

CLASS XI
BIOLOGY (044)
2025-2026

MID-TERM EXAM

Maximum Marks: 70

Time: 3 hours

General Instructions:

- i) All questions are compulsory.
- ii) The question paper has five sections and 33 questions.
- iii) Section-A has 16 questions of 1 mark each; Section-B has 5 questions of 2 marks each, Section-C has 7 questions of 3 marks each; Section-D has 2 case-based questions of 4 marks each, and Section-E has 3 questions of 5 marks each.
- (iv) There is no overall choice. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.
- (v) Wherever necessary, neat and properly labelled diagrams should be drawn.

SECTION-A

Q1. What is the correct sequence?

- | | |
|---------------------------------|----------------------------------|
| (A) Genus-species-order-kingdom | (B) Species-order-phylum-kingdom |
| (C) Species-genus-order-phylum | (D) Kingdom-phylum-class-order |

Q2. Energy flow and energy transformation in a living system follow

- | | |
|----------------------------|-----------------------------|
| (A) Biogenetic law | (B) Law of thermodynamics |
| (C) Law of limiting factor | (D) Liebig's law of minimum |

Q3. Most primitive vascular plants?

- | | |
|------------|------------|
| (A) Mosses | (B) Cycads |
| (C) Kelps | (D) Ferns |

Q4. Select the correct pair :

- | | |
|--------------------------------|-------------------------|
| (A) Arthropoda- silver fish | (B) Pisces- jelly fish |
| (C) Echinodermata- cuttle fish | (D) Mollusca- star fish |

Q5. The morphological nature of the edible part of a coconut is

- | | |
|---------------|---------------|
| (A) Cotyledon | (B) Perisperm |
| (C) Pericarp | (D) Endosperm |

Q6. . Testa of seed develops from

- | | |
|----------------|----------------------|
| (A) Hilum | (B) Funicle |
| (C) Ovary wall | (D) Outer integument |

Q7. Root hair develop from the region of

- (A) Maturation
- (B) Meristematic activity
- (C) Root cap
- (D) Elongation

Q8. Phloem in gymnosperms lacks

- A) Sieve tubes only
- B) Companion cells only
- C) Albuminous cells and sieve cells
- D) Both sieve tubes and companion cells

Q9. . How many digits does the forelimb and hindlimb of frog have respectively?

- A) 3, 4
- B) 5, 4
- C) 4, 5
- D) 4, 3

Q10. Which one of the following is not considered a part of the endomembrane system?

- A) Lysosome
- B) Vacuole
- C) Golgi complex
- D) Peroxisome

Q11. Middle lamella is mainly composed of

- A) Hemicellulose
- B) Muramic acid
- C) Calcium pectate
- D) Phosphoglycerides

Q12. Which of the following is a phospholipid?

- (A) Sterol
- (B)Cholesterol
- (C)Lecithin
- (D)Steroid

Assertion and reason type question

- A) If both Assertion and reason are true and the reason is the correct explanation of the assertion.
- B) If both assertion and reason are true but reason is not the correct explanation of the assertion.
- C) If assertion is true but reason is false.
- D) If both assertion and reason are false.

Q13. Assertion: Pilli are non-motile appendages found in some bacteria.

Reason: This participates in conjugation.

Q14. Assertion: Cell wall of chrysophytes is indestructible.

Reason: Cell wall of chrysophytes have layer of magnesium pectate imbedded in it.

Q15. Assertion: Seed coat is the outermost covering of the seed in dicotyledonous seed.

Reason: The seed coat has two layer, outer -Testa and inner- Hilum.

Q16. Assertion: Specific substrate bind at the active site of an enzyme.

Reason: Enzymes increase the activation energy of substrate.

SECTION-B

- Q17. What do the terms phycobiont and mycobiont signify?
Q18. Write the difference between Metagenesis and Metamerism?
Q19. What do you mean by Phyllotaxy? What are the different types of Phyllotaxy?
Q20. What is the mesosome? Write its function.
Q21. Draw the structure of the amino acid, alanine.

SECTION-C

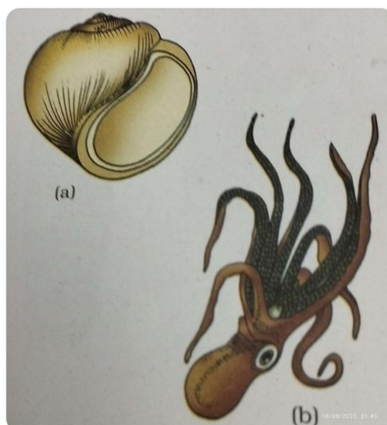
- Q22. Describe briefly the four major groups of protozoa.
Q23. Fill in the following:
(I) Agar is obtained from the _____.
(II) _____ is the colonial form of algae.
(III) Stored food in Phaeophyceae is _____.
Q24. All vertebrates are termed chordates, but all chordates are not vertebrates. Justify the statement.
Q25. Explain the various types of Vascular bundles found in plants with well labelled diagram.
Q26. Draw the well labelled diagram of Mitochondria and explain it.
Q27. Explain the following terms:
(a) Ribosomes (b) polysomes (c) Ribozymes.

How ribosomes differ in prokaryotes and eukaryotes?

- Q28. What do you mean by Holoenzyme, Apoenzyme and co-factors? Explain the different types of co-factors.

SECTION-D

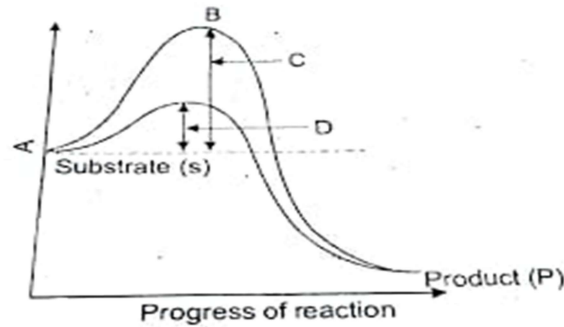
Q29.



Two organisms of Kingdom Mollusca are shown above.

- Identify the organism (a) and (b)
- How does the body differentiate into different parts?
- Write the unique features of Mollusca.

Q30.



- Labelled the C and D.
- What do you mean by Activation energy?
- How is it affected by the presence and absence of an enzyme?

SECTION-E

Q31. Explain the divisions of Algae and their Main Characteristics with example of each.

Q32. Describe the various types of placentation found in flowering plants.

OR

Define the following terms:

- | | |
|-------------------------|-----------------|
| (a) Aestivation | (b) Epiphyllous |
| (c) Phyllotaxy | (d) Pulvinus |
| (e) Adventitious roots. | |

Q33. What is a centromere? How does the position of centromere form the basis of classification of chromosomes? Support your answer with a diagram showing the position of centromere on different types of chromosomes.