**DIRECTORATE OF EDUCATION GNCT OF DELHI**

**MID-TERM PRACTICE PAPER**

**CLASS XI (044 BIOLOGY)**

**2026-2027**

**MaximumMarks:70**
**Time:3hours**

**GeneralInstructions:**

1) Allquestionsarecompulsory.

2) Thequestionpaperhasfivesectionsand33questions.

3) SectionAhas16questionsof1markeach;SectionBhas5questionsof2markseach. SectionChas7questionsof3markseach;SectionDhas2case-basedquestionsof4markseach.And Section E has 3 questions of 5 marks each.

4) Thereisnooverallchoice.Howeverinternalchoiceshavebeenprovidedinsomequestions. A student has to attempt only one of the alternatives in such questions

5) Wherevernecessary,neat,andproperlylabelleddiagramsshouldbedrawn.

**SECTIONA**

| Q. No. | QUESTION | Marks |
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| 1 | There is a need to standardise the naming of living organisms such that a particular organism is known by the same name all over the world. This process is called ----------<br>a) Identification<br>b) Nomenclature<br>c) Classification<br>d) Characterization | 1 |
| 2 | An organism has chlorophyll but lacks a true nucleus and membrane-bound organelles. It can fix atmospheric nitrogen in specialised cells. Which organism is most likely?<br>a) Chlamydomonas<br>b) Nostoc<br>c) Euglena<br>d) Agaricus | 1 |
| 3 | A microorganism is found in a highly saline lake. Its cell membrane and cell wall have special adaptations that enable it to survive in high salt concentration. It is most likely:<br>a) Eubacterium<br>b) Halobacterium<br>c) Cyanobacterium<br>d) Mycoplasma | 1 |

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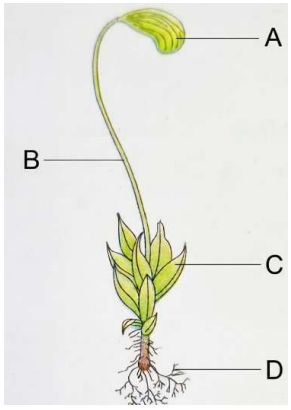
| 4 |  Marchantia<br>a) A- Capsule B- Seta C- Leaf D- Rhizoids<br>b) A- Seta B- Capsule C- Leaf D- Rhizoids<br>c) A- Seta B- Capsule C- Rhizoids D- Leaf<br>d) A- Leaf B- Seta C- Capsule D- Rhizoids | 1 |
| 5 | 4. A plant has vascular tissues and reproduces through spores. Its sporophyte is the dominant generation, while the gametophyte is small but independent. This plant is most likely:<br>a) Marchantia<br>b) Funaria<br>c) Selaginella<br>d) Pinus | 1 |
| 6 | Consider the following characteristics:<br>1. Notochord present at least during some stage<br>2. Dorsal hollow nerve cord<br>3. Pharyngeal gill slits<br>4. Ventral solid nerve cord<br>Which set correctly identifies chordates?<br>a) 1, 2 and 3 only<br>b) 1 and 4 only<br>c) 2 and 4 only<br>d) 1, 3 and 4 only | 1 |
| 7 | A student identifies an animal as a flatworm because it is dorsoventrally flattened and has bilateral symmetry. Which additional feature would support this identification?<br>a) True coelom<br>b) Flame cells for excretion<br>c) Water vascular system<br>d) Jointed appendages | 1 |

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| 8 | In a field study, a student observes a flower where the margin of the thalamus grows upward, completely enclosing the ovary and fusing with its outer wall. The calyx, corolla, and stamens arise above the top of the ovary.<br>How should this flower and its ovary position be classified?<br>a) Hypogynous flower with a Superior ovary<br>b) Perigynous flower with a Half-inferior ovary<br>c) Epigynous flower with an Inferior ovary<br>d) Epigynous flower with a Superior ovary | 1 |
| 9 | A student dissects two unknown flowers in the lab:<br>**Flower A:** Has a single chambered (unilocular) ovary where ovules develop directly on the central axis, and there are no inner dividing partitions (septa).<br>**Flower B:** Has a multi-chambered (multilocular) ovary where ovules are attached to a central column surrounded by septa.<br>Based on these structural observations, which placentation types are present in Flower A and Flower B?<br>a) Flower A: Axile; Flower B: Free-central<br>b) Flower A: Free-central; Flower B: Axile<br>c) Flower A: Parietal; Flower B: Marginal<br>d) Flower A: Marginal; Flower B: Parietal | 1 |
| 10 | A researcher observes cells with thick, lignified walls and very small or absent lumen. Which function is most likely performed by this tissue?<br>a) Photosynthesis<br>b) Storage<br>c) Mechanical support<br>d) Food conduction | 1 |
| 11 | Which combination correctly matches the frog structure with its function?<br>a) Tympanum – respiration<br>b) Nictitating membrane – protection of eye<br>c) Cloaca – pumping of blood<br>d) Hind limbs – digestion | 1 |
| 12 | If the Golgi apparatus is damaged, which process is most likely to be affected?<br>a) Modification and packaging of proteins<br>b) Replication of DNA<br>c) Production of ATP<br>d) Formation of spindle fibres only | 1 |

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| | **For Question No.-13 to 16: A statement of Assertion is followed by a statement of Reason. Mark the correct choice as:**<br>(a) Both assertion and reason are true and reason is the correct explanation of assertion.<br>(b) Both assertion and reason are true but reason is not the correct explanation of assertion.<br>(c) Assertion is true but reason is false.<br>(d) Both assertion and reason are false | |
| 13 | Assertion (A): Mitochondria are called semi-autonomous organelles.<br>Reason (R): They possess their own DNA and ribosomes and can synthesise some of their proteins. | 1 |
| 14 | Assertion (A): All chordates possess a notochord throughout their entire life.<br>Reason (R ): In vertebrates, the notochord is replaced by the vertebral column during development. | 1 |
| 15 | Assertion (A): The gametophyte is the dominant phase in bryophytes.<br>Reason (R ): The sporophyte remains attached to and nutritionally dependent on the gametophyte. | 1 |
| 16 | Assertion (A): Whittaker's five-kingdom classification separated fungi from plants.<br>Reason(R ): Fungi differ from plants in their mode of nutrition, cell wall composition and body organisation. | 1 |
| | **SECTION B** | |
| 17 | A student says that taxonomy and systematics are exactly the same. Do you agree? Give one difference. | 2 |
| 18 | A pond develops a reddish colour due to rapid multiplication of certain microorganisms. Some organisms release toxins that may harm aquatic animals. Identify the group and explain the phenomenon. | 2 |
| 19 | A plant produces two different types of spores, microspores and megaspores. Why is this condition considered evolutionarily significant? | 2 |
| 20 | A marine animal possesses tube feet and a water vascular system. Identify the phylum and mention one function of the water vascular system | 2 |
| 21 | A flower has five fused petals and five fused sepals. The stamens are attached to the petals. What terms would you use for these floral conditions? | 2 |
| | **SECTION C** | |
| 22 | Different microorganisms show different modes of nutrition. Compare cyanobacteria, fungi and animals on the basis of their mode of nutrition.<br>**OR**<br>6. Viruses are often described as being at the boundary between living and non-living.<br>a) Why are viruses considered non-living outside a host?<br>b) Why are they considered living inside a host cell?<br>c) What is the basic genetic material present in a virus | 3 |
| 23 | Describe reproductive structures of bryophytes | 3 |

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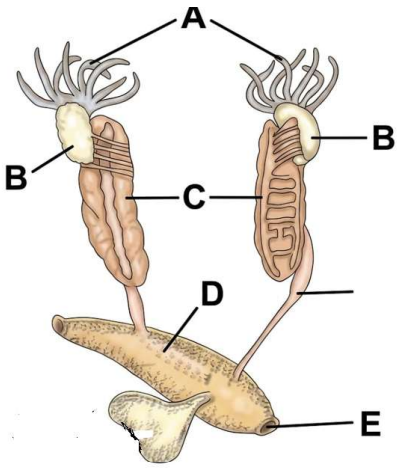
| 24 | What is the role of the swim bladder in bony fishes? Why is it important?<br>OR<br>Describe the habitat and feeding mechanism of cyclostomes. | 3 |
| 25 |  <br>(a) (b) (c) (d)<br>Label the (a), (b), (c) and (d)<br>Write down the role of (c) and (d) | 3 |
| 26 | Describe epidermal tissue system. | 3 |
| 27 |  <br>Identify the diagram.<br>Labell the parts A,B,C,D and E<br>**OR**<br>Describe female reproductive system | 3 |
| 28 | Explain the structure and functions of peroxisomes. How are they different from lysosomes? | 3 |
| | **SECTION D** | |
| 29 | Read the following passage and answer the questions.<br>A transverse section of a root showed an outer epiblema, a broad cortex, a distinct endodermis and a centrally located vascular region. The xylem and phloem were arranged alternately, and the xylem was tetrarch.<br>Questions:<br>1. Identify whether the root is monocot or dicot. Give one reason. (1)<br>2. What is the role of the Casparian strips present in the endodermis? (1)<br>3. Explain the arrangement of xylem and phloem in the vascular bundle of this root. (2) | 4 |

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| 30 | During an experiment, a frog is observed to breathe through its lungs while on land but relies considerably on its skin when submerged. Its heart pumps blood through pulmonary and systemic circuits, although complete separation of oxygenated and deoxygenated blood does not occur.<br>Questions:<br>1. Name the two respiratory modes mentioned in the case. (1)<br>2. Why is the frog's circulation called incomplete double circulation? (1)<br>3. How does the amphibious nature of the frog influence its respiratory adaptations? (2) | 4 |
| | **SECTION E** | |
| 31 | A flower has five fused petals, five fused sepals, five stamens and a superior ovary with axile placentation.<br>a) Identify the family it most likely belongs to.<br>b) Name the type of aestivation commonly found in this family.<br>c) Give two examples of plants belonging to this family.<br>d) Mention one economic importance of the family.<br>**OR**<br>Draw and Describe marginal, axile, parietal, free-central and basal placentation with examples. | 5 |
| 32 | a) Draw neat labelled three various types of vascular bundles.<br>b) Write the important role of cambium present in dicotyledons stems.<br>**OR**<br>Differentiate between the internal anatomy of a dicot root and a monocot root with respect to epiblema, cortex, endodermis, pericycle, vascular bundles, pith and secondary growth. | 5 |
| 33 | Explain the structure and functions of the cytoskeleton. Describe the roles of microtubules, microfilaments and intermediate filaments.<br>**OR**<br>Describe the structure and functions of the nucleus. Explain the role of nuclear envelope, nucleoplasm, nucleolus and chromatin**.** | 5 |