INDIAN SCHOOL SALALAH

FINAL EXAMINATION, FEBRUARY 2026 (AY 2025-26)

CLASS-XI **BIOLOGY -044** **Date: 03/02/2026**

Time: 3 Hrs. **Maximum Marks: 70**

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 labeled diagrams should be drawn.

SECTION A

1 In lichens fungal component is known as ….. **1**

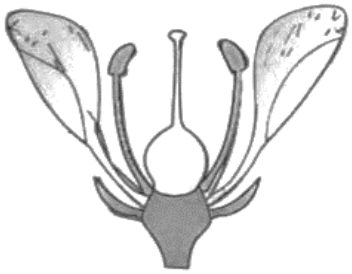
(A) Mycobiont
(B) phycobiont
(C) A & B
(D) none of these.

2 Cnidaria is called so because of **1**

(A)Stinging cells
(B)Gastrovascular cavity
(C)Tissue grade
(D)Polymorphism.

3. Velamen takes part in **1**

(A)Exchange of gases
(B)Transpiration
(C)Absorption of moisture from air
(D)Absorption of water from soil.

4.  **1**

Identify the type of flower given above based on the position of ovary on the thalamus.

(A) Epigynous

(B) Perigynous

(C) Hypogynous

(D) Hypergynous.

5 Which among the following is incorrect about anatomy in a monocot leaf? **1**

(A) Stomata is present both on abaxial and adaxial epidermis

(B) Mesophyll is well differentiated into Palisade and spongy parenchyma cells

(C)Vascular bundles are seen in veins and mid-rib and are surrounded by thick bundle sheath.

(D) Most of the cells are parenchyma cells.

6 Proteins are polymers of amino acids that are connected by _____ **1**

(A) Peptide linkage

(B) Glycosidic linkage

(C) Phosphodiester linkage

(D)Vanderwaal linkages.

7. Which of these undergo recombination? **1**

(A) Homologous chromosomes

(B) Non-homologous chromosomes

(C) Non-sister chromatids

(D) Sister chromatids.

8. Glycolysis is also known as **1**

(A) Krebs cycle

(B)EMP pathway (Embden-Meyerhof-Parnas)

(C)ETS

(D) Calvin cycle

9 Which plant hormone plays a crucial role in the formation and shedding of leaves and fruits? **1**

(A) Auxin

(B) Gibberellin

(C)Ethylene

(D) Abscisic acid

10 The volume of air inspired or expired during normal breathing is called: **1**

(A)Vital capacity

(B) Tidal volume

(C) Inspiratory reserve volume.

(D)Residual volume

11 Which of the following two-word items mean the same thing? **1**

(A) Blood cancer – Haemophilia

(B) Pacemaker – S A Node

(C) Osteoporosis – arthritis

(D) None of the above.

12. Which of the following is succeeded by PCT? **1**

(A) Henle's loop

(B) Glomerulus

(C) DCT

(D)Collecting duct

Question No. 13 to 16 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:
A. Both A and R are true and R is the correct explanation of A.
B. Both A and R are true and R is not the correct explanation of A.
C. A is true but R is false.
D. A is False but R is true.

13. **Assertion**: Nerve conduction is the one-way conduction. **1**

Reason: Nerve impulse is transmitted from dendrite terminals to axon terminals.

14 **Assertion:** Hypothalamus produces neurosecretory factors. **1**

Reason: Pituitary is controlled by the roof of the brain.

15 **Assertion:** Immune response of old persons become weak. **1**

Reason: Thyroid degenerates in old individuals.

16 **Assertion**: The axonal membrane of the neuron is more permeable to sodium ion (Na+) and nearly impermeable to potassium (K+). **1**

Reason: In a resting state, neuron conducts impulses.

SECTION B

17. **A)** What is Binomial Nomenclature? **2**

B) What are the rules to be followed? Give one example.

18. a) There are non-protein components in an enzyme. What are they called as? **2**

b) Classify the 3 types with examples.

OR

a) What is a di-peptide?

b) Illustrate the formation of a peptide bond

19. **Answer the following questions based on the equation given below:** **2**

$$2H_2O \longrightarrow 2H+ + O_2 + 4e-$$

a) Where in plants does this reaction occur?

b) What is the importance of this reaction?

OR

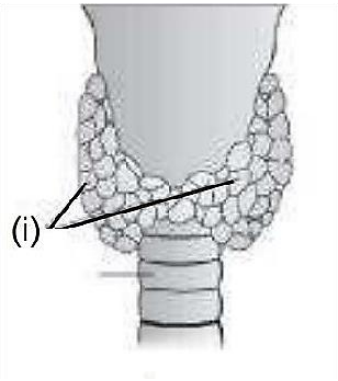
a) Name the type of light reaction which occurs in the stromal lamellae.

b) Give a schematic representation to represent the steps.

20 Differentiate: **2**

a) Meiosis I and Meiosis II b) Equational and reduction division.

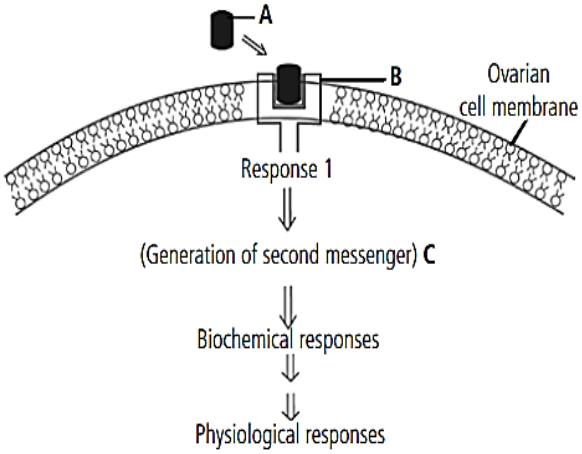
21 **2**



a) Identify (i) in the above figure.

b) How does its reduced and increased activity affect adults?

OR



a) What is the mode of action shown above?

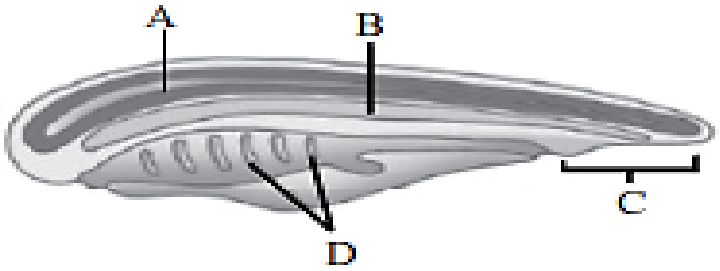
b) Identify A, B and C:

SECTION C

22 Classify the 4 major groups of fungi based on the following; **3**

a) mycelium b) asexual reproduction

23 **3**



a) Identify the above features which marks a chordate.

b) How are they classified based on the location of Label B. Give example.

24 a) Name the family which is called as the potato family. **3**

b) Give its floral formula and the floral diagram.

25 Write the phases of the cell cycle against each of the events **3**

a) The disintegration of the nuclear membrane

b) The appearance of the nucleolus

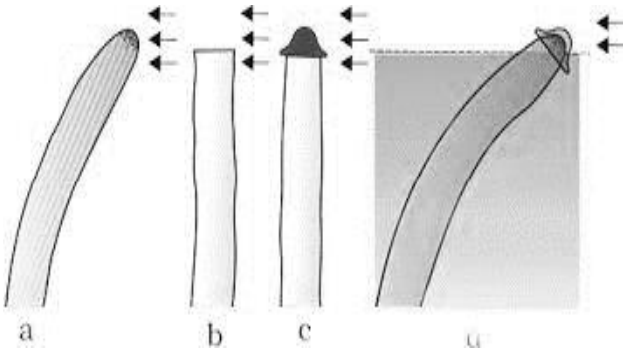
c) Division of centromere

d) Replication of DNA

e) Pairing of the homologous chromosomes

f) Crossing- over between the non-sister chromatids.

26 **3**



a) What was the objective of the above experiment? Who was responsible for it?

b) What do the arrows indicate? Comment on the observation made.

27 Identify the following and comment on them. **3**

a) Chronic respiratory disorder due to smoking.

b) Inspiratory capacity

c) O_2 dissociation curve

28 A patient was complaining of frequent urination, excessive thirst, hunger, and tiredness. His fasting glucose level was found higher than 130 mg/dL on two occasions: **3**

a) What is the disease the person is suffering from?

b) What is the root cause of the disease?

c) Explain why the fasting glucose level is high.

SECTION D

29 **Q.no 29 and 30 are case based questions. Each question has subparts with internal choice in one subpart.** **4**

A biology student prepares a thin transverse section (T.S.) of a sunflower stem to study its anatomy. Under a microscope, they observe distinct layers from the outside to the center: a single-layered epidermis with cuticle, multiple layers of cortex (hypodermis, general cortex, and endodermis), vascular bundles arranged in a distinct ring, and a central pith.

A) Identify the nature of the vascular bundles seen in this stem and explain why they are considered "open".

B) Describe the arrangement of xylem (endarch or exarch) and state its significance.

Attempt either subpart C or D.

C) What is the function of the hypodermis in a dicot stem, and what type of cells is it made of?

OR

D) How do the vascular bundles of this stem differ from those in a monocot stem?

30. During an accident, a person fractures his "floating ribs." **4**

Questions:

(A) How many pairs of ribs are "floating" in the human rib cage?

(B) Why are they called floating ribs?

Attempt either subpart C or D.

(C) How do the "true ribs" differ in their attachment?

OR

(D) What type of skeleton is this? State the importance of the floating ribs.

SECTION E

31 **A)** a) Give a schematic representation to show the classification of sub phylum Vertebrata. **5**

b) Differentiate the following:

i) poikilothermic and homiothermic

ii) Acoelomate and pseudocoelomate

iii) Diploblastic and triploblastic

OR

B) a) Differentiate the different groups of algae based on the following criteria:

i) pigment ii) storage food iii) sexual reproduction

b) What are called as the amphibians of the plant kingdom? Why are they called so?

c) Comment on their life cycle.

32 **A)** a) Why is respiration pathway considered as an amphibolic pathway? **5**

b) Give the schematic representation to show the interrelationship among the respiratory pathways.

c) Define respiratory quotient. When is it said to be more than 1? What does it indicate?

OR

B) a) What are C4 plants? Give an example.

b) Illustrate the cycle which protects them from photo respiratory loss.

c) Add a note on how that is made possible by the above cycle.

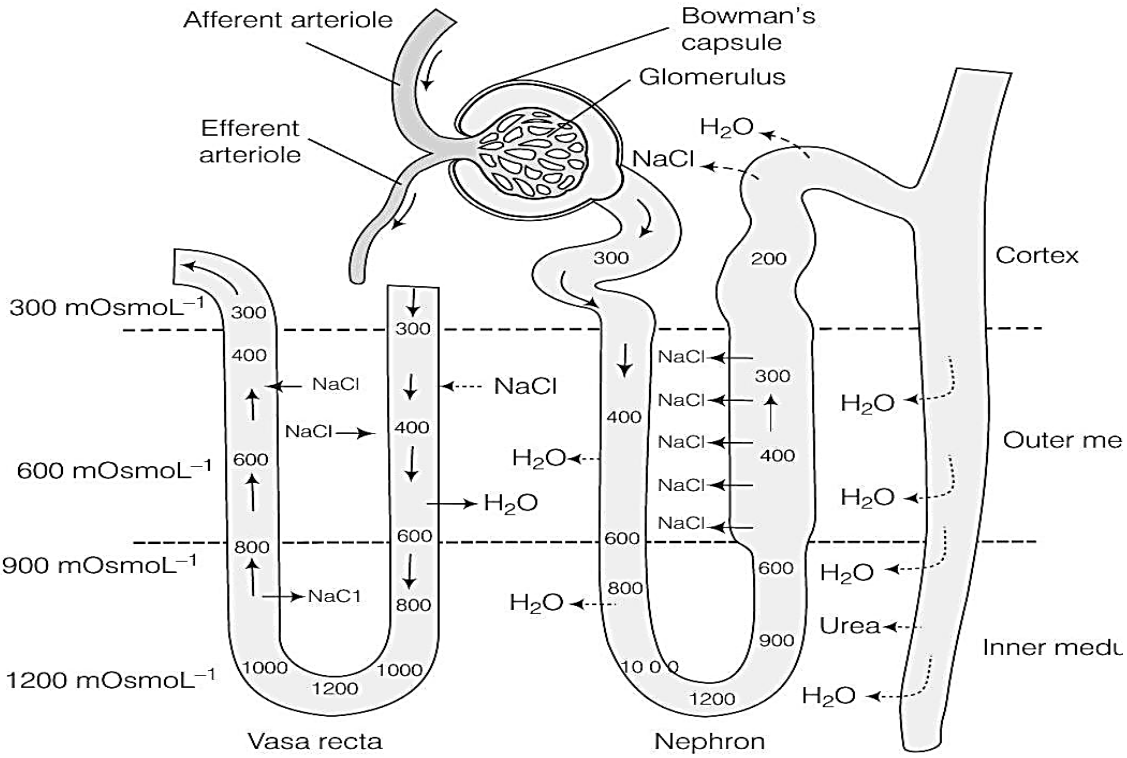
33 **A)** a) What is Rh grouping in human and Rh incompatibility? **5**

b) How does it affect during pregnancy? Explain.

c) What is the other type of blood grouping widely used?

OR

B)



a) What is the process exhibited in the above figure?

b) Explain the process and state its importance.

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