

BUDHA DAL PUBLIC SCHOOL, PATIALA
Final Examination (6 March 2026)

Class XI (Science)
Subject - Biology
(Set - A)

M.M. 70

Time: 3hrs.

General Instructions:

- (i) All questions are compulsory.
- (ii) The question paper has five sections and 33 questions. All questions are compulsory
- (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. Which is not found in annelid?
a) Pseudocoelom b) Ventral nerve cord c) Segmentation d) Closed circulatory system
- Q2. Coenocytic mycelium is characteristic feature of
a) Phycomycetes b) Ascomycetes c) Basidiomycetes d) Deuteromycetes
- Q3. Endosperm, product of double fertilization in angiosperms is absent in the seeds of
a) Gram b) Orchids c) Maize d) Castor
- Q4. Sinus venosus occurs on
a) Dorsal side of heart b) Ventral side of heart c) Basal region of heart d) Apical end of heart
- Q5. When we homogenize any tissue in an acid, the acid soluble pool represents
a) Cytoplasm b) Cell membrane c) Sugar phosphate d) Nucleotide
- Q6. In the fluid mosaic model of cell membrane
a) Proteins can flip flop while lipids cannot
b) Both lipids and proteins can flip flop
c) Lipids can rarely flip flop while proteins cannot
d) Neither lipids nor proteins can flip flop
- Q7. Growth can be measured in various ways. Which of these can be used as parameters to measure growth?
a) Increase in cell number b) Increase in cell size
c) Increase in length and weight d) All the above
- Q8. PEP is primary CO₂ acceptor in
a) C₄ plants b) C₃ plants c) C₂ plants d) Both C₃ and C₄ plants
- Q9. The end product of oxidative phosphorylation is
a) NADH b) Oxygen c) ADP d) ADP + H₂O
- Q10. Hormones stored and released from neurohypophysis are
a) Prolactin and vasopressin
b) Thyroid stimulating hormone and oxytocin
c) Oxytocin and vasopressin
d) Follicle stimulating hormone and luteinising hormone
- Q11. Excretory organs of flatworms are
a) Flame cells b) Nephridia c) Malpighian tubules d) Renette glands
- Q12. Volume of blood that enters aorta with each ventricular systole is
a) Stroke volume b) Vital capacity c) Cardiac output d) Cardiac cycle

A-1



Each of the following questions (Q.No. 13 to Q.No 16) consists of two statements, one is Assertion (A) and the other is Reason (R). Give answer:

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

Q13. Assertion : Cardiac notch is present over right lung.
Reason : Heart lies tilted with apex towards the diaphragm.

Q14. Assertion : Fermentation is incomplete oxidation of glucose.
Reason : Pyruvic acid decarboxylase and alcoholic dehydrogenase catalyse the reaction.

Q15. Assertion : In Golgi apparatus, there is curvature with a convex and a concave surface.
Reason : Golgi vacuole bud off from convex surface.

Q16. Assertion : In Cycas, nitrogen fixation is present.
Reason : In coralloid roots of Cycas, cyanobacteria are found.

Section - B

Q17. Why are stamens of

- a) brinjal called epipetalous b) lily, called epiphyllous?

Q18. a) What is the effect of substrate concentration on the action of enzyme?

- b) Distinguish between apoenzyme and coenzyme.

Q19. Name the stage of cell cycle at which each of the following events occurs:

- a) Chromosomes are moved to spindle equator
- b) Centromere splits and chromatids separate
- c) Pairing between homologous chromosomes takes place
- d) Crossing over between homologous chromosomes takes place

Q20. What is limbic system? Mention its functions.

Q21. Where is Cytochrome c located in mitochondria? Mention its function.

OR

Give the chemical name of one example of each of the following and mention one function of each of them:

- a) Natural auxins b) Gaseous plant hormones

Section - C

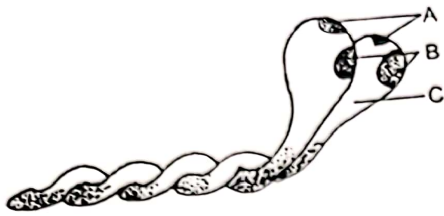
Q22. Give the general characters of cephalochordata and urochordata. Provide one example each of two groups.

Q23. What is phyllotaxy? Name the type of phyllotaxy found in Mustard, Alstonia and Calotropis and explain each.

Q24. Explain female reproductive system of frog with diagram.

Q25. a) What are monosaccharides? Give few examples.
b) Explain how glycosidic bonds are formed?
c) Name one monosaccharide sugar that is found in the blood plasma of human beings

Q26. Explain Glycolysis with the help of schematic representation.



- a) Identify the following in the diagram of myosin filament.
 (i) ATP binding sites (ii) Actin binding sites
 b) Name the monomers of myosin.

- c) Expand (i) HMM and (ii) LMM

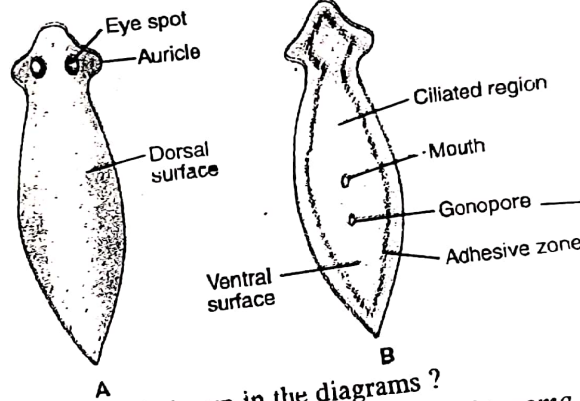
- a) Describe the role played by diaphragm and intercostal muscles in inspiration.
 b) Why do workers in industries that involve grinding or breaking of stones suffer from inflammation of lungs? How can they be protected?

OR

How is respiration regulated in human beings? Explain.

Section - D

- Q29. Study the diagrams carefully and answer questions (a) to (d) by choosing correct options:



- (a) What is the name of the animal shown in the diagrams?
 (A) *Fasciola*
 (B) *Schistosoma*
 (C) *Planaria*
 (D) *Echinococcus*

- (b) How is the animal able to move?
 (A) It swims in water with the help of cilia.
 (B) It can glide over solid substrata by cilia, muscular contractions and mucilage

- (c) How is it able to protect itself from its enemies?
 (A) Eversion of pharynx
 (B) Poisonous nature of mucilage
 (C) Hiding below stones
 (D) Secretion of thick opaque adhesive layer over the body by rhabdites.

- (d) What for the animal famous?
 (A) High power of regeneration
 (B) Dioecious nature
 (C) External fertilization
 (D) Direct development.

- Q30. Read the following and answer the questions given below:
 The amount of filtrate formed by the kidneys per minute, is called glomerular filtration rate (GFR) healthy human, the GFR is approximately 125 mL/minute. Study the flow chart given and answer questions to fill in the blanks.

The (A) cells release Renin,
 when there is a fall in (B)



Renin converts (C) in the blood into (D)



(D) activates the adrenal cortex to release (E)



(E) raises the reabsorption of Na^+ and water and raises the (F)

- a) Name the cells (A) which release rennin
- b) Mention what (B) represents.
- c) Identify (C), (D), (E) and (F) in the flow chart

OR

- c) When is ANF released? Mention its source and how does it function as a check to the above mentioned mechanism.

Section - E

Q31. a) Write six characteristic features of Dinoflagellates.

- b) How are viroids different from viruses?

OR

- a) Write any six characteristic features of Dryopteris.
- b) The spread of living pteridophytes is limited and restricted to narrow, geographical regions. Why?

- a) Draw a diagram of a human heart and label the parts in the special nodal musculature concerned with the conduction of cardiac impulse.

- b) What is joint diastole? Describe the blood flow in the heart during this phase.

OR

Explain Krebs cycle with the help of Schematic Representation.

Q33. Explain various type of placentation with example.

OR

Explain fluid mosaic model of cell membrane with the help of diagram.