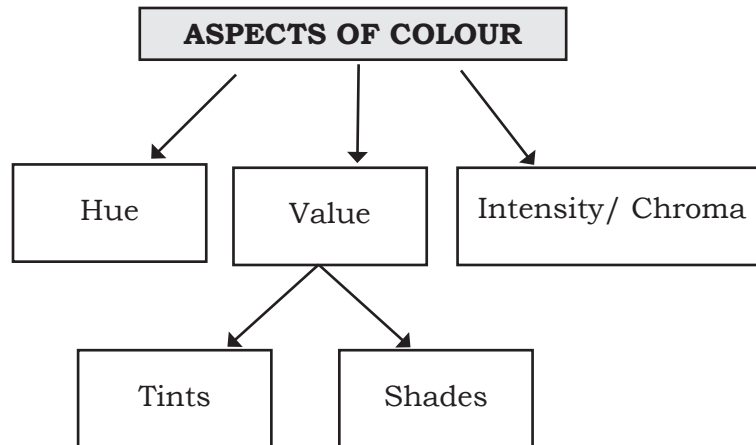
3. **Two main factors of Design- Elements and Principles**



5. Choice of colour of clothes depends on the following points-

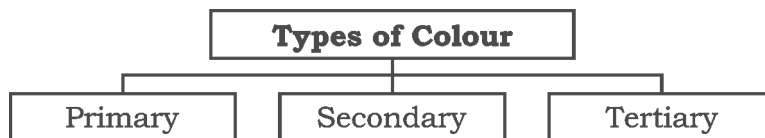
- i. Personal choice
 - ii. Season
 - iii. Occasion
 - iv. Peoples' thoughts
 - v. Culture/ Traditions
 - vi. Climate
 - vii. Fashion
6. Colour can be defined as reflection of light striking the surface of an object. It is the visual sensation resulting from reflection of visible light rays that strike 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

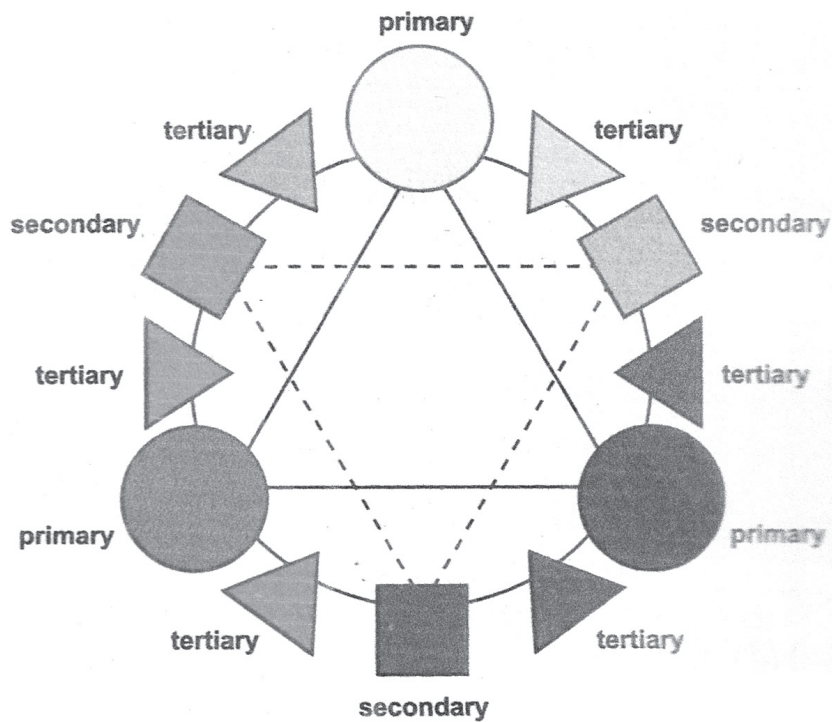
Blue+Green = Blue Green

Blue+Purple = Blue Purple

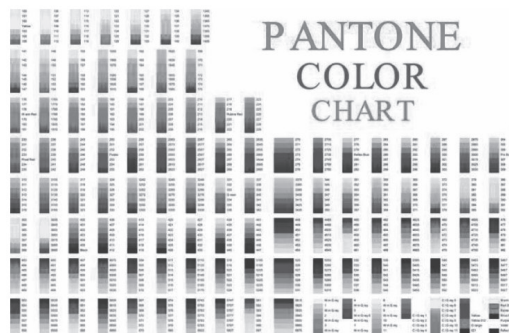
12. Neutral Colours/ Achromatics- They are colours without colour like- white, black, grey, silver, metallics.

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 10.5 is the mid value for grey or hue. It shows the tints and shades of any colour (hue).

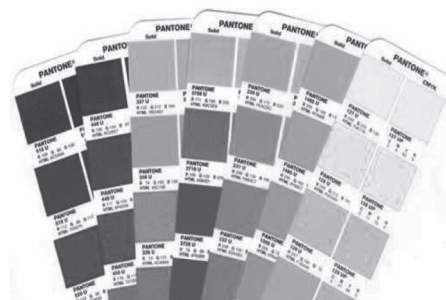
0	1	2	3	4	5	6	7	8	9	10
BLACK					GREY					WHITE
S	H	A	D	E	HUE	T	I	N	T	S



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.

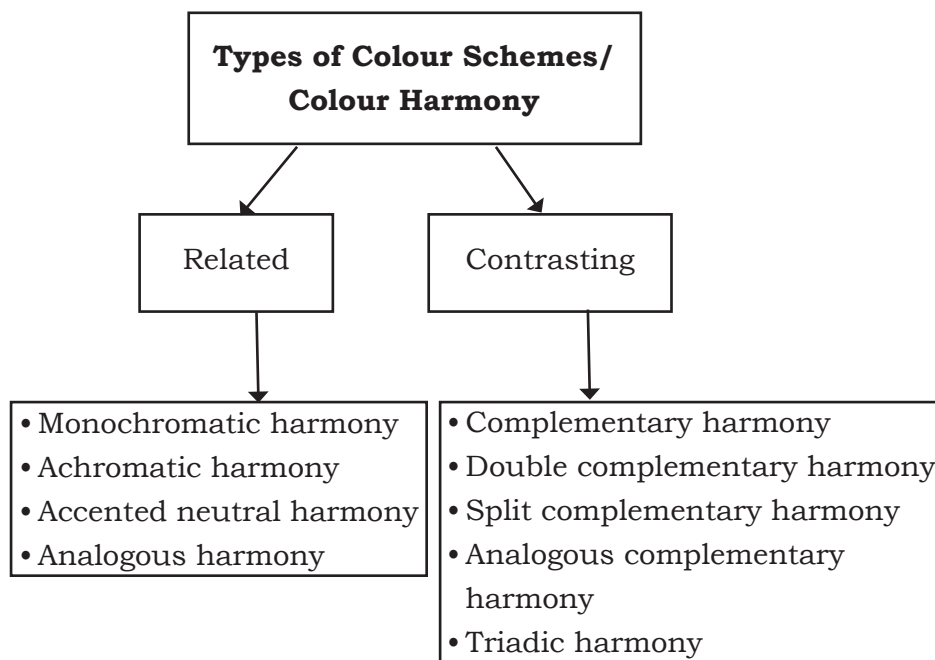
15. Colour can be added on fabric at different stages-

- 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.

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.

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.

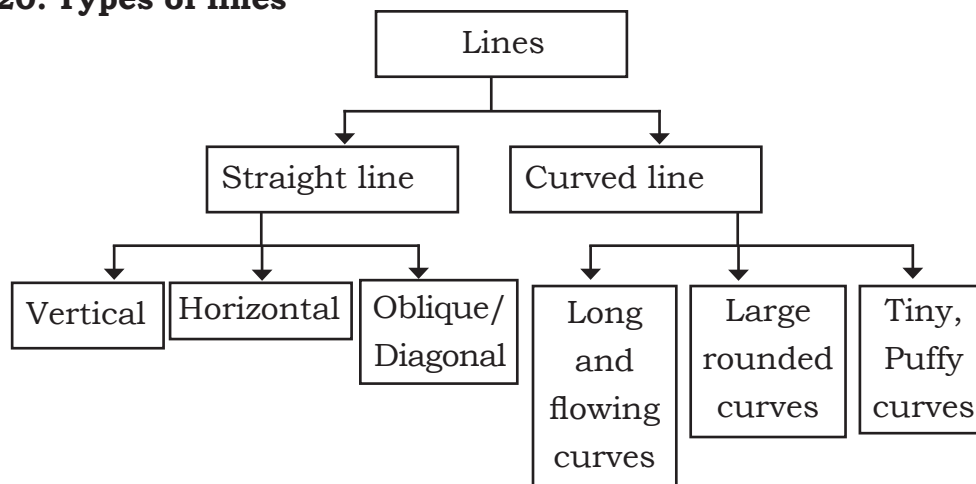
18. Factors which determine the texture in textile materials-

- 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 curved



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.

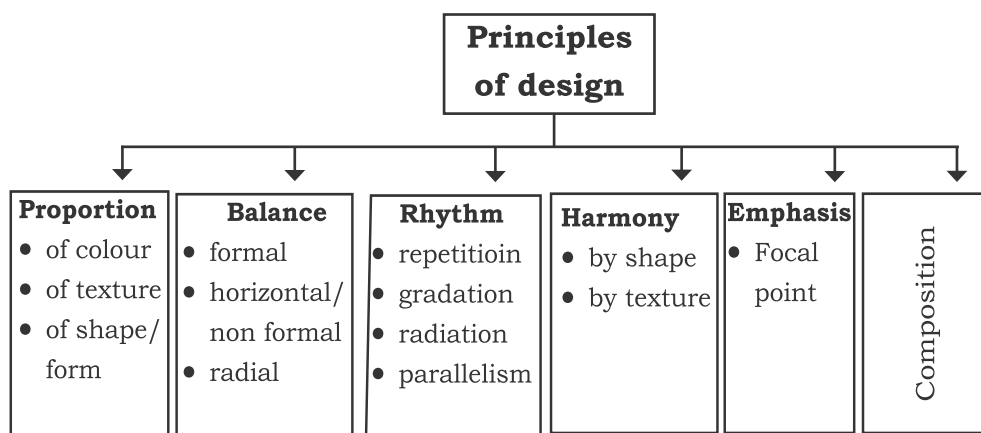
22. Four basic groups of shapes-

- 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

PRINCIPLES OF DESIGN
PROPORTION (Golden Mean)



FORMAL BALANCE



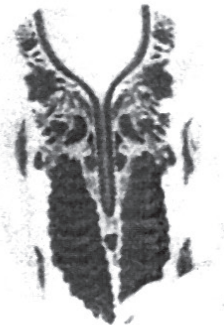
HORIZONTAL/
INFORMAL BALANCE



RADIAL BALANCE

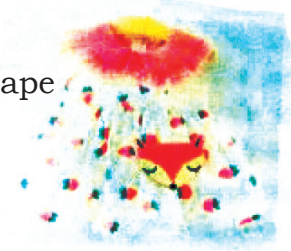


EMPHASIS



HARMONY

By shape



By Texture



RHYTHM



REPETITION

RADIATION



GRADATION

PARALLELISM

or decrease the size of the person wearing the garment, 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 etc at necklines, sleeves and hemlines can bring about rhythm
- 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 denned 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. Name the type of design
 - a. Structural
 - b. Radial
 - c. Applied
 - d. Both a and c

Ans. d. Both a and c.

2. Which of the following colour is not in VIBGYOR?
 - a. Red
 - b. Blue
 - c. White
 - d. Green

Ans. c. White

3. Lightness of hue is called_____of hue.

- a. Tint
- b. Shade
- c. Shade card
- d. Chroma

Ans. a. Tint

4. 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

5. _____lines give an illusion of height

- a. Horizontal
- b. Vertical
- c. Diagonal
- d. Curved

Ans. b Vertical

B(i) Match the following

- A. Emphasis
- B. Balance
- C. Rhythm
- D. Proportion
- i) Repetition
- ii) Golden mean
- iii) Focal point
- 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

B(ii). Match the following

- A. Achromatic harmony
- B. Double Complementary harmony
- C. Monochromatic harmony
- D. Triadic harmony
- i) Combination of three colours
- ii) Two pairs of complements
- iii) Only neutral colours
- 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. Picture based Questions

- i. Draw a diagram to show one way of bringing emphasis on young girl's frock.

Ans.



D. Very Short Answer Questions

- i. What is meant by Grey scale?

Ans. Grey scale helps to judge the value of any colour. It has 11 grades (0 to 10).

- ii. 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.

- iii. 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.

3. Which of the following dress is an example of Achromatic harmony?

- a) White shirt
- b) Pink frock
- c) Black suit and colourful dupatta
- d) Red top and green skirt

Ans. a) White shirt

4. Which of the following is incorrect statement-

- a) Structural design depends on the basic cut of the garment
- b) Applied design is super imposed on the fabric.
- c) VIBGYOR is a group of seven colours.
- d) Value is the common name of the colour

Ans. d) Value is the common name of the colour.

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? On what three aspects does the texture of a fabric depend?

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 Point 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. How is balance obtained in a garment? Explain by taking an example of any dress.

Ans. Refer to Points to Remember Number-24.

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. Colour schemes which are made using colours which lie near each other on the colour wheel are called Related colour schemes / harmonies. They have at least 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. eg. red, pink, mehroon.
- ii. Achromatic harmony - Only neutral colours are used in this colour scheme. eg. white, black
- iii. Accented neutral harmony - In this colour scheme, one neutral colour and one other colour are used. eg. 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 eg. yellow, yellow green and green.
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.

Ans. a) Refer to Points to Remember Number -24 (4)

- b) Two ways of shifting emphasis away from the arms are-
 - (i) Placements of decorations on waist etc.
 - (ii) Use of contrasting colours on neckline etc.

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.

Ans. Colour schemes which are made using colours which lie far away from each other on the colour wheel are called Contrasting colour schemes.

They are of five types-

- i. Complementary harmony- In this colour scheme, two colours are used which lie exactly opposite to each other on the colour wheel. eg. 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. eg. 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 eg 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. eg. 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 eg red, blue, yellow.

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)

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.

FASHION TERMINOLOGY



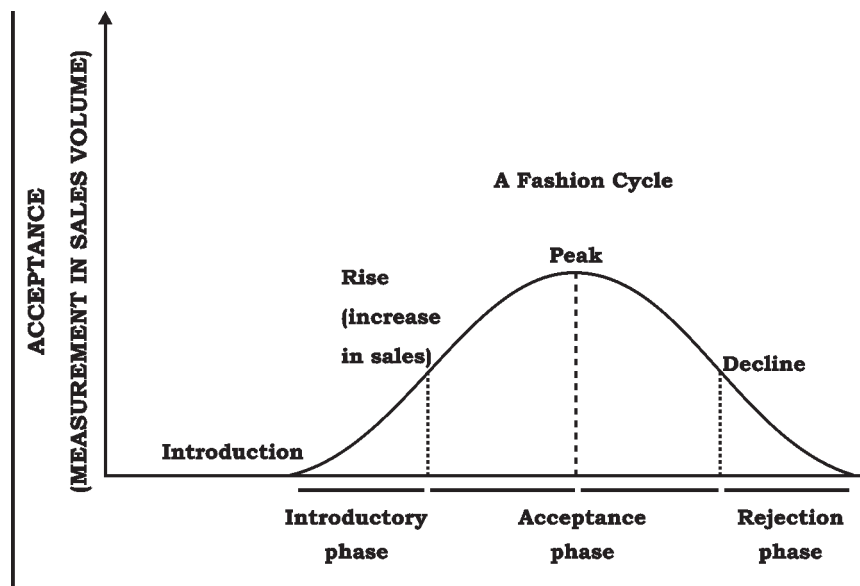
EXAMPLES OF FADS(TEMPORARY FASHION)



EXAMPLES OF CLASSICAL STYLES

- 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). Yves 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 represented by a bell shaped curve of time and sales.

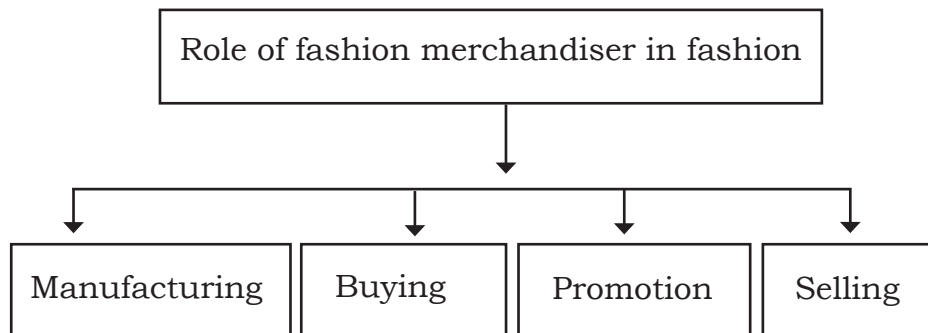


Stages of Fashion Cycle

- 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 changes 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

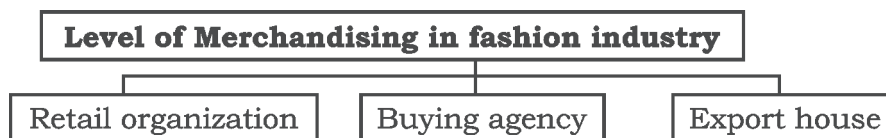
- For this, he needs to have a creative mind, strong visual merchandising and production skills.
- To promote the products of the designer, the fashion merchandiser participates in fashion exhibitions and find the target market for the products,

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.

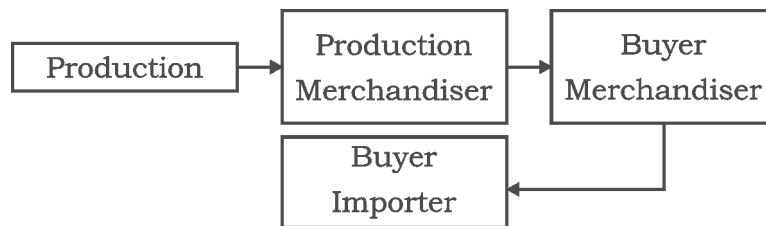
ii. Buying Agency Merchandising: This agency provides consultancy services for the goods merchandisers. Selling through buying agency is beneficial for exporters as it saves time and cost.

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



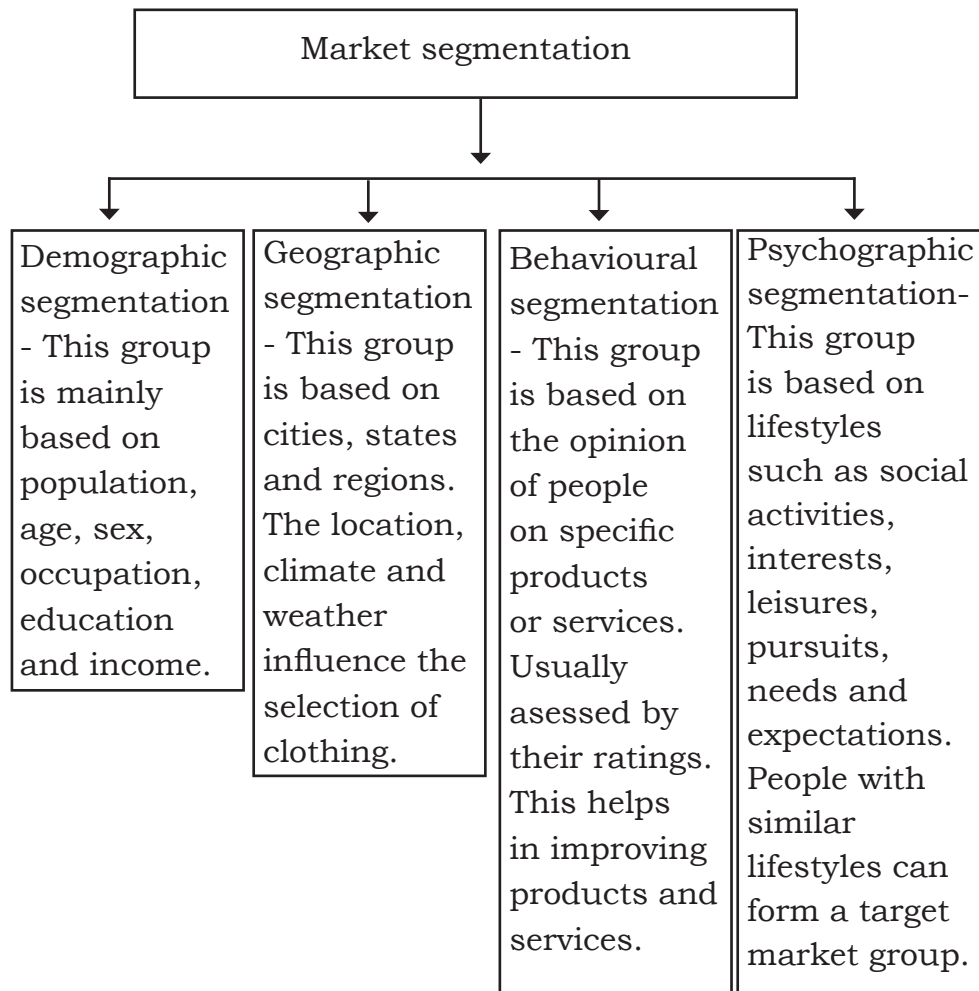
- Buyer merchandiser
 - They act as an intermediary between the buyer and the manufacturer and ensure that the product is developed according to the buyer's requirement.
 - They are responsible for sourcing, sampling and communicating with the buyer.
- Production merchandiser
 - These act as an intermediary 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.

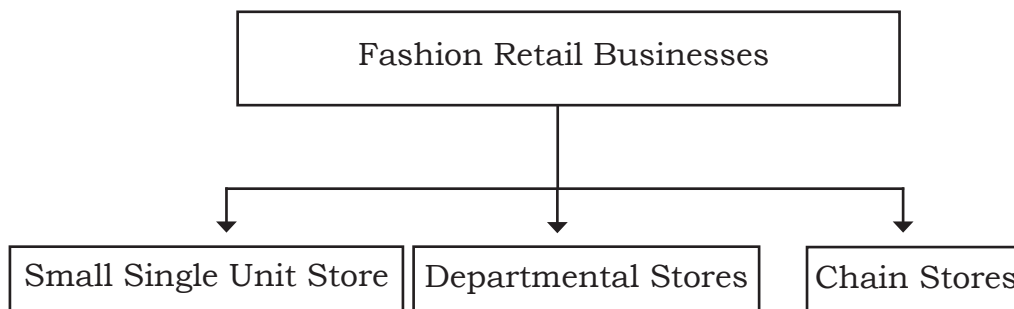


12. Right things for Business

- 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 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

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

B(ii) Match the following

- | | |
|---|------------------------------|
| A Classic Style | i Saree, Blazer |
| B Introduction of a style | ii Short lived fashion |
| C Fads | iii A stage of fashion cycle |
| D A step towards demand for ready to wear clothes | iv Skirt blouse |

Pick the correct option

- a) Aii, Biii, Ci, Div
- b) Aii, Biv, Ciii, Di
- c) Ai, Biii, Cii, Div
- d) Aii, Biii, Civ, Di

Ans. c) Ai, Biii, Cii, Div

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.

1. Which of the following careers is not related to fashion designs.
 - a) Visual merchandise designer
 - b) Set designer
 - c) Human Resource Manager
 - d) Interior Designer

Ans-c Human Resource Manager

2. What is a style of fashion that never becomes completely obsolete?
 - a) Classic
 - b) Fads
 - c) Dress
 - d) Specific style

Ans- a Classic

3. The Bachelor degree course in Fashion Design or Fashion Business is of
 - a) 2 years
 - b) 3 years
 - c) 4 years
 - d) 1 year

Ans- 4 years

4. Which of the following statements is not correct?
 - a) The history of fashion helps design makers in making current and future fashion decisions.
 - b) The exchange of goods and crafts was the beginning of the trade system.

- c) In ancient times and medieval times, fashion used to change very fast.
- d) Before the Industrial Revolution only the rich were able to buy fashion clothes.

Ans- c In ancient times and medieval and medieval times, fashion used to change very fast.

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 mechanises 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) & (ii)

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?

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

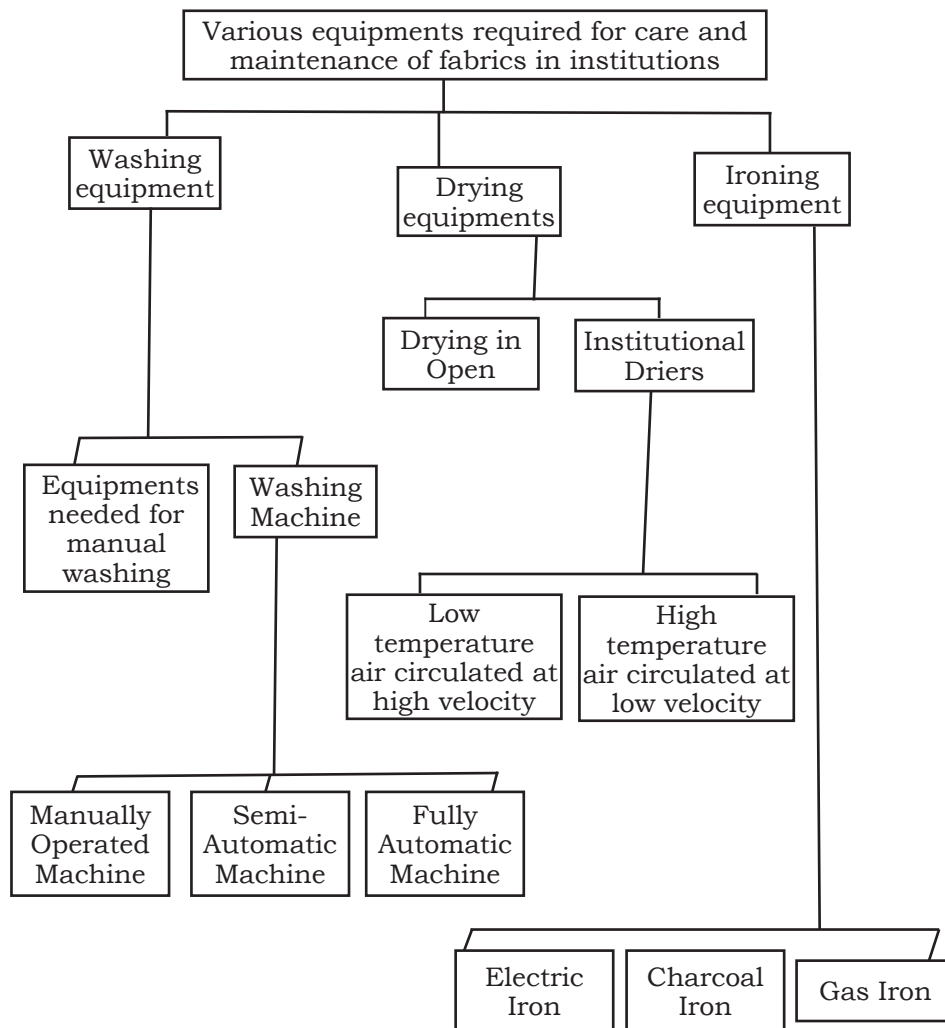
10. Care and Maintenance of Fabrics in Institutions

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

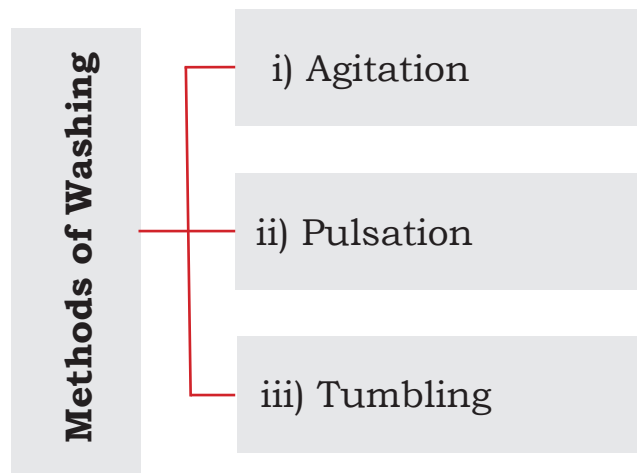
These models can be of three types:

- 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

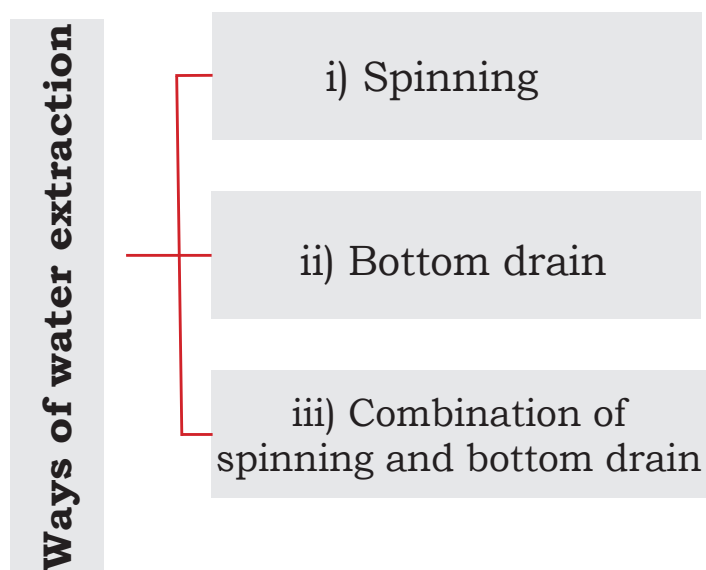
A fully automatic machine has the following operations.

- 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 clothes 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

Driers 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 drier 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.

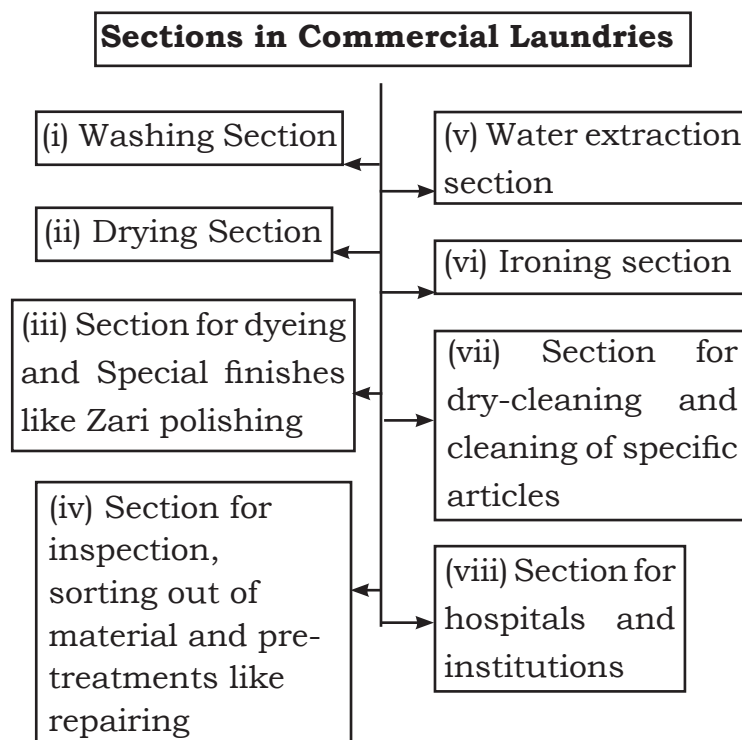
9. Ironing Equipment

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, driers, 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. 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	Patients Kurta		
4	Doctors Kurta		
5	Towel		
6	Mask		
7	Pillow cover		
8	Apron		
9			
10			
11			
12			
13			
14			
15			
16			
17			

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 method of washing is used in front-loading machines?
- 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

B. (i) 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 |

**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. After washing and rinsing, the process of removing water from clothes is known as
- a) Pulsation
 - b) Tumbling
 - c) Spinning
 - d) Water extraction

Ans- (d) Water extraction

2. If the clothes are not rinsed properly with water after washing, they appear
- a) White, harsh
 - b) grey, harsh
 - c) yellow, hard
 - d) yellow, dense

Ans- (b) grey, harsh

3. What are the individual professionals who collect clothes from home for washing or ironing are known as?
- a) Dhobis
 - b) Mistry
 - c) Entrepreneur
 - d) Washers

Ans- (a) Dhobis

4. Which of the following options is correct?
- a) The amount of laundry work is more in hotels than in hospitals.
 - b) Some washing machines drain water from the bottom without stopping and this is the best method of drainage.
 - c) Aesthetic care, health, hygiene and disinfection of garments are taken care of in the washing house of the hospital.
 - d) In the field of clothing care, practical training is not required to make a living.

Ans- (b) Some washing machines drain water from the bottom without stopping, and this is the best method of drainage.

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

6 Calendaring machine

7 Trolley to move clothes from one place to another

5. Give the reason for the following:

a) Spinning to near dryness is avoided.

b) Agitators of washing machine should be made of bake lite. (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 bake lite- 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.

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 Remembers' 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 Remembers' 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.

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 Puskar 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.

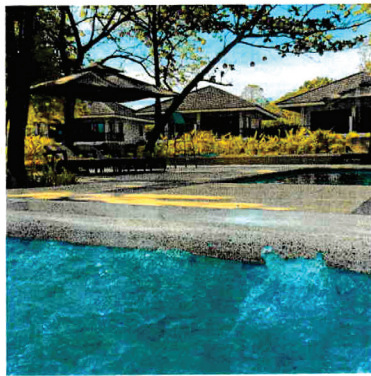
Tourist—Tourist is one who travels and stays temporarily in another place.



Motel



Hotel



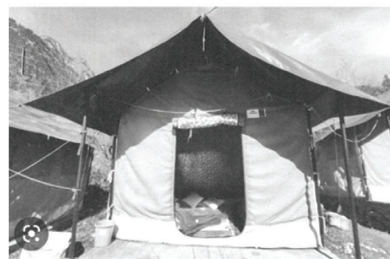
Resort



Lodge



Furnished Flats



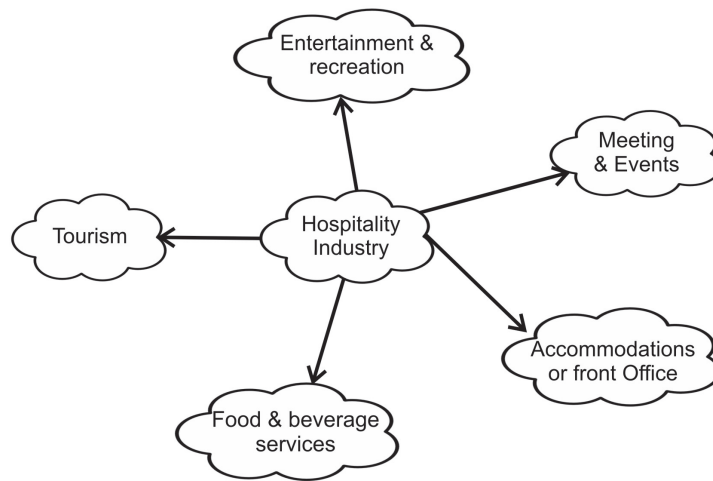
Furnished camps

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.

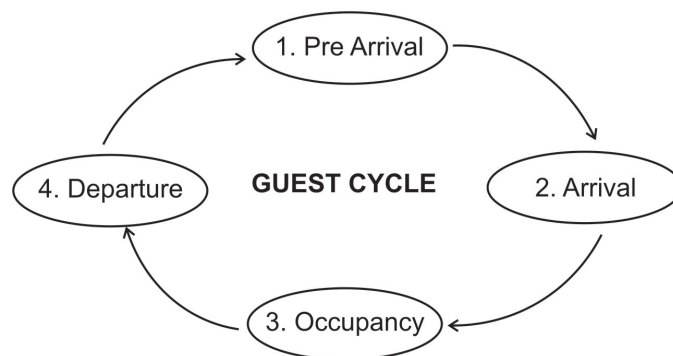
Different type of establishments which offer hospitality services are-

- 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.

6. Departments involved in Hospitality Management of an Organisation

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

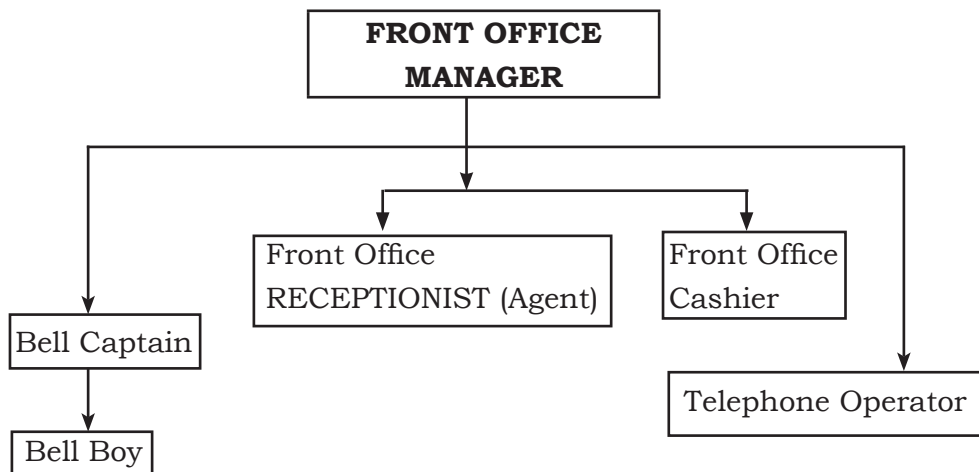
- Welcoming guests, meeting & greeting them.
- Organising reservation status of room availability.
- Registering guests and allocation of rooms.

- 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

DESIGNATION	FUNCTIONS /DUTIES
1. Front office Manager	<ul style="list-style-type: none"> • Responsible for managing the front office, lobby, transport activities. • Schedules shifts / staff rotation and duties of the staff in shifts • Checks the arrivals of the day. • Checks the arrivals of the V.I.P.'s, coordinates with housekeeping and other departments.
2. Front office Supervisor	<ul style="list-style-type: none"> • Is responsible for a shift. • Meets and greets all arrivals. • Ensures accurate and speedy rooming procedure. • Checks occupancy.
3. Front office Cashier	<ul style="list-style-type: none"> • Is responsible for maintaining guests bills. • Receiving payments when the guests check-out.
4. Telephone Operator	<ul style="list-style-type: none"> • Is responsible for providing information. • Communicates with in-houses guests and visitors.
5. Assistant Manager - Front office	<ul style="list-style-type: none"> • Organises, supervises the front office in the absence of front office manager. • Ensures smooth functioning of the front office.
6. Lobby Manager	<ul style="list-style-type: none"> • Organises supervises and controls all uniformed services.

7. Receptionist (Front office Agent)	<ul style="list-style-type: none"> • Reserves registers and assign rooms to guests. • Provides information as and when necessary to guests during their stay in hotel.
8. Bell Captain .	<ul style="list-style-type: none"> • Organises, supervises and controls all uniformed services, bell boys in the lobby • Supervises all baggage movement during check-in and check-out. • Is responsible for shifting of baggage of guests within and out of the room. • Welcomes guests upon arrival and escorts them to the registration desk.

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.

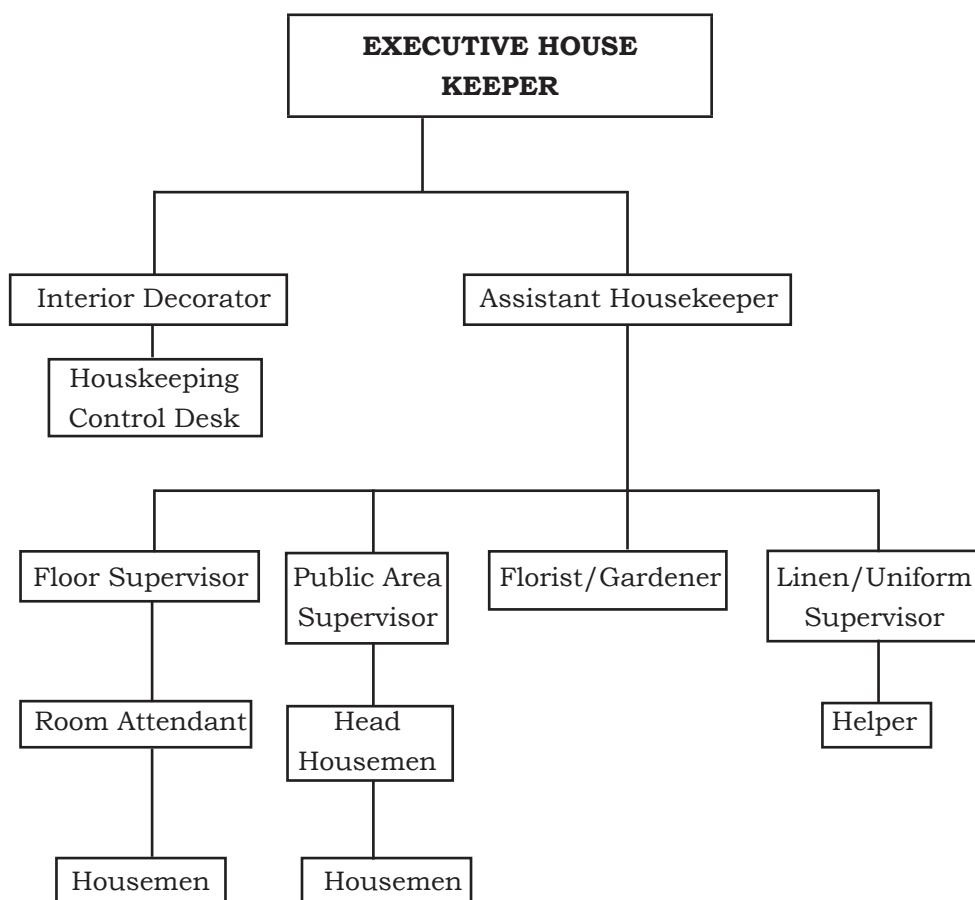
(i) Functions of Housekeeping Department

- Cleaning of public areas.
- Supply, upkeep of laundry and exchange of various lines 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 or 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.

(iii) 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 Competences 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)

(C) State whether the following statements are True or False

- (a) Smile is the most enduring competency required of Front Office personnel.
- (b) "Suite" has two rooms, one serves as a living-cum-dining area and the other room has a bed.
- (c) Housekeeping department provides food to the customers.
- (d) Kitchen stewarding is concerned with the preparation of food.
- (e) Controlling is the function of ensuring that the plans and objectives are to keep the schedules and allocated budget.

Ans. (a) True

(b) True

(c) False

(d) False

(e) True

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 likes 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 Multiple Choice 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 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.b) Lodge

2. Which of the following is not included in stages of a Guest Cycle?

- | | |
|----------------|--------------|
| a) Arrival | b) Departure |
| c) Pre-arrival | d) Tourism |

Ans. d) Tourism

3. Which of the following can be used for environment conservation in the hospitality sector?

- (i) Use of organic cotton sheets
- (ii) Use of Air conditioner
- (iii) Excessive use of plastic
- (iv) Use of solar energy

Choose the correct option

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

Ans. b) i and iv

4. Which of the following statement is incorrect?

- a) A hotel is a commercial establishment offering lodging, meals and other services to its guests.
- b) 'Smile' is the most enduring competency required at front office personnel
- c) Hospitality industry works on the idea of 'A Home Away from Work Home' nowadays.
- d) Kitchen Steward's work is related to cooking of food.

Ans. d) Kitchen Steward's work is related to cooking of food.

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. Write four stage of Guest-Cycle?

Ans. Refer to points to Remember No. 5

4. Which departments come under Support Service department.

Ans. Refer to points to Remember No. 20

5. 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 |

6. 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 quest 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 Point 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.

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. "More jobs and business opportunities are available for youth 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 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. The person should be qualified in this field- 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

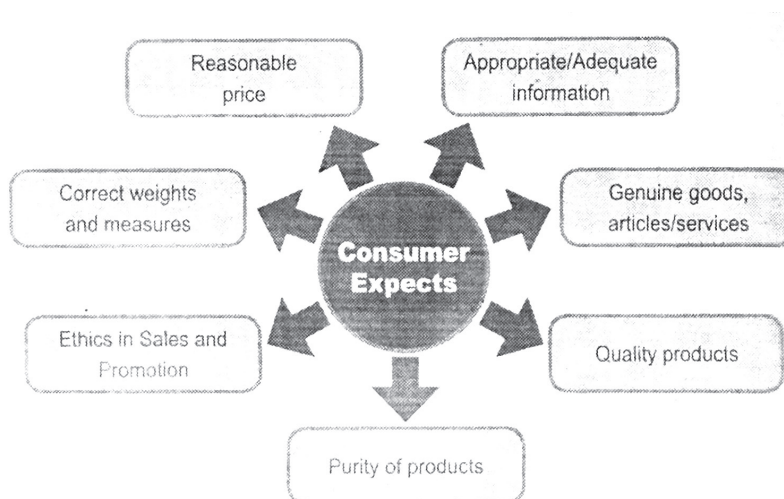
3. Explain meaning and functioning of restaurant and kitchen?
(NCERT)

Ans. Refer to Points to Remember No. 19(i) (iii)

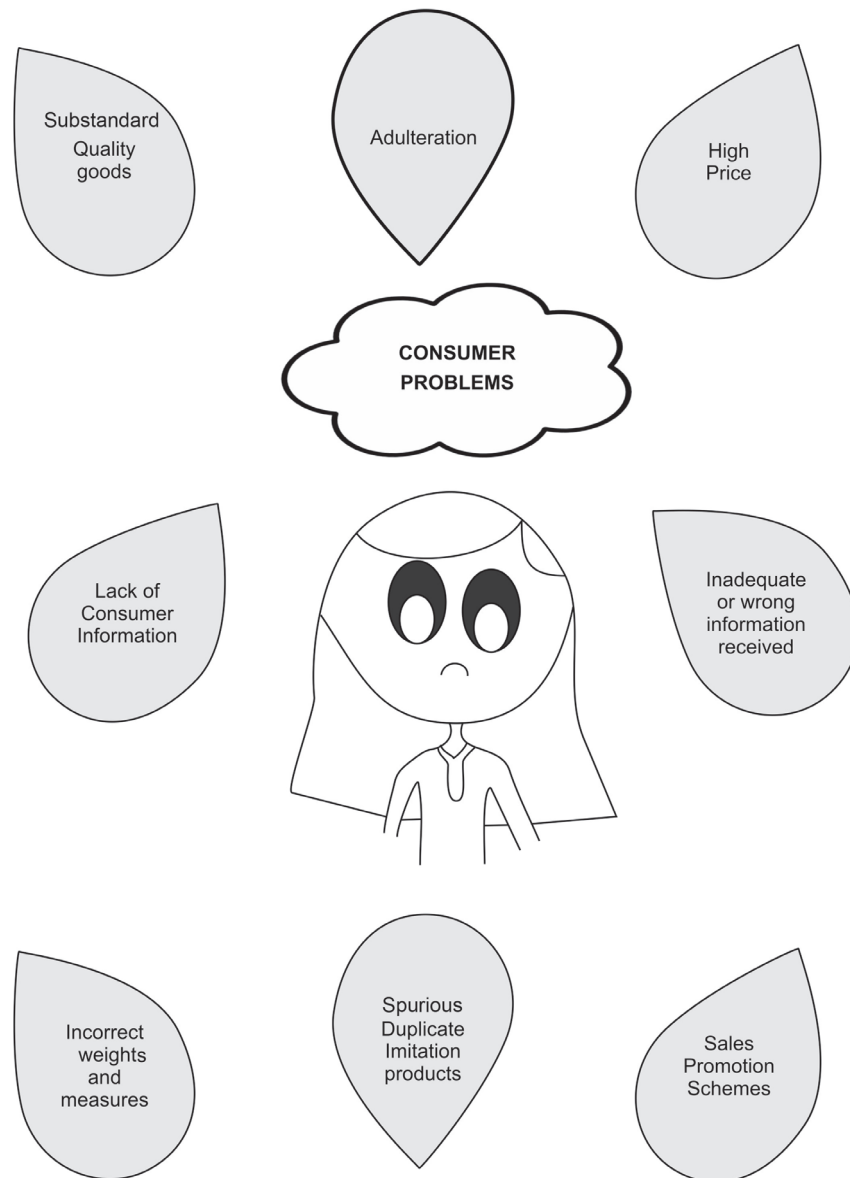
12. Consumer Education and Protection

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 -**



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.
- 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 faces 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.

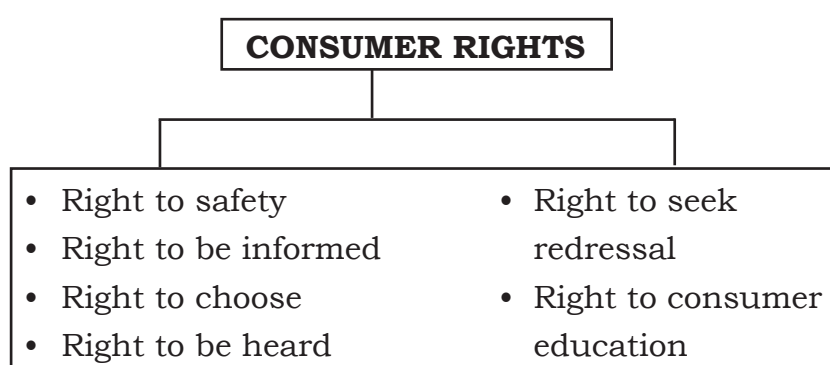
10. Consumer Protection Act (CPA) was passed in 1986. It was modified many times. New Consumer Protection Act was implemented in 2019.

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. 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. Different Standardization Marks -



ECOMARK

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, water bottle, 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 to same 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 standard 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
IS.I.	Indian Standard Institute	Bureau of Indian Standards (BIS)	Mandatory -Mineral water, condensed milk, milk powder, custard powder Voluntary- Biscuit, tea, coffee

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.
Silkmark	Silkmark	Silkmark 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.

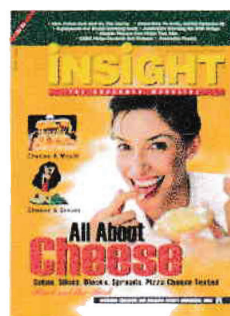
16. Work done by Voluntary Consumer Organisations/NGO's

- 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

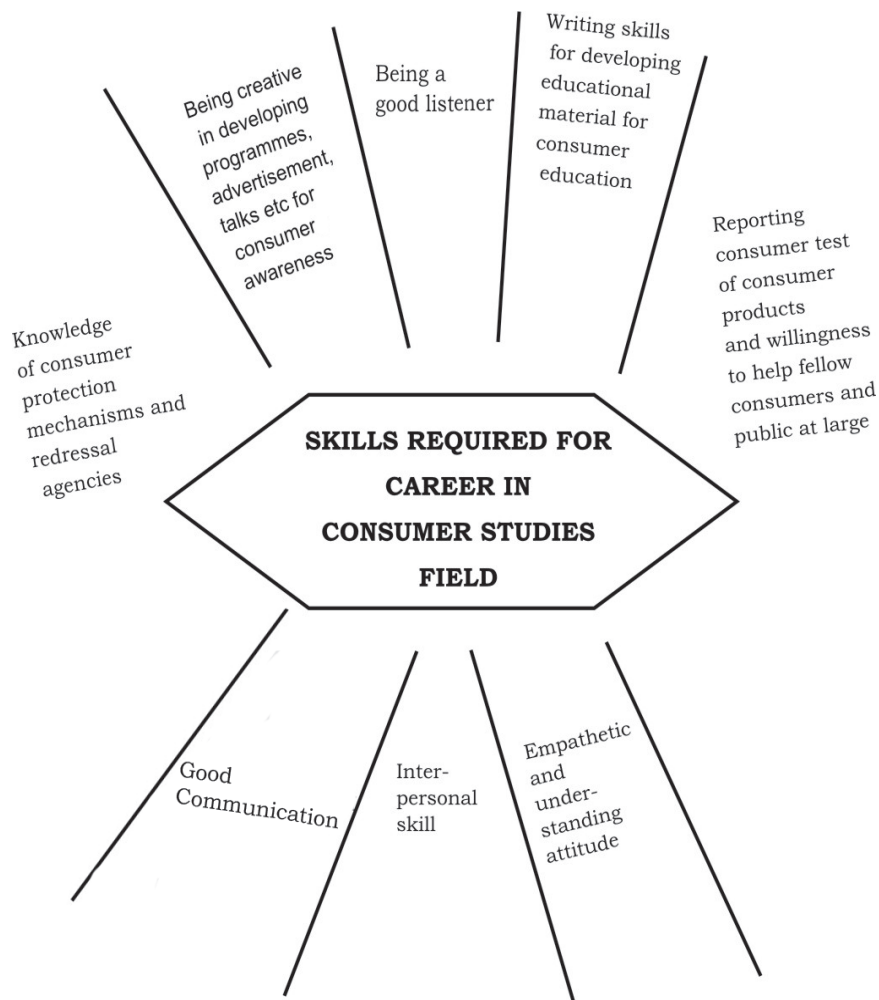
Nonprofit Publisher
of Consumer Reports



Few Consumer Organisations—

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	Silkmark 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 of a mall called ?

- a) Consumer Association b) Consumer Product
c) Consumer Footfalls d) Consumer Behaviour

Ans. c) Consumer Footfalls

2. When was Consumer Protection Act approved ?

- a) 1964 b) 1972
c) 1982 d) 1986

Ans.d) 1986

3. Which of the following standardization mark is found on packed water bottle?

- a) Agmark
- b) ISI
- c) Silkmark
- d) Wood mark

Ans. b) ISI

4. On what products is Hallmark standardization mark found?

- i) Gold jewellery
- ii) Silver utensils
- iii) Brass utensils
- iv) Steel Jewellery

Choose the correct option

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

Ans. (d) i and ii

5. Which of the following career is not associated with Consumer Education and Protection ?

- a) Becoming Consumer activist
- b) Becoming Consultant in Consumer Club
- c) Becoming journalist
- d) Working in B.I.S.

Ans. c) Becoming journalist

B (i) Match the following

- | | |
|---------------------|-------------------|
| A. Consumer Voice | i) America |
| B. Which | ii) India |
| C. Choice | iii) England (UK) |
| D. Consumer Reports | iv) Australia |

Pick the correct option-

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

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

B) (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) Picture Based Questions

1. You want to buy a silk scarf. Which standardised mark you will see on it? Draw the picture.

Ans. Silkmark



Your Assurance of Pure Silk

2. Identify the given picture and tell that this standardization mark is given by which agency?



Ans. Agency - B.I.S. (Bureau of Indian Standards)

D) 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)

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 began 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. Which standardization mark is given by SMOI ?

- a) Silkmark b) Agmark
- c) Woolmark d) Hallmark

Ans. a) Silkmark

2. Which of the following is not a consumer problem ?

- a) Getting adulterated goods
- b) Getting product at right price
- c) Getting incomplete information
- d) Duplicate / Imitation products

Ans. b) Getting product at right price

3. What is the full name of CPA ?

- a) Consumer Public Act
- b) Central Protection Association
- c) Consumer Protection Act
- d) Central Population Association

Ans. c) Consumer Protection Act

4. Which of the following is incorrect statement?

- a) Consumer organisations give legal advice to the consumers.
- b) Consumers have the right to seek redressal.
- c) Consumer should have knowledge of institutions giving redressal.
- d) It is not necessary to take the receipt of the purchased product, for seeking redressal

Ans. d) It is not necessary to take the receipt of the purchased product, for seeking redressal

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. What is Ecomark? This is given by which agency?

Ans. Ecomark is given on products which do not cause pollution like soap, detergent, paint, paper, cosmetics. Ecomark standardization mark is given by Bureau of Indian Standards (B.I.S.)

4. 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
5. 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 safety.

Long Answer Questions (4 Marks)

1. 'Consumer has to face many problems in the market. Explain any four consumer Problems.

Ans. i) Refer to Point 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, fruit juice, wheat flour, biscuit.

Ans.

Food Product	Standard Mark	Full Name
Milk powder	I.S.I.	Indian Standard Institute
Packaged drinking water	I.S.I.	Indian Standard 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. Make a list of works done by Consumer Organizations.

Ans. Refer to Points to Remember Number-16

5. '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.

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 No. 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)

- a) Consumers
- b) Consumer rights
- c) Consumer responsibilities
- d) Consumer Protection Act
- e) 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)

- a. Any three consumer rights
- b. Any three consumer responsibilities
- c. Any five consumer problems
- d. 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.

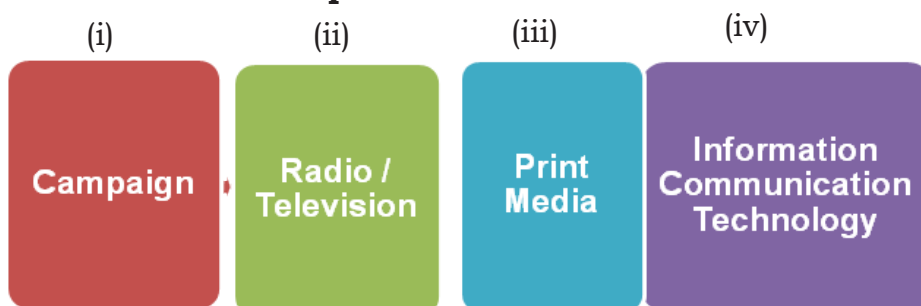


4. Development Communication

- 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



6. 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.

6(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.

6(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 Nukkad Natak/Folklore, Stories by artists and by Doctors 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) (Gujrat), Delhi University (DU) FM in North Delhi and many such others that are helping communities in voicing their problems and finding solutions.

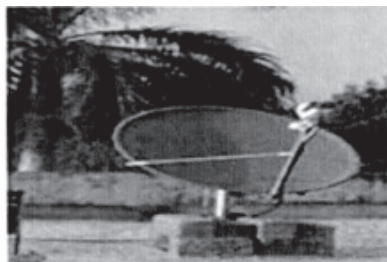
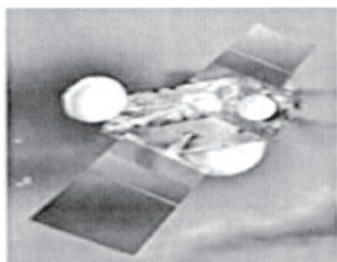
Television –

- (i) New horizons of information are opened for television viewers. Programme of immense educational value like 'Kyun ki Jeena isi ka naam hai' Main Kuch Bhi Kar Sakti hoon' are telecasted on private channels.

- (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.
- (iii) Many government and non-governmental institutions are showing programmes of educational importance and public interest on various channels.
- (iv) Television is currently the most prominent means of development communication which is providing entertainment as well as educational and social awareness.

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

C (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.
 - Syndicate Bank branch opened in village.
 - New income-generation schemes created.
 - Electricity, and water problems solved.

5 (iv) Information 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. Information communication technology- 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. Information communication technology -ICTs has proven to be economically, socially, and politically transformative.
- iv. Today the use of Information 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 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.



(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.

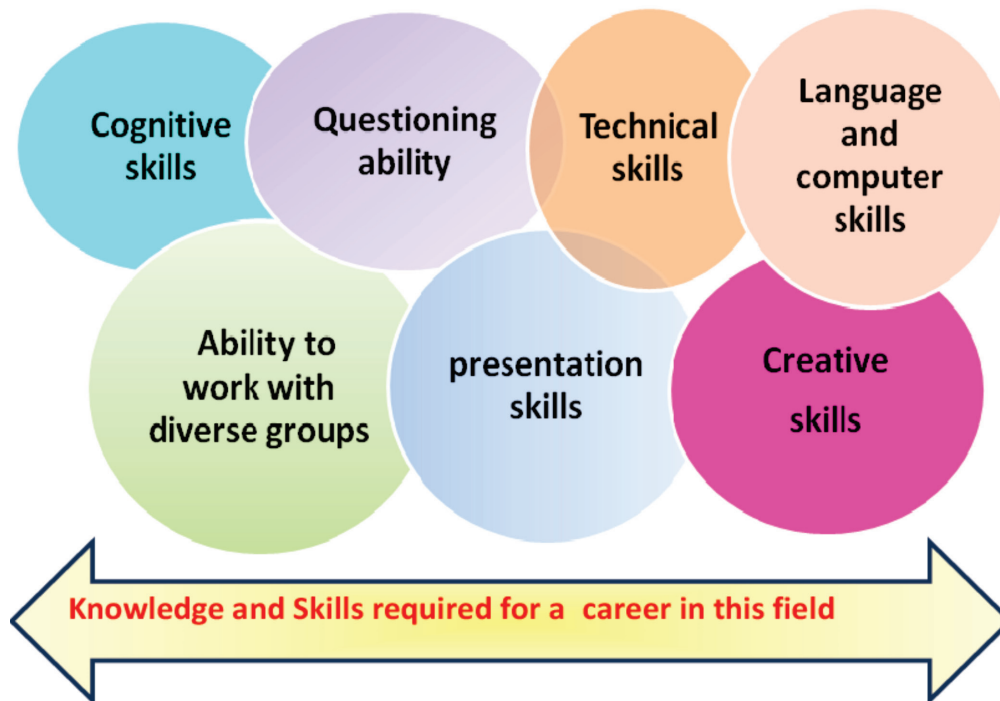
(b) SEWA - Self-Employed Women's Association

- 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 names of Abbreviations

1	DCJ	Development Communication Journalism
2	RRE	Red Ribbon Express
3	HIV	Human Immunodeficiency Virus
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 Who does the work of reaching out to the community through many means?
 - a) Accountant
 - b) Moneylender
 - c) Historian
 - d) Journalist
 Answer - d) Journalist

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

4 Pulse polio immunization is an example of multimedia _____.

- a) Project
- b) Campaign
- c) Advertisement
- d) Interactive format

Answer- b) Campaign

B) Match the following-

- | | | |
|---|---------------------------------------|------------------------|
| 1 | A. SEWA | i) Delhi University FM |
| | B. Sustainable Access in Rural India. | ii) GSAT-3 |
| | C. Community Radio | iii) Gujarat |
| | D. EduSat | iv) Tamil Nadu |

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)

b) Match the following

A. Television	i) 1969
B. Chatera Village Project.	ii) 2004
C. Development Communication 'Term'	iii) 1972
D. First Education Satellite	iv) 1959

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)

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 Questions (4 × 1 Mark)

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 Under what skills will the complete knowledge of the operation of applications like Microsoft Office, Power Point be achieved?
 - a) Cognitive skills
 - b) Computer skills
 - c) Creative skills
 - d) Hardware skillsAnswer - b) Computer Skills
- 2 Development communication professional working in advertising agency for a media, will always be in an advantageous position rather than others if he has -----.
 - a) Skills to work with a diverse group
 - b) Language skills
 - c) Creative skills
 - d) Dance skillsAnswer: c) Creative skills

- 3 Which of the following medium is not as effective as a development communication tool?
- Community Radio
 - Television
 - Discussion and debate
 - Internet

Answer - c) Discussion and debate

- 4 Which of the following statements is incorrect?
- Development journalism is a social activity.
 - Development journalism focuses on making people more infirm to their basic needs.
 - Development journalism promotes human development.
 - Development communication facilitates social, economic development, peace and happiness of individuals and the common man.

Answer- b) Development journalism focuses on making people more infirm to their basic needs.

Short Answer Questions (2 Marks)

1. What is development communication and what is its role in development? (NCERT)

Ans. Refer to Points to Remember No. 4

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 'Corona Vaccine Awareness Campaign'

'To stay protected from deadly corona disease.

'Take the covid vaccine and remain at ease'.

(Any other slogan, any one)

- 4 '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)

1. '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 two)

2 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 two)

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)

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 (2022-2023)
HOME SCIENCE (Theory) (064)

General Instructions:

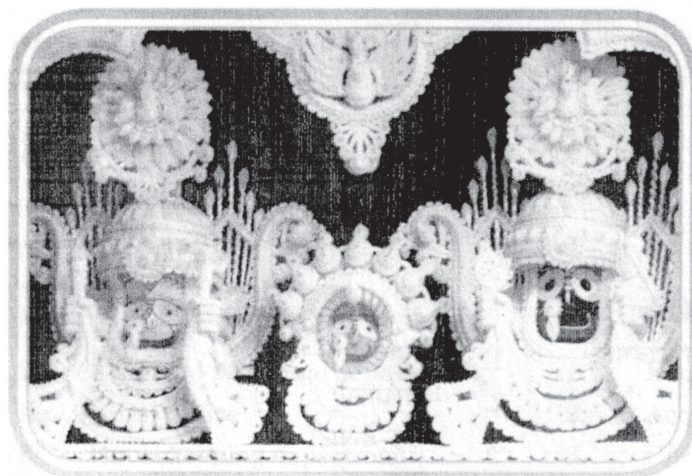
Read the following instructions carefully and strictly follow them :

- (i) **All** questions are **compulsory**.
- (ii) This question paper contains **35** questions.
- (iii) The question paper is divided into **three** sections - **Section A, B and C**.
- (iv) **Section A** has questions no. **1 to 18** (Multiple Choice Questions) of 1 mark each.
- (v) **Section B** has questions no. **19 to 25** of 2 marks each and questions no. **26 to 29** of 3 marks each.
- (vi) **Section C** has questions no. **30 to 33** of 4 marks each and questions no. **34 and 35** of 5 marks each.
- (vii) Internal choices are given in some questions.
- (viii) Support your answers with suitable examples wherever required.

Section A

1. Implementation of Red Ribbon Express (RRE) project was **not** supported by which of the following ? 1
 - (a) UNICEF
 - (b) UNESCO
 - (c) NYKS
 - (d) NACO
2. Women cells have been created in Ministry of _____ to look at the problems of women workers. 1
 - (a) Education
 - (b) Home Affairs
 - (c) Women and Child Development
 - (d) Labour and Employment

3. _____ provides hospitality to people who go hiking, undertake adventure sports, etc. 1
- (a) Lodge (b) Resort
(c) Furnished camp (d) Motel
4. Ayesha is running a campaign on 'Girl Safety'. For effective communication, she has to prepare a short film for which knowledge of camera techniques and video production is required. Identify the skill needed to operate camera equipment correctly from the following : 1
- (a) Creative skills
(b) Cognitive skills
(c) Technical skills
(d) Language and computer skills
5. Name the colour harmony/scheme where only neutral colours are used: 1
- (a) Split Complementary
(b) Monochromatic
(c) Achromatic
(d) Triadic
6. Identify the handicraft in the given picture and name the State where it is popular. 1



*The following question is for the **Visually Impaired Candidates**, only in lieu of Q. No 6 :*

Puppets are traditional handicraft of which State?

- (a) Punjab (b) Uttar Pradesh
(c) Rajasthan (d) Goa

7. Your mother wants to purchase silver bangles. Which standardization mark should she look for in them? 1

- (a) FSSAI (b) Hallmark
(c) Woolmark (d) ISI

8. Abilities that enable people to behave in healthy ways, particularly in situations that challenge them are known as:

- (a) Attitudes (b) Life skills 1
(c) Values (d) Physical labour

9. Match the following: 1

- | | | |
|---------------------------------------|----|------|
| i. National Youth Policy | 1. | 2014 |
| ii. First SOS Children's Village | 2. | 2005 |
| iii. National Curriculum Framework | 3. | 1964 |
| iv. National Policy for Older Persons | 4. | 1999 |

Choose the correct option :

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

10. Match the following : 1

- | | | |
|---------------------------------|----|----------------|
| i. Food and Beverage department | 1. | Receptionist |
| ii. Front Office | 2. | Accountant |
| iii. Housekeeping 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

11. Identify the methods of washing clothes in a top-loading washing machine. 1

- (i) Research Scholar
- (ii) Tumbling
- (iii) Calendering
- (iv) Pulsation

Choose the correct option :

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

12. Raghav wants to pursue a career in the field of Development Communication. Which of the following options may he choose ? 1

- (i) Research Scholar
- (ii) Radio Jockey
- (iii) T.V. Anchor
- (iv) Visual Merchandiser

Choose the correct option :

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

13. Proportion of Golden Mean with respect to garment size is represented by the following ratios :

- (i) 1:2:4
- (ii) 2 : 4 : 10
- (iii) 5 : 8 : 13
- (iv) 3:5:8

Choose the correct option :

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

Case Study-Based Questions

Read the passage carefully and answer the questions no. **14** to **18**.

Public Health Nutrition is the field of study that is concerned with promotion of good health through prevention of nutrition related illnesses/problems in the population and the government policies and programmes that are aimed at solving these problems. Public Health nutritionists/professionals use large scale, organised and multidisciplinary approaches to solve the problems that affect the population, i.e., large number of people for whom group action is necessary. Therefore, this field is multidisciplinary in nature and is built on the foundation of biological and social sciences. It differs from other fields of nutrition, e.g. clinical nutrition and dietetics, because the professionals are required to address problems of community/public, specially the vulnerable groups.

14. Micronutrient deficiency is called _____. 1
- (a) Goitre (b) Anemia
(c) Hidden hunger (d) Obesity
15. Professionals who deal with nutritional management of illness of an individual are referred to as : 1
- (i) Clinical Nutritionist
(ii) Public Health Nutritionist
(iii) Medical Representative
(iv) Medical Nutrition Therapist
(v) Dietitian
- Choose the correct option :
- (a) (i), (ii), (iii)
(d) (i), (iii), (iv)
(b) (i), (iii), (v)
(c) (i), (iv), (v)

OR

- (b) Why are social entrepreneurs called 'social catalysts' ?
Write any two characteristics of an entrepreneur. 2
- 22.** (a) Enlist any four objectives of Diet Therapy. 2

OR

- (b) Which four methods are used by a dietitian/clinical nutritionist to assess the nutritional status of a patient?
2
- 23.** (a) What do you understand by the term "Community Radio" ?
(b) Describe its two important roles in the development of the country. 2
- 24.** (a) Differentiate between manufactured foods and formulated foods. Give one example each. 2

OR

- (b) (i) What do you understand by High Risk Foods? Give one example.
(ii) Which temperature range is called the Danger Zone for growing of bacteria? 2
- 25.** France's dominance over international fashion began in the early 18th century.' Mention any two developments in fashion until the Industrial Revolution. 2
- 26.** (a) As per National Curriculum Framework (NCF) publication on ECCE, enlist any six guiding principles of ECCE. 3

OR

- (b) Fatima Bano wants to send her three year-old child to a preschool. Explain to her the six attributes that she should look for in a good preschool. 3
- 27.** Mandeep wants to buy a readymade pant and shirt. Explain two ways by which he can bring harmony in it. 3
- 28.** Julia wants to set up her own small hotel.
(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. 3

29. Give full forms of the following international organisations dealing with food standards, quality and trade. 3

(a) CAC

(b) ISO

(c) WTO

Section C

30. (a) 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. 2+2=4

OR

(b) (i) Prakash is working in a semi-government consumer organization. State four important roles his organization should be performing in the interest of consumers.

(ii) Name any one consumer organization based each in Delhi and Ahmedabad. Also name the magazines which they publish. 2+2=4

31.(a) (i) Enlist any two 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 Abhiyaan. 2+2=4

OR

(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. 1+3=4

32. (a) In fashion industry, what is the meaning of the term 'Fads' ? Give one example.

(b) Discuss the three levels of merchandising in fashion industry. 1+3=4

33. (a) 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?
- (b) Briefly explain two other kinds of children's homes run by the Government for vulnerable children.
- (c) Name the law enacted for children involved in anti-social activities. 1+2+1=4
34. (a) Which five knowledge and skills are required by a recipe development professional involved in Food Processing and Technology industry? Elaborate in detail. 5

OR

- (b) Define Toxicity and Hazard. Explain three types of hazards in foods with examples. 1+1+3=5
35. (a) Your friend wants to become a fashion designer. Enumerate three primary skills that he should possess, in order to be successful.
- (b) Illustrate and explain to him the difference between formal and informal balance. 3+2=5

For Visually Impaired Candidates

- (b) No need to draw diagrams.

CBSE PAPER (2022-23)
CLASS XII HOME SCIENCE (064)
MARKING SCHEME

Q.No.		Marks
SECTION A		
1.	(b) UNESCO	1
2.	(d) Labour and Employment	1
3.	(c) Furnished camp	1
4.	(c) Technical skills	1
5.	(c) Achromatic	1
6.	Shola craft, Odisha or West Bengal	
	1 mark should be awarded for attempting the question as options are not provided.	
	For the Visually Impaired Candidates-	
	(c) Rajasthan	
7.	(b) Hallmark	1
8.	(b) Life skills	1
9.	(c) i 1, ii 3, iii 2, iv 4	1
10.	(a) i 3, ii 1, iii 4, iv 2	1
11.	1 mark should be awarded for attempting the question as correct option is not provided in English medium.	1
12.	(d) (i), (ii) and (iii)	1
13.	(b) (iii) and (iv)	1
14.	(c) Hidden hunger	1
15.	(d) (i), (iv), (v)	1
16.	(b) Underweight	1
17.	(d) (ii), (iv), (v)	1
18.	(b) Primary Health Centre	1

SECTION B

19. Within the broad category 'Youth', write names of four groups who are especially vulnerable.

Names of four Youth groups who are especially vulnerable- $\frac{1}{2} \times 4 = 2$

1. Rural and Tribal Youth
2. Out-of-school Youth
3. Adolescents, particularly female adolescents
4. Youth with disabilities
5. Youth under specially difficult circumstances like victims of trafficking, orphans and street children

Any other, Any four

20. How are phytochemicals different from medical foods?

Phytochemicals (Bioactive compounds) $1+1=2$

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.

Any other, Any one difference

21. (a) List four pillars on which the science of ergonomics is set. $\frac{1}{2} \times 4 = 2$

Four pillars of ergonomics-

1. Anthropometry (body size and measurements)
2. Biomechanics (musculoskeletal activities and forces exerted)
3. Physiology
4. Industrial psychology

OR

(b) Why are social entrepreneurs called 'social catalyst?'
Social entrepreneurs are called "social catalysts" as they-

1. focus on social good
2. achieve large scale social benefits
3. work for underserved/neglected/ disadvantaged people
4. help those who lack financial resources
5. create/bring social changes
6. bring sustainable development /improvements
7. bring development in social fields of education/health care/economic development /environment/arts/any other
8. does not work for profits but for social benefits and impact

Any other, Any one

Write any two characteristics of an entrepreneur.

Two characteristics of an entrepreneur-

1. Willingness to work hard
2. Knowledge and skills for planning and implementation
3. Skills of management of finances, materials, personnel and time
4. Having the courage to take calculated risks
5. Ability and preparedness to handle many tasks simultaneously
6. Ability to learn and acquire the necessary skills for the tasks at hand
7. Ability to deal with tough issues and find the solutions
8. Being realistic and not expecting easy solutions
9. Ability to cope with set-backs, challenges and failures
10. Ability to develop partnerships, and able networking

11. Ability to negotiate, strategise and prioritise
12. Being flexible and able to handle crises
13. Have good communication skills

Any other, Any two

22. (a) Enlist any four objectives of Diet Therapy. Four objectives of Diet Therapy are- $\frac{1}{2} \times 4 = 2$

1. formulation of the diet to meet the needs of the patient taking into consideration her or his food habits
2. modification of the existing diets to ameliorate the disease condition and to keep it under control
3. correction of nutritional deficiencies
4. prevention of short-term and long-term complications in case of chronic diseases
5. education and counselling of the patient regarding the need to adhere to the prescribed diet

Any other, Any four

OR

(b) Which four methods are used by a dietitian/clinical nutritionist to assess the nutritional status of a patient?

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 tests 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

23. (a) **What do you understand by the term “Community Radio”?** 1

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

Any other, Any one

- (b) **Describe its two important roles in the development of the country. Its two important roles -** $\frac{1}{2} \times 2 = 1$

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

Any other, Any two

- 24. Differentiate between manufactured foods and formulated foods. Give one example each.** $\frac{1}{2} \times 4 = 2$

Manufactured foods	Formulated 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.	These are products prepared by mixing and processing of individual ingredients to result in relatively shelf stable food products.
Examples-pickles, jams, marmalades, squashes, papads, wadis.	Examples-bread, biscuits, ice cream, cakes, kulfi.

Any other, Any one difference with one example for each

OR

- (b) (i) What do you understand by High-Risk Foods? Give one example. High- Risk Foods.** 1

They are protein rich foods attacked by bacteria.

Example-Meat, fish, poultry, eggs and dairy products $\frac{1}{2}$

Any other, Any one example

- (ii) Which temperature range is called the Danger Zone for growing of bacteria?** $\frac{1}{2}$

Temperature range

5°C - 60°C

- 25. 'France's dominance over international fashion began in the early 18th century.' Mention any two developments in fashion until the Industrial Revolution.**

Development in fashion until the Industrial Revolution-

1. Support from the royal court $1 \times 2 = 2$
2. Development of silk industries in France
3. Many of the French cities were supplying the court with silk fabrics, ribbons and laces

4. Clothes were handmade/hand sewn
5. Clothes were custom made

Any other, Any 'two

- 26. (a) As per National Curriculum Framework (NCF) publication on ECCE, enlist any six guiding principles of ECCE.** $\frac{1}{2} \times 1 = 3$

Six guiding principles of ECCE-

1. Play as the basis for learning
2. Art as the basis of education
3. Recognition of the special features of children's thinking
4. Primacy of experience rather than expertise (i.e., experiential learning is emphasised)
5. Experience of familiarity and challenge in everyday routines
6. Mix of formal and informal interactions
7. Blend of textual and cultural sources
8. Use of local materials, art and knowledge
9. Developmental appropriate practices, flexibility and plurality
10. Health, well-being and healthy habits

Any six

OR

- (b) Fatima Bano wants to send her three-year-old child to a preschool. Explain to her the six attributes that she should look for in a good preschool.**

Six attributes that she should look for in a good preschool-

1. Safe and secure environment $\frac{1}{2} \times 6 = 3$
2. Clean and hygienic environment
3. Play way method of learning
4. Child centered approach
5. First Aid / Medical Facilities
6. Loving and Trained teachers/staff

7. Variety of play materials / Recreational Facilities
8. Informal education
9. Optimal learning environment
10. Prepares for formal school
11. Availability of additional support for children with special needs or difficult circumstances/ Inclusive education

Any other, Any six

- 27. Mandeep wants to buy a readymade pant and shirt. Explain two ways by which he can bring harmony in it.**

Two ways by which harmony can be created- $1\frac{1}{2}+1\frac{1}{2}=3$

1. By texture-Texture and accessories should be in accordance with each other. For perfect harmony, both shirt and pant should be of same texture. Example- Cotton shirt with cotton pant.
2. By shape-By using same lines and shapes in a garment, by matching prints, angles of lines and colours to maintain the continuity of the design. Example- Collar, cuff, pocket and hem should be of the same shape.
3. By colour-Using any colour scheme/harmony.
Example-Colour of both shirt and pant should blend together according to any colour scheme.

Any other, Any two

- 28. Julia wants to set up her own small hotel. $\frac{1}{2}\times 4=2$**

(a) She wants to make her employees understand the Guest cycle first. Explain the four stages of guest cycle for her employees.

Four stages of guest cycle-

1. Pre -arrival Stage -quoting rates for a guest, reserving a room.
2. Arrival Stage-The guest actually arrives and registers or Checks- in.
3. Occupancy Stage -providing services as per the guest's requirements, ensuring security of the guest,

coordination of various guest services, ensuring guest satisfaction.

4. Departure Stage -This is the final stage where the guest is ready to leave/ move out or Check-out of the accommodation, Guest history including feedback from the guest is obtained.

(b) List two environmental conservation and eco-friendly practices which she will ensure in her hotel. $\frac{1}{2} \times 2 = 1$

Two environmental conservation and eco-friendly practices to be ensured in the hotel-

1. using 100 percent organic cotton bed sheets
2. using chemical free laundry cycle
3. using agents which are non- toxic, water-based, hypoallergenic and biodegradable
4. urging the guest to reuse towels so that resources like water, electricity, detergent used for laundering can be saved
5. use of energy- efficient light bulbs in rooms can help save electricity
6. rain water harvesting
7. use of solar energy
8. avoid single use plastic
9. plantation of trees/maintaining hotel lawns
10. composting from hotel's kitchen waste

Any other, Any two

29. Give full forms of the following international organisations dealing with food standards, quality and trade. $1 \times 3 = 3$

(a) CAC

(b) ISO

(c) WTO

Full forms -

(a) CAC- Codex Alimentarius Commission

- (b) ISO-International Organisation for Standardisation
- (c) WTO-World Trade Organisation

SECTION C

30. (a) 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. $\frac{1}{2} \times 4 = 2$

Four consumer rights-

1. Right to Safety
2. Right to Choose
3. Right to be Informed
4. Right to be Heard
5. Right to seek Redressal
6. Right to Consumer Education

Any four

Four consumer responsibilities-Consumer should-

$\frac{1}{2} \times 4 = 2$

1. regularly update their knowledge of various laws made by the government.
2. be honest in all their dealings and must pay for all their purchases.
3. do a market survey and compare the prices.
4. feel free to choose from variety available as per their needs and requirements.
5. read all the information given on the label/ brochure.
6. buy products with standardisation marks.
7. keep receipts and other relevant documents of purchase.
8. read and understand all terms and conditions, liabilities, service charges etc. before purchasing services like insurance, credit cards, bank deposits etc.

9. have increased awareness about various national and international consumer organisations.

Any other, Any four

OR

- (b) (i) Prakash is working in a semi-government consumer organization. State four important roles his organization should be performing in the interest of consumers.** $\frac{1}{2} \times 4 = 2$

Four important roles of consumer organization-

1. Creating consumer awareness
2. Disseminating information through magazines, booklets, newsletters, buying guides, audio visual material etc.
3. Providing legal advice
4. Comparative testing of products
5. Conducting product recall
6. Handling Consumer complaints and grievances
7. Organising public meetings
8. Empowering consumers and consumer movement
9. Bringing out publications in Consumer interests
10. Setting up of libraries and documentation centres
11. Act as vigilance group

Any other, Any four

- (ii) Name any one consumer organization based each in Delhi and Ahmedabad. Also name the magazines which they publish.** $\frac{1}{2} \times 4 = 2$

Place	Consumer Organization	Magazine
Delhi	VOICE	Consumer Voice
Ahmedabad	CERC	Insight

31. (a) (i) Enlist any two short-term interventions of POSHAN Abhiyaan which was launched in March 2018.

Two short-term interventions of POSHAN Abhiyaan-

1×2=2

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
2. Fortification of essential foods (salt fortified with iodine)
3. Production and popularisation of low-cost nutritious foods from indigenous and locally available raw materials by involving women in this activity
4. Control of micronutrient deficiencies among vulnerable groups by supplementing these nutrients, distributing free tablets, etc.

Any two

(ii) Mention any four nutritional programmes operating in our country, other than POSHAN Abhiyaan.

Four nutritional programmes operating in our country other than Poshan Abhiyaan-

$\frac{1}{2} \times 4 = 2$

1. ICDS
2. Nutrient Deficiency Control programmes-
 - National Prophylaxis Programme for Prevention of Blindness due to Vitamin A deficiency
 - National Nutritional Anemia Prophylaxis Programme
 - National Iodine Deficiency Disorder Control Programme
3. Food Supplementation Programmes-
 - Mid-Day Meal Programme
4. Food Security Programmes-
 - Public Distribution System
 - Antodaya Anna Yojana
 - Annapurna Scheme
 - National Food for Work Programme

5. Self-employment and wage employment schemes

Any other, Any four

OR

(b) (i) What do you understand by modified diets? 1

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

(ii) Based on changes in consistency, what are the three types of diets? Give one example of each diet. $1 \times 3 = 3$

Three types of diets based on changes in consistency's.
Clear liquid diet

- very thin in consistency
- given just after surgery
- Free from fibre and less in spices

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

2. Liquid diet

- fluid in consistency at room temperature
- advised to person who are unable to chew or swallow
- Very less in fibre and spices Example- Soup, fruit juice, milk, buttermilk, etc.

3. Semi-solid diet

- includes food in semi solid state » less in fibre and spices

Example-Thin custard, thin porridge, etc.

4. Soft diet

lightly seasoned and less fibrous « easy to chew and digest
Examples-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 oily and spicy
Example- Stewed fruits, mashed and boiled vegetables, etc.

Any three with one example for each

- 32. (a) In fashion industry, what is the meaning of term “Fads”? Give one example.** $\frac{1}{2} \times 2 = 1$

Fads are short-lived fashion which can come and go in a single season. They lack the design strength to hold consumer attention for long. **Example-** Hot pants, baggy pants, unmatched buttons, etc.

Any other, Any one example

- (b) Discuss the three levels of merchandising in fashion industry.** $1 \times 3 = 3$

Three levels of merchandising in fashion industry-

1. Retail organization merchandising
 - It is the business that moves the fashion world from designer’s showroom to retail sales floor and into the hand of consumers.
 - Ensures that adequate amount of merchandise is on hand and sold at prices that consumers are willing to pay.
2. Buying Agency Merchandising
 - Acts as procurement office for the buyers.
 - Keeps a regular control over quality during production process.
 - Provides services for buying consultancy.
 - Profitable for exporters-saves cost and time.
3. Export House Merchandising

Two types of merchandising in an export house -

 - a) Buyer merchandiser-
 - acts as a link between the buyer and the manufacturer.
 - ensures the requirements of the buyer.

- b) Production merchandiser-
- acts as a link between production and buyer merchants.
 - ensures that the production goes according to the schedule and requirements of the buyer.

Any one point for each level

33. (a) 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?

Observation Home 1

(b) Briefly explain two other kinds of children homes run by the Government for vulnerable children.

Two other kinds of children homes run by the Government for vulnerable children-

1. Special homes- where juveniles (children under 18 years of age) found guilty in terms of violation of law, are placed in custodial care. $1 \times 2 = 2$
2. 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) Name the law enacted for children involved in anti-social activities.

Juvenile Justice (Care and Protection of Children) Act 1

34. (a) Which five knowledge and skills are required by a recipe development professional involved in Food Processing and Technology industry? Elaborate in detail.

Five knowledge and skills required by a recipe development professional involved in Food Processing and Technology industry are- $1 \times 5 = 5$

1. Expertise in cooking
2. Knowledge of nature and properties of food
3. Uses of ingredients, measuring and weighing them accurately

4. Designing, analysing and adapting a basic recipe
5. Food handling skills
6. Food production following hygiene and safety norms
7. Handling tools and equipments accurately
8. Innovations in product design and preparation according to consumer perceptions
9. Use of Information Technology for contemporary production

Any other, Any five

OR

(b) Define Toxicity and Hazard. Explain three types of hazards in foods with examples.

Toxicity

It is the capacity of a substance to produce harm or injury of any kind under any conditions. 1

Hazard

It is the relative probability that harm or injury will result when substance is not used in a prescribed manner and quantity. 1

Three types of hazards in foods with examples - 1×3=3

1. **Physical Hazard**-Any physical material not normally found in food which causes illness or injury.
Example- wood, stones, hair, bidi, cigarettes, buttons, nails, etc.
2. **Chemical Hazard**-Chemical or deleterious substances which may be intentionally or un-intentionally added to foods.
Example-pesticides, chemical residues, food colours, preservatives, toxic metals, etc.
3. **Biological Hazards**-Living organisms which include microbiological organisms associated with food that cause diseases.

They may be of two types -

- Visible-Example-worms, fly, cockroach, weevil, etc.
- Invisible-Example-bacteria, virus, yeast, mould, protozoa, etc.

Three hazards with any one example for each

- 35. (a) Your friend wants to become a fashion designer. Enumerate three primary skills that he should possess, in order to be successful.**

Apart from flair/ knowledge of fashion three primary skills required to become successful fashion designer are - 1×3=3

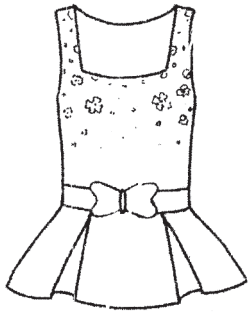
1. Forecasting ability/should be able to predict fashion trends/awareness of market trends
2. Analytical ability/must keep abreast of the economy/ should understand how styles fit into budget
3. Communication ability/should be able to negotiate with the manufacturer and sell their fashion choices to the consumer/ Writing skills

Any other, Any three

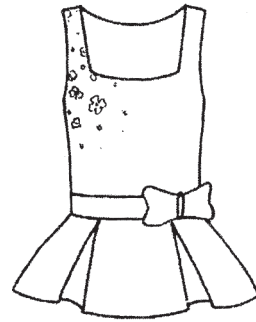
- (b) Illustrate and explain to him the difference between formal and informal balance.** 1×2=2

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 one difference



Formal Balance



Informal Balance

Any other suitable illustration

For Visually Impaired Candidates-

(b) No need to draw diagrams.

CBSE SAMPLE PAPER (2023-2024)
CLASS-XII
HOME SCIENCE (Theory) (064)

Time: 3 Hours

Maximum Marks: 70-

General Instructions

1. All questions are compulsory.
2. There are total 35 questions.
3. Question paper is divided into four sections-A, B and C and D.
4. Section A has question no.1 to 14 (Multiple choice questions) and are of 1 mark each.
5. Section B has question no. 15 to 18 are case based questions and are of 1 mark each.
6. Section B has question no.19 to 25 of 2 marks each and question no.26 to 29 of 3 marks each.
7. Section C has question no.30 to 33 of 4 marks each and question no.34 and 35 are of 5 marks each.
8. Internal choices are given in some questions.
9. Support your answers with suitable examples wherever required.

SECTION A (Multiple Choice Questions) 1 Mark

1. Hot pant is an example of-
 - a) Classic
 - b) Fashion
 - c) Fads
 - d) Style

2. Which of the following is not the guiding principle of ECCE?1
 - a) Blend of textual and cultural sources
 - b) Experiential learning is emphasized
 - c) Based on only informal interaction
 - d) Health, wellbeing and healthy habits
3. Which Article of the Constitution of India guarantees equality of opportunity for all citizens in matters related to employment?
 - a) Article 16(1)
 - b) Article 16(2)
 - c) Article 26(1)
 - d) Article 36(2)
4. Name the psychologist who emphasized on supportive environment for young children.
 - a) Piaget
 - b) Maria Montessori
 - c) Vygotsky
 - d) Sigmund Freud
5. Which of the following method of washing is usually used in front load washing machine?
 - a) Agitation
 - b) Pulsation
 - c) Tumbling
 - d) Crumbling
6. Aditya is wearing dark pink kurta with light pink pajama. Which colour harmony he is referring to -
 - a) Analogous
 - b) Achromatic
 - c) Accented
 - d) Monochromatic

(OR)

The shapes that do not resemble any specific objects are-

- a) Natural
- b) Abstract
- c) Stylised
- d) Geometric

7. What is the full form of SEWA?
- Self-Employed Women Association
 - Self-Employed Work force Association
 - Sustainable Employability Women Artisans
 - Self-Empowered Women Association
8. The beneficiaries of NOAPS should be above -
- 65 years with destitute status
 - 62 years with disrepute status
 - 58 years with substitute status
 - 60 years with constitute status
9. Find the incorrect statement from the following:
- Working and earning one's livelihood offers scope for hope, self-esteem and dignity.
 - Meaningful work is useful to society or to others, is done responsibly and is enjoyable to the worker.
 - A livelihood is driven by a deep desire to excel and a passionate need to grow.
 - Work is a set of activities with an intended set of outcomes.
- 10. Select correct pair.**
- Application of scientific knowledge in food production
Food adulteration
 - Transformation raw ingredients into finished and semi-finished products: Food processing
 - Mass production of food products: Food technology
 - Changes that occur at various stages of food: Food manufacturing
- 11. Match List I with List II**
- | List I (Youth Programmes) | List II (Activities) |
|----------------------------------|------------------------------|
| A. National Service Scheme | I. Adult Education |
| B. Scouts and Guide | II. Study of flora and fauna |

- C. Promotion of Adventure III. Organising Rallies
 D. National Service IV. Tree plantation
 Volunteer Scheme

Choose the correct option from the following-

- a) A—III; B—IV; C—II; D—I
 b) A—IV, B — III; C—II; D—I
 c) A—II; B—III; C—IV; D—I
 d) A—I; B—II; C—III; D—IV

12. Match List I with List II

List I (Mode of communication)

- A. Radio
 B. Press
 C. Television
 D. ICT

List II (Features)

- I. Economic activity
 II. Most popular
 III. Pillar of Democracy
 IV. Edusat

Choose the correct option from the following-

- a) A—III; B—IV; C—II; D—I
 b) A—IV; B—III; C—II; D—I
 c) A—II; B—III; C—IV; D—I
 d) A—I; B—II; C—III; D—IV

13. Ergonomics is the judgement of 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-

- 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

(OR)

Which of the following soft skills are required by a person who wants to join textile industry?

- 1. Learning effectively
- 2. Positive health
- 3. Communicating clearly
- 4. Prevention of negative behaviour

Choose the correct option from the following-

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

14. Knowledge in area of consumer education and protection can help to develop career in -

- 1. Government and Non-Government organizations
- 2. Journalism and Audio-visual publicity
- 3. Merchandising and forensic science
- 4. Financial advisor

Choose the correct option from the following-

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

SECTION-B

CASE STUDY BASED QUESTIONS (CBQ) 1 Mark

Read the passage carefully. Answer question no. 15 to 18.

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.

15. Which of the following is incorrect pair?
- a) Seeds: Physical Hazard
 - b) Salmonella: Biological Hazard
 - c) Probiotics: Chemical Hazard
 - d) Hepatitis: Pathogen
16. Which of the following is responsible to eliminate false labelling of the products?
- a) GMP
 - b) GHP
 - c) HACCP
 - d) GDP
17. **Given below are two statements labeled 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.

18. Given below are two statements labeled 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.
- 19.** 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 interventions are required for the revival of these occupations.
- 20.** Mention four stages of guest cycle to Mr. Anurag who has recently joined the Front Desk.

(OR)

2+2=4

Mr. Sushant is the hospitality management graduate. He joined the hotel as front office receptionist. What will be his four duties/responsibilities?

21. Give four objectives of diet therapy.

SECTION-C (Short Answer Questions) (SAQ) 2/3 Marks

22. "An analytical capability is pre-requisite of a fashion merchandiser". Justify this statement with two reasons.
23. What could be the four factors that lead to food deterioration or spoilage?
24. 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.

(OR)

Aarav wants to work in the day care center. What four skills he must possess?

25. Mention two key roles of each CAC and WTO in protecting health of the consumers.
26. 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.
27. What do you understand by the term 'Development Communication'? Write any four essential features of it.

(OR)

Explain the term Campaign with the help of an example. How is it effective tool of communication? Support your answer with two reasons.

28.
 - a) What do you mean by functional food? Give an example.
 - b) Roma wants to develop new recipe of pickle. What four skills she must possess?
29.
 - a) Enlist any four duties of the staff who are working in the restaurant.
 - b) Give any two skills they must possess while dealing with the customers.

(OR)

Enumerate any three roles of Housekeeping department of the hotel.

30. Amrita is a pure vegetarian. She 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 vegetarian ingredient. She asked shopkeeper to return but he refused.
- Give two rights which were not fulfilled /violated in the above situation.
 - Explain her any four responsibilities she must have followed before buying any commodity.

SECTION-D

(Long Answer Questions)

31. Elaborate any two ways each of creating balance and proportion in the dress.

OR

4

Demonstrate any four colour harmony of contrasting colour scheme.

32. Your friend Rohan is medical nutrition therapist in a city hospital. 2+1+1=4
- Indicate any four methods he will use to obtain the information on the patient's nutritional status and needs.
 - Which is the best mode of feeding he will suggest for your grandfather who has undergone intestinal surgery and why?
 - What type of diet he will recommend for your grandfather once he recovers and why?
33. In order for the child to grow optimally in all areas, it is important that the child's needs for food, shelter, health care, 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. 1+1+2=4

- a) When was first SOS village established?
 - b) What is the main aim of SOS village?
 - c) How can you distinguish it with ICDS? Give two points.
34. a) Outline three each short-term and long-term strategies implemented to solve nutritional problems in India.
- b) Describe any two nutrition programmes operating in our country. 3+2=5

(OR)

- a) Compare three each benefit and drawbacks of Food or Diet based strategies used to combat public nutrition problems in India.
 - b) What are the two functions of Iodine in human body? Tell two ill-effects if pregnant woman is not taking recommended amount of iodine in her diet.
35. Mohan has recently opened Hi- tech laundry in the city. He got a contract signed with the Government hospital. 1+4=5
- a) What two important points he must consider while doing hospital laundry?
 - b) Write eight steps of the process of laundry function in hospitals.

CBSE SAMPLE PAPER (2023-2024)
CLASS-XII
HOME SCIENCE (064)
MARKING SCHEME

SECTION A

1.	c. fads	1
2.	c. Based of on only informal interaction	1
3.	a. Article 16(1)	1
4.	a. Piaget	1
5.	c. Tumbling	1
6.	d. Monochromatic OR b. Abstract	1
7.	a. Self-Employed Women Association	1
8.	a. 65 years with destitute status	1
9.	A livelihood is driven by a deep desire to excel and a passionate need to grow.	1
10.	b. Transformation raw ingredient into finished and semifinished products: Food processing.	1
11.	b. A-iv, B-iii, C-ii, D-i	1
12.	c. A-ii, B-iii, C-iv, D-i	1
13.	a. i and ii OR c. i and iii	1
14.	a. i and ii	1
SECTION B (CASE BASED QUESTIONS)		
15.	c. Probiotics : Chemical Hazard	1

16. a. GMP 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

SECTION-B

19. Four areas where interventions are required for the revival traditional occupations- $\frac{1}{2} \times 4 = 2$
- Innovation in design
 - Implementing of preservation and refinement strategies
 - Use of eco-friendly raw materials and packaging
 - Establishment of training facilities
 - Conservation of traditional knowledge
 - Protection of intellectual property rights (IPR)
- Any other, Any four
20. Four stages of guest cycle- $\frac{1}{2} \times 4 = 2$
- Pre-arrival stage- Quoting rates for a guest
Reserving a room as a part of central reservation system or reservation department.
 - Arrival Stage -Guest actually arrives and registers or checks-in.
 - Occupancy-Provides various services as per the guest's requirements, ensuring security of the guest and coordination of various guest services.
 - Departure-The guest is ready to leave/move out or "check-out" of the accommodation.
- Any four stages

(OR)

Four duties/responsibilities of Front Office Receptionist -

- Reserves rooms for the guests $\frac{1}{2} \times 4 = 2$
- Registering guests
- Assigns rooms to the guests

- Provides information to guests during their stay in the hotel

(Any other, Any four)

21. Four objectives of diet therapy are- $\frac{1}{2} \times 4 = 2$

- formulation of the diet to meet the needs of the patient
- modification of the existing diets to ameliorate(rectify) the disease condition
- correction of nutritional deficiencies
- prevention of short-term and long-term complications in case of chronic diseases
- education and counselling of the patient

Any other, Any four

22. Two reasons why analytical capability is required for fashion merchandiser- $1 \times 2 = 2$

- Fashion merchandisers and marketers must keep abreast of the economy as a whole, the economy of their particular companies
- They must be able to assume how certain styles will fit into a consumer's budget.
- They must ensure that they make a profit for their employers

(Any other, Any two)

23. Four factors that lead to food deterioration or spoilage are-

- Infestation by insects $\frac{1}{2} \times 4 = 2$
- Inappropriate temperatures used for processing and/or storage
- Excessive exposure to light and other radiations
- Contamination by micro-organisms
- Physical and chemical changes after harvesting/ slaughtering

(Any other, Any four)

24. Two courses which can be done along with graduation-

$\frac{1}{2} \times 2 = 2$

- Certificate Programme in NGO Management
- Diploma in Youth Development Work

(Any other, Any two)

(OR)

Four skills he must possess-

$\frac{1}{2} \times 4 = 2$

- an interest in children and their development.
- knowledge about the needs and capabilities of young children.
- capacity and motivation for interacting with children.
- skills for creative and interesting activities with children in all areas of development.
- enthusiasm for activities like storytelling, exploration, nature and social interaction.
- willingness and interest in answering children's queries.
- capacity for understanding individual differences.

(Any other, Any four)

25. Two key roles of CAC in protecting health of the consumers-

$1 + 1 = 2$

- Establishing international standards to protect the health of the consumers $\frac{1}{2} \times 2 = 1$
- Facilitate fair practices in food and agricultural trade

(Any other, Any two)

Two key roles of WTO in protecting health of the consumers-

$\frac{1}{2} \times 2 = 1$

- To help trade flow smoothly, freely, fairly and predictably
- By administering trade agreements
- Settling trade disputes

- Assisting countries in trade policy issues

Any other, Any two

26. Three types of different stores - 1×3=3

- Small Single-unit Store-It is a neighborhood store. These are owner and family operated single stores.
- Department Stores consist of separate sections, known as departments, such as clothing, sporting goods, automotive supplies, health and beauty products and electronics equipment. Some department stores may also sell food products.
- Chain stores are retail outlets that share a brand and central management and usually have standardised business methods and practices.

Any other, Any three stores

27. Development Communication- 1+2=3

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. 1

Four essential features of Development Communication-

$\frac{1}{2} \times 4 = 2$

- 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.

(OR)

Campaign- 1+1+1=3

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. 1

(Any other definition)

Example-

- Swachh Bharat Mission
- Red Ribbon Express (RRE)

(Any other, Any one) 1

Campaign is effective tool of communication (Two reasons)-

- Ensures attention and interest.
- It lasts in the memory of the people and stimulates action.
- It creates conducive environment for adoption of practices

Any other, Any two $\frac{1}{2} \times 2 = 1$

28. A. Functional food- 1+2=3

These are foods that can have a beneficial effect on human health. $\frac{1}{2} \times 2 = 1$

An example-

- Probiotics
- Lycopene

Any other, Any one example

B. Four skills required for recipe development- $\frac{1}{2} \times 4 = 2$

- Expertise in cooking skills and energy use
- Uses of ingredients, measuring and weighing them regularly
- Designing, analyzing and adapting a basic recipe
- Handling tools and equipment accurately
- Innovations in product design and preparation according to consumer perceptions
- Use of Information Technology for contemporary production

Any other, Any four

29. A. Four duties of the staff who are serving the food to the customers in the restaurant- $2+1=3$
- Provides food and beverages to the customers $\frac{1}{2} \times 4=2$
 - Clears the table
 - Maintains cleanliness of the restaurant
 - Taking bill payments of food and beverages from the customer $\frac{1}{2} \times 2=1$
- Any other, Any four
- B. Two skills they must possess-
- Thorough knowledge of the ways of serving the food
 - High standards of hygiene
 - Basic etiquettes and good manners
- Any other, Any two

(OR)

- Three roles of Housekeeping- $1 \times 3=3$
 - Cleaning of public areas and guestrooms
 - Supply, upkeep of laundry and exchange of various linen
 - Internal flower arrangement and maintenance of external landscape or garden.
 - Coordination and communication with other departments such as front office, restaurants, engineering, accounts, etc., through control desk.
 - Pest control
- Any other, Any three for each

SECTION-D (Long Answer Questions)

30. A. Two rights which were not fulfilled /violated in the above situation- $2+2=4$
- Right to be informed-To demand information regarding products
 - Right to be Heard-To receive due consideration in

appropriate forum 1×2=2

Any other, Any two

B. Four responsibilities she must have followed - $\frac{1}{2} \times 4 = 2$

- Regularly updating their knowledge of various laws and legislative procedure.
- Should do a market survey to find out the different brands, features etc. of items available in different shops/ markets and should compare the prices.
- Should feel free to choose from the variety available as per their needs and requirements.
- Read all the information given on the label/ brochure.
- Buy products with standardization marks.
- Keep receipts and other relevant documents of purchase.

Any other, Any four

31. Two ways of creating balance- 2×2=4

- Symmetrical /Formal balance-When design has equal elements on both sides. 1×2=2
- Asymmetrical/ Horizontal /Informal balance-When details of a garment on one side differ from those on the other side.
- Radial Balance-When elements of design radiate from a central focal point in a dress.

Two ways of creating proportion- 1×2=2

- Proportion of Scale-It is based on proportion of Golden Mean 3:5:8,5:8:13 and so on
- Proportion of colour-Using colour in unequal amounts
- Proportion in shape and form-Size and position of prints/motifs should be in proportion with the size of the wearer
- Proportion of texture-Textures should support the design of the garment and size of the person

Any two ways for each

(OR)

Four colour harmony of contrasting colour scheme- $1 \times 4 = 4$

- Complementary harmony - Uses two hues that lie directly opposite to one another on the Colour Wheel.
- Double complementary - Has two pairs of complements, usually neighbours on the Colour Wheel
- Split complementary - Has three colour combination- a hue, its complement (directly across on the Colour Wheel) and neighbour. It may also use a hue and two neighbour of its complement.
- Analogous complementary - A combination of analogous and complementary schemes, a complement selected for dominance in a group of neighbouring colours.
- Triadic Harmony - A combination of three hues that lie equidistant from one another on the Colour Wheel.

Any four harmony

32. A. Four methods he uses to obtain the information on the patient's nutritional status and needs- $2+1+1=4$
1. Anthropometric measurements (Height, weight, head and chest circumference) $\frac{1}{2} \times 4 = 2$
 2. Biochemical assessment (Relating the information of laboratory and physical measurements with the above information)
 3. Clinical Assessment (Obtaining detailed information on health, diet, personal and medication histories)
 4. Disease Identification (Using the above information to identify potential nutritional deficiencies and risk of future deficiencies)
- Any other, Any four
- B. Best mode of feeding he will suggest for your grandfather who has undergone mouth surgery-Intravenous Feeding $\frac{1}{2} \times 2 = 1$

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 $\frac{1}{2} \times 2 = 1$

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

33. A. First SOS village was established in-1964 $1+1+2=4$

B. Main aim of SOS Village- Provides family based long term care to children who can no longer grow up with their biological families. 1

Any other, Any six

C. Two differences between ICDS and SOS- $1 \times 2 = 2$

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 nongovernment social organisation.
It does not follow family approach.	It follows family approach.

Any other, Any two $3+2=5$

34. A. Three each short- term and long-term strategies implemented to solve nutritional problems in India- Short term strategies- $1\frac{1}{2}+1\frac{1}{2}$

- Integrated Child Development Services (ICDS) to cover all vulnerable group. $\frac{1}{2} \times 3 = 1\frac{1}{2}$

- fortification of essential foods (salt fortified with iodine)

- production and popularisation of low-cost nutritious foods from indigenous and locally available raw material by involving women in this activity.

- control of micronutrient deficiencies (iron, vitamin A, folic acid and iodine) among vulnerable groups.

Long-term strategies- $\frac{1}{2} \times 3 = 1\frac{1}{2}$

- ensuring food security i.e., improving availability of food
- improving the dietary patterns by ensuring availability of nutritionally rich foods
- reducing poverty for rural and urban poor through employment generation schemes and public distribution system, implementing land reforms, etc.

Any other, Any three for each

B. Two Nutrition programmes operating in our country-

$1 \times 2 = 2$

- ICDS: It is an outreach programme for early childhood care and development
- Nutrient Deficiency Control programmes: National Prophylaxis programme for prevention of blindness due to vitamin A deficiency, National Anemia control programme, National Iodine deficiency disorder control programme,
- Food Supplementation programmes like the Mid-day meal programme,
- Food security programmes: Public Distribution System, Antodaya Anna Yojana, Annapurna Scheme, National Food for Work Programme
- Self-employment and wage employment schemes

Any other, Any two

(OR)

A. Three benefit of Food or Diet Based strategies used to combat public nutrition problems- $3 + 2 = 5$

- Highly cost effective $\frac{1}{2} \times 3 = 1\frac{1}{2}$
- Wide coverage
- Sustainable

Any other, Any three

Three drawbacks of Food or Diet Based strategies used to combat public nutrition problems- $\frac{1}{2} \times 3 = 1\frac{1}{2}$

- Requires research

- Participation of food industry
 - Requires changes in eating behavior
 - Requires change in agricultural policies
- Any other, Any three
- B. Two functions of Iodine-
- Required for normal mental growth
 - Essential for physical growth and development
- Any other, Any two Two ill effects of iodine deficiency during pregnancy-
- Results in mental retardation of the foetus
 - Causes congenital abnormalities of the foetus
- Any other, Any two 1+4=5
35. A. Two important points to be considered while doing hospital laundry- $\frac{1}{2} \times 2 = 1$
- Emphasize on hygiene and cleanliness
 - Ensures disinfection of clothes
- Any other, Any two
- B. Process of laundry function in hospitals - $\frac{1}{2} \times 8 = 4$
- Collection from Emergency, main OT, OPD, various specialized centres and wards.
 - Transportation from linen bank or directly from hospital to laundry plant
 - Unloading dirty linen and sorting
 - Washing is done in large washing machines which have a capacity of 100 kg per load.
 - Hydro extraction -Hydro extractors work in centrifugal motion which removes moisture
 - Drying, Pressing, ironing, folding and stacking
 - Mending and segregation of condemned articles
 - Packing and Distribution
- Any Other, Any Eight

PRACTICE PAPER (SOLVED)
CLASS XII HOME SCIENCE (Theory) (064)

Time Allowed: 3 Hours

Maximum Marks: 70

GENERAL INSTRUCTIONS

1. All questions are compulsory.
2. There are total 35 questions.
3. Question paper is divided into four sections-A, B, C and D.
4. Section A has question no.1 to 14 (multiple choice questions) and are of 1 mark each.
5. Section B has question no. 15 to 18 (case based questions) and are of 1 mark each.
6. Section C has question no. 19 to 25 of 2 marks each and question no.26 to 29 of 3 marks each.
7. Section D has question no.30 to 33 of 4 marks each and question no.34 and 35 are of 5 marks each.
8. Internal choices are given in some questions.
9. Support your answers with suitable examples wherever required.

SECTION A (Multiple Choice Questions)

1. Rita has designed a frock for her six-year-old daughter using light and dark pink colour, which indicates the aspect of a colour. 1
 - a. Chroma
 - b. Value
 - c. Hue
 - d. Intensity
2. Use of ergonomics in any workplace is NOT important for which of the following- 1
 - a. Optimum work capacity
 - b. Increase in errors
 - c. Increase in productivity
 - d. Comfortable working conditions

3. What is a brief 10-60 second message between a programme, generally in the form of jingles played on radio called? 1
- Public Service Announcement
 - Public System Announcement
 - Programme Service Announcement
 - Personal Service Announcement
4. A good preschool will provide which of the following experience likely to be beneficial for young children? 1
- Rote learning
 - Teacher centered approach
 - Formal teaching
 - Child centered approach
5. The objective of the equal remuneration act is- 1
- Equal wages for the same work
 - Different working hours
 - Equality among men and women in every field
 - Special facilities for women
6. Which Act of India made it mandatory to have creche in a work place? 1
- Plantation Labour Act of 1951
 - Employees State Insurance Act
 - Factories Act of 1948
 - Mines Act of 1952

OR

Bamboo craft is a traditional handicraft of which state?

- | | |
|------------|---------------|
| (a) Assam | (c) Karnataka |
| (b) Kerala | (d) Punjab |
7. What is the full form of VIBGYOR? 1
- Violet Indigo Black Green Yellow Orange Red
 - Violet Indigo Blue Green Yellow Orange Red

- (c) Violet Indigo Blue Grey Yellow Orange Red
- (d) Violet Indigo Brown Green Yellow Orange Red
8. Which stage of the fashion cycle involves manufacturers copying fashion and preparing adaptations of it at many price levels? 1
- Decline in popularity
 - Increase in popularity
 - Introduction of a style
 - Peak of popularity
9. Find the incorrect statement from the following: 1
- Montessori schools were outlined by Maria Montessori
 - A child of 8-12 months shows fear of unknown people
 - Care given to a child in the absence of the mother is called substitute care
 - A four to five year old child is called a Toddler
10. Select correct pair: 1
- Preserved foods : Sugar from sugarcane
 - Food derivatives : Cake, Kulfi
 - Manufactured foods : Frozen vegetables
 - Medical foods : Lactose free milk
11. Match List I with List II 1
- | List I (Programmes/Initiatives) | List II (Vulnerable group) |
|---|-----------------------------------|
| (A) National Service Scheme | i. Juveniles |
| (B) Integrated Child Development Scheme | ii. Old man |
| (C) Mobile Medicare Units | iii. Youth |
| (D) Special Homes | iv. Children |

Choose the correct option.

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

12. Match List I with List II

1

List I (Examples)

(List II - Mode of development communication)

- | | |
|-----------------------------|-----------------|
| A. RRE | ii. Televison |
| B. SEWA | ii. Print Media |
| C. Project-Village Chhatera | iii. Campaign |
| D. EDUSAT | iv. ICT |

Choose the correct option.

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

13. Care and maintenance of the fabric depends on

1

- i. Fibre content
- ii. Fabric construction
- iii. Tie and Dye technique
- iv. Brand of the fabric

Choose the correct option,

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

OR

Which of the following methods are used to keep fabric in motion in a Top loading washing machine?

- | | |
|---------------|---------------|
| i. Agitation | iii. Tumbling |
| ii. Pulsation | iv. Spinning |

Choose the correct option

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

14. Which elements of design will you select while designing clothes for your tall sister? 1

- v. Vertical lines
vi. Horizontal lines
vii. Related colours
viii. Contrasting colours

Choose the correct option.

- a. i and ii
b. ii and iv
c. i and iii
d. iii and iv

SECTION-B (CASE BASED QUESTIONS)

Read the passage carefully and answer question no. 15 to 18

Nutrition is the science of food, nutrients and other substances as well as their digestion, absorption and utilization by the body. Optimum nutrition is important for providing immunity and protection from infection, and to promote recovery from a variety of illnesses as well as managing chronic diseases. Nutrition and health are intimately interlinked. Health problems, illness/disease and their treatment can affect nutritional status in a variety of ways such as i) by impairing a person's ability to eat and/or swallow, ii) by interfering with digestion, absorption and metabolism. The specialized area of nutrition which deals with nutritional management during illness is clinical nutrition, more recently called medical nutrition therapy. The professional who delivers this service is referred to as dietitian/medical nutrition therapist / clinical nutritionist.

15. Which of the following is correct pair? 1
- (a) Liquid diet : Coconut water
 - (b) Clear diet : Pakodas
 - (c) Soft diet : Pureed dal
 - (d) Mechanical soft diet : Burger

16. Which of the following parameters are not considered while taking anthropometric measurements? 1
- a. Waist circumference
 - b. Height
 - c. Hemoglobin level
 - d. Weight

17. Given below are two statements labelled as Assertion (A) and Reason (R). 1

Assertion (A): Liquid diet is free from fibre.

Reason (R): These diets are given to patients suffering from diabetes.

Select the most appropriate answer from the options given below.

- (a) (A) and (R) both are true and (R) is the correct explanation of (A).
 - (b) (A) and (R) both 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) : Patients suffering from abnormal heart rhythm should consume fish once a week.

Reason (R) : Fish is a rich source of Omega-3 fatty acids which are essential components of cells.

Select the most appropriate answer from the options given below.

- (a) (A) and (R) both are true and (R) is the correct explanation of (A).
- (b) (A) and (R) both 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. Your mother is admitted in the hospital for a surgery. Her gastrointestinal tract is functioning properly but she is not able to take food by mouth. Which feeding route should be adopted in this situation? Write any one advantage of the method. 2
- 20.
 - a. Why France became the center of fashion in the 18th century?
 - b. State the term used for male and female designer. 2
- 21. What do you understand by the term food-based strategy? Enlist any two food-based strategies you may adopt to tackle public nutrition problems. 2

OR

What do you understand by the term Hidden Hunger? Name any two conditions classified under Hidden Hunger.

- 22. Your younger brother is very confused regarding which career to choose.
Mention four factors he should consider while taking career related decision. 2

OR

Renu has recently joined new company but she is finding it difficult to adjust with her colleagues. Suggest her any four essential soft skills she must adopt at her workplace.

- 23. During COVID, Seema has done online diploma in Food Product Development. If she wants to start Food Processing Unit, what four skills she may require to do so? 2

24. List any four job opportunities for print journalist. 2

OR

Why language and computer skills are necessary for DCJ professional? Give four reasons.

25. Enlist any four sections of housekeeping department. 2

26. a. Distinguish between the view point of Piaget and Vygotsky in context to ECCE. 2+1=3

b. State any two role of ECCE professional.

27. Illustrate any three ways each of creating rhythm in your school uniform. 3

OR

Illustrate any three ways each of creating emphasis in a kurta / kurti.

28. a. Differentiate between Food infection and Food intoxication. 2+1=3

b. Write any two ways by which salmonella bacteria spreads.

29. Give one role of each of the following- 3

a. Assistant manager of front office

b. Chef de parties

c. Floor supervisor of housekeeping department

OR

Hospitality Industry has grown to provide. 'A Home Away from Home.' Why is this industry one of the fastest growing Industry?

SECTION D (LONG ANSWER QUESTIONS)

30. Mr. Dharampal has started his own food processing unit for exporting the products. His friend has suggested him to implement HACCP. 1+3=4

a. What is HACCP?

- b. Highlight any three importance of HACCP to convince him to adopt it.

OR

Mrs. Ramvati has started her own bread manufacturing unit. She wants to get her manufacturing unit certified by Government of India. 1+1+2=4

- a. Name the new Food safety Act implemented in India.
b. Which year it was implemented?
c. Enlist any four functions of the new Food safety Act.
31. a. Why are youth vulnerable? Give two reasons. 1+1+2=4
b. What is National Service scheme?
c. Highlight any two activities taken up under National Service Scheme.

OR

- a. In which year the first SOS children's village was setup? 1+3=4
b. Explain three features of SOS children's Village.
32. a. What is the difference between consumer forum and footfalls? 2+2=4
b. "Inadequate information given by manufacturer is common problem amongst the consumer". Support this statement with two examples.
33. Sonu is planning to setup a commercial laundry in his neighbourhood. 4
Elaborate how commercial laundry will differ from home laundry (Write any four features).
34. Describe three basic causes and two underlying causes at household level contributing to under nutrition in our country. 5

OR

Explain five ways of diet modification to meet the needs of an individual. Give an example of each.

35. Anu is a fashion merchandiser who is working in a fashion house. She is involved with various activities including conversion of inspiration into design, use technology to conceptualize and address the planning and distribution of products in the fashion industry. 2+1+2=5
- a. Elaborate any four roles and responsibilities she will have in different phases of fashion merchandising.
 - b. How is small single unit store different from chain store?
 - c. Enumerate any four courses that Anu might have done to have a career in fashion merchandising?

PRACTICE PAPER
CLASS XII HOME SCIENCE

Expected Answers/VALUE POINTS

SECTION A (MULTIPLE CHOICE QUESTIONS)

- | | | | |
|----|----|-------------------------------|---|
| 1. | b. | Value | 1 |
| 2. | b. | Increase in errors | 1 |
| 3. | a. | Public Service Announcement | 1 |
| 4. | d. | Child centered approach | 1 |
| 5. | a. | Equal wages for the same work | 1 |
| 6. | c. | Factories ACT of 1948 | 1 |

OR

- | | | | |
|-----|-------|--|---|
| | a. | Assam | |
| 7. | b. | Violet Indigo Blue Green Yellow Orange Red | 1 |
| 8. | d. | Peak of popularity | 1 |
| 9. | d. | A four to five year old child is called loddes | 1 |
| 10. | d. | Medicinal food: Lactose free milk | 1 |
| 11. | c. | A-iv, B-ii, C-i, D-ii | 1 |
| 12. | c. | A-iv, B-iii, C-i, D-ii | 1 |
| 13. | a. | i and ii | 1 |
| | Or b. | i and ii | |
| 14. | b. | ii and iv | 1 |

SECTION B (CASE BASED QUESTIONS) (15-18)

- | | | | |
|-----|----|--|---|
| 15. | a. | Liquid diet : Coconut water | 1 |
| 16. | c. | Hemoglobin level | 1 |
| 17. | c. | (A) is true but (R) is false | 1 |
| 18. | a. | (A) and (R) are true and (R) is correct explanation of (A) | 1 |

SECTION C (SHORT ANSWER QUESTIONS)

- | | | | |
|-----|---|---|-------|
| 19. | Feeding Route to be adopted: Tube feeding | Advantage of tube advantage: It is nutritionally adequate | 1+1=2 |
|-----|---|---|-------|

20. a. France become the center of fashion in the 18th century: 1×2=2

1. Due to support from the royal court.
2. Development of silk industry,
b. Male designer- couturier
Female designer- couturiere

21. Food based strategies: Food based strategies are preventive and comprehensive strategies that use food as a tool to overcome nutritional deficiencies. Strategies to tackle nutritional problems: 1+1=2

1. Dietary diversification
 2. Horticulture interventions
- Any other, Any two

OR

Hidden Hunger: Term used to refer to micronutrient deficiency. Two Conditions: 1×2=2

1. Vitamin A deficiency
2. Anaemia
3. Goitre

Any other, Any two

22. Factors he should consider while taking career related decision are- $\frac{1}{2} \times 4 = 2$

1. One's own aptitude
2. Talent
3. Personal preferences
4. Needs and aspirations

Any other, Any four

OR

Four essential soft skills she must adopt at her workplace are-

1. Communicating clearly
2. Thinking critically and creatively
3. Learning effectively

4. Working cooperatively
 5. Working productively
- Any other, Any Four
23. Four skills required to start Food Processing Unit: $\frac{1}{2} \times 4 = 2$
1. Knowledge of food preparation
 2. Knowledge of product specifications
 3. Assessment by sensory methods
 4. Labelling and packaging of products
 5. Industrial practices Any other, Any four
24. Four job opportunities for print journalist $\frac{1}{2} \times 4 = 2$
1. Interviewing people
 2. Attending press conferences
 3. Making phone calls
 4. Covering stories
 5. Sending stories to editors Any other slogan

OR

Importance of Language skills and Computer skills:

1. It helps to write technical reports and documents.
 2. To interact with people.
 3. Sending e-mails to create story
 4. Sharing information with people
- Any other, Any four
25. Sections of housekeeping department: $\frac{1}{2} \times 4 = 2$
1. Housekeeping control desk
 2. Housekeeping management
 3. Guestroom brigade
 4. Public area brigade
 5. Linen and uniform
- Any other, Any four
26. Three ways of creating rhythm in school uniform- $1 \times 3 = 3$
1. Repetition of embroidery, laces, buttons, piping, etc. at necklines

2. Cordation (Gradation) by increasing or decreasing of sizes of colours, lines, buttons, etc.
3. Radiation of gathers in waist, puff sleeves, etc.
4. Parallelism when elements lie parallel to each other. For Example-Knife pleats in skirts.

Any other, Any three

Three ways each of creating emphasis in a kurta/kurti-

1. Repetition -To emphasize a colour repeatedly use it.
2. Unusual lines, shapes or textures like unusual shape of collars, sleeves
3. Placement of decorations on necklines, waist, etc.

Any other, Any three

27. a. View point of Piaget and Vygotsky in context to ECCE-
1×2=2

OR

PSYCHOLOGIST	VIEW POINT
PIAGET, developmental psychologist	<ul style="list-style-type: none"> • Young children need a supportive environment to explore phenomenon in their own ways because they have different ways of understanding the world • An institution must realize the importance of cultural context within which it operates and works along with family.
VYGOTSKY, psychologist and educationist	The children need a concerned and caring knowledgeable educator adult in early childhood for creating optimal environment for easy, enjoyable and meaningful learning according to the child's abilities and temperament

- b. Two role of ECCE professional-
1. commitment to children, their well-being and learning.
 2. awareness and knowledge about their needs.
 3. challenges for providing opportunities for their growth and development.
 4. professional training for a career in early childhood programs
 5. providing favourable learning conditions. Any two, Any other
28. a. Difference between Food infection and Food intoxication.

2+1=3

FOOD INFECTION	FOOD INTOXICATION
It is caused by ingestion of live pathogenic organisms which multiply in the body and cause disease.	Ingestion of toxicated food.
Incubation period is long	Incubation period is short

- b. Two ways by which salmonella bacteria spreads.
1. It spread through cross - contamination (When same chopping board is used for raw meat/poultry and salad)
 2. Inadequate cooking
- Any other, Any two
29. a. Assistant manager of front office- 3×1=3
1. Organizes and supervises front office in absence of front office manager
 2. Ensures smooth functioning of the front office
- b. Chef de parties-Supervision of some sections of kitchen
- c. Floor supervisor of housekeeping department-Responsible for cleanliness and maintenance of guest room

OR

This industry is growing fast due to the following reasons.

- i) People travel for pilgrimage and to visit holy places.
- ii) People Travel to different countries for business purposes.
- iii) Medical tourism is also an upcoming field as people travel to seek health care.
- v) Students also travel to different countries for studying.
- vi) Some people travel to visit heritage monuments and wild life.
- vii) People also travel to various places for experiencing different cultures.

For all the above reasons people need comforts and facilities similar to what they get at home.

SECTION D (LONG ANSWER QUESTIONS)

30. a. HACCP- **Hazard Analysis Critical ControlPoint (HACCP)** 1+3=4
- b. Three importance of HACCP
1. Preventive approach to ensure food safety
 2. Helps to detect hazards at any stage of processing or manufacture in order to ensure a good quality end product, by taking appropriate action at the stage where the problem occurs.
 3. Enables producers, processors, distributors and exporters to utilise resources efficiently
- Any other, Any three

OR

- a. **Food Safety and Standards Act** 1
- b. Year-2006 1
- c. Four functions of FSSA $\frac{1}{2} \times 4 = 2$

1. Framing of regulations to lay down the standards and guidelines for article of food and system of enforcing various standards.
2. 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.
3. 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.
4. 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.

Any other, Any four

31. a. Reasons why youth is vulnerable- 2+1+1=4
1. Biological changes in body have an impact on the person's sense of well-being and identity.
 2. Peer pressure and pressure to excel in an increasingly competitive world
 3. When the family/environment is unable to provide positive support to the adolescent
 4. Some adolescents may consume alcohol and drugs (also termed substance abuse)
 5. Health
- Any other, Any two
- b. National Service scheme- Involve college level students in programmes of social service and national development
 - c. Two activities taken up under National Service Scheme

1. construction and repair of roads, school buildings, village ponds, tanks .
2. related to environmental and ecological improvement like tree plantation, removal of weeds from lakes, digging pits.

Any other, Any two

OR

- a. Year of SOS children's village set up-1964 1+3=4
- b. Functioning of SOS children's Village-
 1. Provide family-based, long-term care to children who can no longer grow up with their biological families.
 2. In each SOS home there is a 'mother' who looks after 10-15 children.
 3. This unit lives like a family and the children experience relationships and love once again, which helps children to recover from traumatic experiences.
 4. The SOS families live together, forming a supportive Village' environment.

Any other, Any three

32. a. Difference between consumer forum and footfalls 2+2=4

Consumer forum- A place or an organisation where consumers can seek protection and help them address their problems faced regarding products and services.

Consumer footfalls- This means the number of customers/ consumers who visit any given space such as a store or a mall. With increasing consumption in a country, consumer footfall increases.

- b. Inadequate information given by manufacturer with two examples —
 1. Labels are not factually correct
 2. Labels are incomplete
 3. Very often their print is blurred or too small to read

Any other, Any two

33. Difference between commercial laundry and home laundry-

1×4=4

COMMERCIAL LAUNDRY	HOUSEHOLD LAUNDRY
Big articles are washed	Mostly small articles of daily use are washed at home
Quantum of clothes is more (100kg or more)	Quantum of clothes is less (5-10 kg)
Large size of washing machine	Clothes are washed by hand or washing machines
System of code tag for keeping record	No need of records

Any other, Any four

34. Three basic causes and two underlying causes at household level contributing to under nutrition in our country are-

3+2=5

BASIC CAUSES	CAUSES AT HOUSEHOLD OR FAMILY LEVEL
1. Quantity and quality of actual resources, e.g., human resources, financial and organisational (existence of services and the way they are operated and controlled). 2. 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. 3. Potential resources: environment, technology and people	1. Insufficient access to food 2. Poor water / sanitation and hygiene 3. Inadequate maternal and child care practices 4. Inadequate education 5. Inadequate health services and insufficient causes at access to health services 6. Inadequate and/or inappropriate knowledge and discrimination against women, elderly and girl child.
Any three	Any two

OR

Changes (in normal diet) to meet the medical needs of the patient through modified diets—

1. Change in consistency and /or texture (e.g., fluid and soft diets) Depending on the condition, patients may be advised liquid, soft or regular diet
 2. An increase or decrease in the energy (Calorie) intake
-increasing calories for pregnant / lactating / athlete
 3. Include greater or lesser amounts of one or more nutrients-increased protein in case of surgery
 4. Frequency-Serving meals during fever/diarrhea infants
 5. Changing the feeding route-Tube feeding/Intra venous feeding Any other example
35. a. Four roles and responsibilities she will have in different phases of fashion merchandising 2+1+2=5
1. In Manufacturing-Makes significant input on the types of fabrics used to make a piece of clothing.
 2. Buying -Becomes part of fashion merchandising when a merchandiser buys fashion items to be presented in a store.
 3. Promoting -The designer's product to stores using creativity, visual merchandising skills, production skills and fashion shows
 4. Selling-Responsible for selling fashion items to stores, which then sell to consumers.
- b. Small single unit store different from chain store-**Small Single-unit Store** is a neighbourhood store. These are owner and family operated single stores Chain stores are retail outlets that share a brand and central management and usually have standardised business methods and practices. 1

c. Two courses to have a career in fashion merchandising-

2

Certification of diploma/ degree programme	In fashion merchandising can usually be completed in 6 months to 1 year
Bachelor's degrees (4 year programme)	In fashion design of fashion merchandising
Master's programme (2 year)	In fashion merchandising that combine a certain amount of liberal arts

Any two

