Bhavan's Tripura Vidyamandir

1st Terminal Examination (2024-2025)

Class:- 11 **Subject:- Biology**

Time:- 3 Hours Total :- 80 Marks

Name of the student : Roll: Stream:

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: 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 diagram should be drawn.

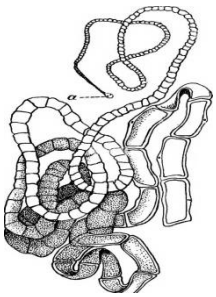
SECTION-A

1. The term 'systematics' refers to-
   a. Identification and classification of plants and animals.
   b. Nomenclature and identification of plants and animals.
   c. Diversity of kinds of organisms and their relationships.
   d. Different kinds of organisms and their classification.

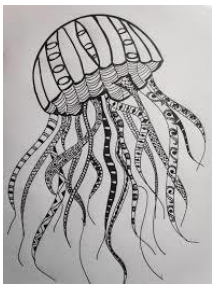
2. The tallest gymnosperm is-
   a. Sequoia b. Pinus c. Cedrus d. Picea

3. Green algae have starch storage bodies called-
   a. Amyloplasts b. Pyrenoids c. Leucoplasts d. Proplastids

4.The figure shows four animals (i), (ii), (iii) and (iv). Select the correct answer with respect to a common characteristic of two of these animals-

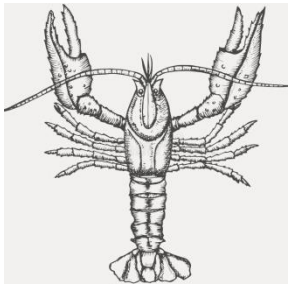


(i)



(ii)

(iii)



(iv)

   a. (iii) and (iv) have a true coelom
   b. (i) and (iv) respire mainly through body wall
   c. (ii) and (iii) show radial symmetry
   d. (i) and (ii) have cnidoblasts for self-defence

5. select the Taxon mentioned below that represents both marine and fresh water species-
   a. Cnidaria b. Echinoderms c. Ctenophora d.Cephalochordata

6.Arrangement of flowers in racemose inflorescence is-
   a. Acropetal b. Basipetal c. Centrifugal d. Irregular

7. The term polyadelphous is related to-
   a. Calyx b. Gynoecium c. Androecium d. Corolla

8. Bidder's canal in frog is present in-

a. Testis b. Kidney c. Ovary d. Brain

9. The membrane of cristae possess tennis ball like minute structures called-

a. Oxysomes b. Ribosomes c. Granules d. Secretory Particles

10. Plasmodesmata are minute cytoplasmic bridges between adjacent-

a. Plant cells b. Animal cells c. Bacterial cells d. Fungal cells

11. Sucrose is a disaccharide formed by condensation of two monosaccharides-

a. Glucose+Mannose b. Fructose+Glucose

c. Glucose+Galactose d. Fructose+Mannose

12. Select the correct statement about G1 phase-

a. Cell is metabolically inactive b. DNA in the cell does not replicate

c. It is not a phase of synthesis of macro-molecules. d. Cell stops growing.

Question No- 13 to 16 consists 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(A):** Human Beings belong to family Canidae.
Reason(R): They are members of order Primata of class mammalia.

14. **Assertion(A):** Equisetum is called horsetail.
Reason(R): Surface of stem is rough due to presence of ribs and deposition of silicon over the epidermal cells.

15. **Assertion(A):** In molluscs, feather like gills are present in mantle cavity,
Reason(R): These gills have respiratory and excretory functions.

16. **Assertion(A):** The area between cotyledonary node of embryo axis and its plumule is called epicotyl.
Reason(R): The area between cotyledonary node and radicle is called hypocotyl.

SECTION-B

17. Differentiate between viruses and viroids (mention any four points).

18. "The gametophytes of bryophytes are different from gymnosperms"-Explain the mentioned statement.

19. Briefly describe the type of excretory and circulatory system in annelida.

20. Draw a neat and labelled diagram of Superior and Inferior Ovary. **(1+1)**

OR

Write the characteristics of a drupe type of fruit with example.

21. Briefly describe about "Activation Energy".

SECTION-C

22. Differentiate between Red,Brown and Green Algae with example. **(2+1)**

23.Give one example of following:

i) Axile placentation

ii) Imbricate aestivation

iii)Racemose inflorescence **(1+1+1)**

24. Give an illustrated description of Maize and Gram seed.

25.Draw a clear and labelled anatomival diagram of Dicot leaf. Mention any one important function of Trichome. **(2+1)**

26. Mention three main types of respiration in frog. Write the functions of ureters in frog. **(1.5+1.5)**

27. Apart from nucleus, name other two organelles that have independent DNA. Mention the main function of centriole. **(2+1)**

OR

Draw a neat diagram of Golgi Apparatus. State the importance of lysosome in eukaryotic cell.

28. Write the different phases in Cell-cycle. Mention the significance of each phases. **(1+2)**

SECTION-D

29. Sponges are the common name for members of this phylum. They are primarily asymmetrical aquatic creatures. These creatures are multicellular primitives with organization at the cellular level. A canal or water transport system is present in sponges. Water enters the body through tiny pores in the wall and exits through the osculum,. The movement of water facilitates the exchange of respiration, the elimination of waste, and the collecting of food. The tubes and the cavities are lined by specific cells. Within cells, digestion occurs. A skeleton is present to support the body. The sexes are not distinct. Sponges reproduce sexually by creating gametes and asexually by fragmentation.

i) the minute opening present on the body of sponges through which water enters in the body cavity-

a) Cnidocytes b) hypostome c) Ostia d) spongocoel

ii) Name the Central cavity present in Sponges.

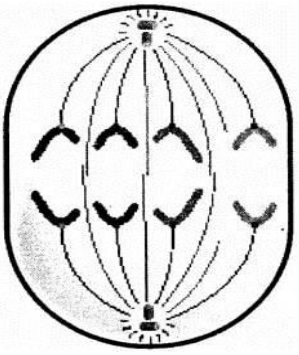
OR

Name the components that are present in skeletal structure of Porifera.

iii) Write the Biological name of any member of phylum porifera.

iv) State the function of Osculum. **(1+1+1+1)**

30. Study the figure and answers the questions-



i). Write the stage of cell division that depicts the figure. Mention its characteristics.

ii). Mention the different types of chromosomes that are shown in the figure.

OR

Distinguish between Chromatin threads and Chromosomes.

iii). From where spindle fibre is arise. **(2+1+1)**

SECTION-E

31.i) Distinguish between male frog and female frog with the help of Diagrams.

ii)State the function of tympanum. **(4+1)**

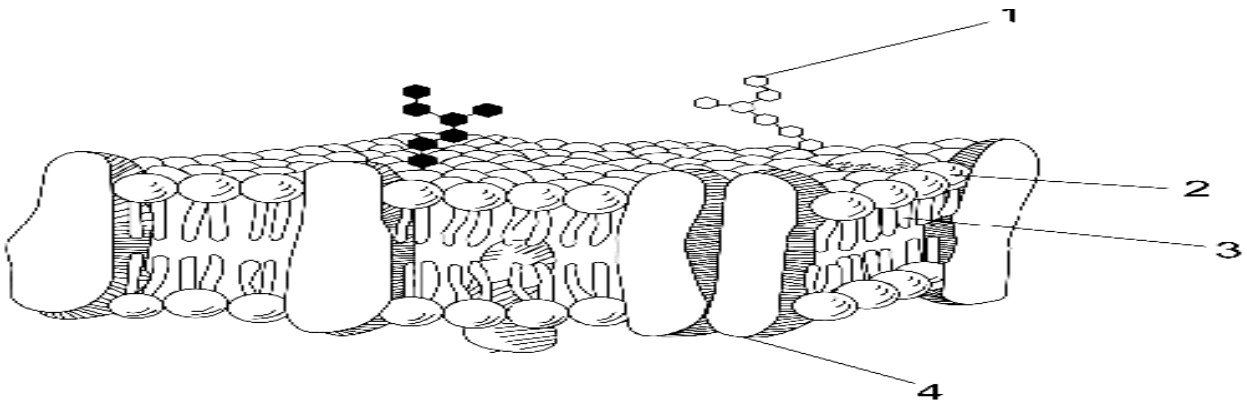
OR

i) With the help of a neat diagram briefly explain the digestive system of frog.

ii). Write any two distinguishable characters of toad and frog **(3+2)**

32. i) List the functions of RER.

ii)Observe the following figure and Identify (1),(2),(3) and (4).



iii) State one difference between leucoplast and chromoplast. **(1+{0.5*2}+1)**

OR

i). Give the difference between cell wall of Gram-positive and Gram-negative bacteria.

ii). Mention about the different types of ribosomes and their subunits. **(3+2)**

33. i) Write a short note on types and structure of Proteins.

ii) Draw the structure Glycine and Alanine. **(3+2)**

OR

i). Explain the lock and key hypothesis of Enzyme action.

ii) List the nature, source and functions of Glycogen. **(2+1+1+1)**