

Exam -2011, Class: XI, Subject: Biology

Time: 3 Hr

M.M. 70

1. *All questions are compulsory.*
2. *The question paper consists of four sections A, B, C and D. Section A contains 8 question of 1 mark each. Section B is of 10 questions of 2 marks each. Section C has 9 questions of 3 marks each where as Section D is of 3 question of 5 marks each.*
3. *There is no overall choice. However, an internal choice has been provided in one question of 2 marks, one question of 3 marks and one question of 5 marks weightage. A student has to attempt only one of the alternatives in such questions.*
4. *Wherever necessary, the diagrams drawn should be neat and properly labeled.*

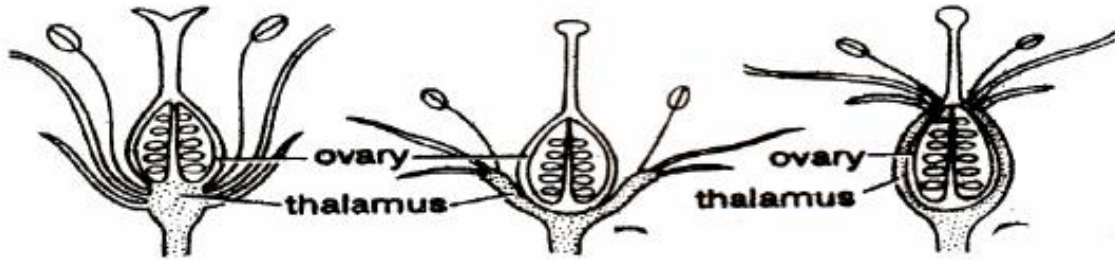
[Section - A]

- Q. 1. Expand ICBN, ICZN.
- Q. 2. What are Phanerogams? What is the other name for them?
- Q. 3. The term “cell” is actually misnomer. Explain it in one sentence.
- Q. 4. Why spleen known as blood bank?
- Q. 5. Why slime mould called as fungus-animals?
- Q. 6. Which hormone is known as immunosuppressive and stress hormone?
- Q. 7. Name the enzyme secreted by the digestive system of human to digest protein in acidic and alkaline medium.
- Q. 8. What are liverworts? Why are they so called?

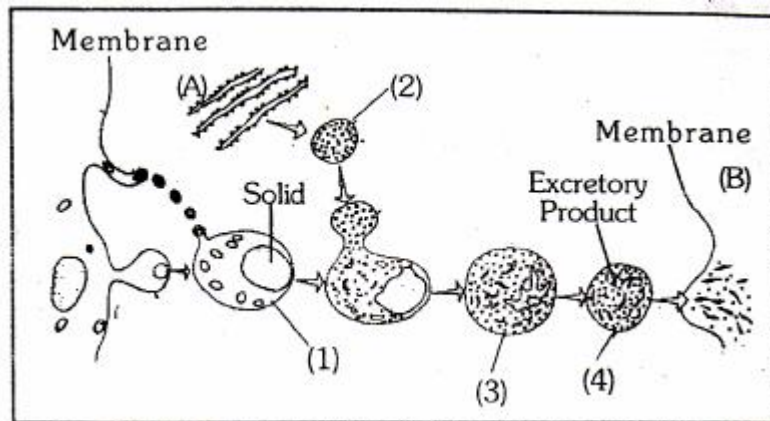
[Section - B]

- Q. 9. What is GERL system? Give two function of related cell organelle?
- Q.10. What is plindromic region of DNA? Adenine in a DNA molecules is 20%, amount of Guanine (G) will be...
- Q.11. Nerve cell produces 36 ATP and kidney cell 38 ATP by complete oxidation of one glucose molecule. Why it is so. Explain it.
- Q.12. What is fungi imperfecti? Give out line classification of fungi.
- Q.13. Give the botanical name of a plant of family Fabaceae. Show the floral formulae and floral diagram of same plant.
- Q.14. Name any one cranial nerve that controls eye ball movement. Is this nerve a sensory, a motor or a mixed nerve? Give total pair of motor and sensory nerves in human.

Q.15. Give three form of thalamus as regards of insertion of pistil and perianth or other floral organ and give example of each type.



Q.16. Observe this model diagram and give answers of following question.



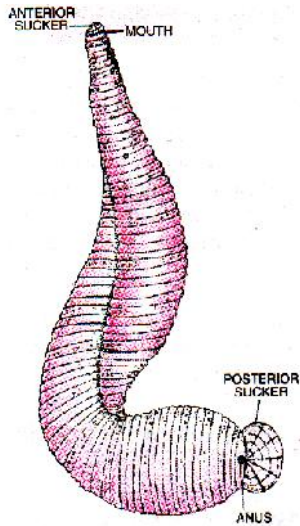
- What is 1 and 4?
- Which process occur through membrane A?
- Which process occur through membrane B?

Q.17. Draw life erythrocytic cycle of Malarial parasite.

OR

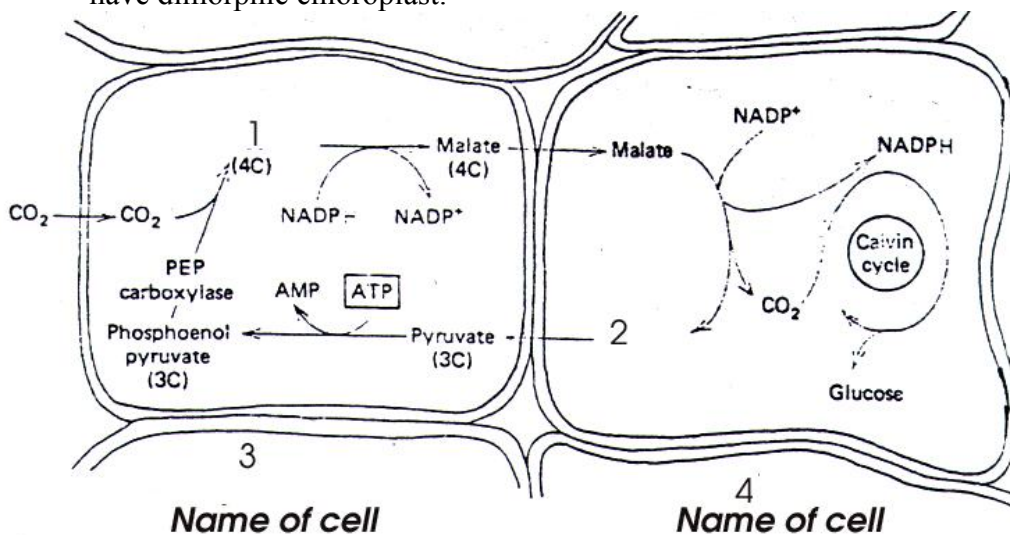
What is the basis of division of protozoan protists? Give name of all groups of protozoan protest with basic structure.

Q.18. Identify the following animal, give zoological name and phylum of this animal. Give two unique feature of same phylum.



[Section - C]

- Q.19. What is synapse? Explain how nerve impulse is transmitted across a synapse?
- Q.20. (i) Pepsinogen is a proteinase enzyme of stomach. It is a exoenzyme or endoenzyme.
 (ii) What are the holoenzyme and Isoenzyme.
 (iii) How sulfa drugs help in inhibition of bacterial growth.
- Q.21. What is meant by biological nitrogen fixation? Explain the process of biological nitrogen fixation with example.
- Q.22. It is CO_2 assimilation in sugarcane leaves. Label 1,2,3 and 4. How these plant have dimorphic chloroplast.



- Q.23. (i) In most plants the terminal bud suppresses the development of lateral buds. What is this phenomenon called? Name the phytohormone that can promote the phenomenon.
- (ii) Name the gaseous plant hormone and mention its three different kinds of action on plants.
- Q.24. What are tidal volume and vital capacity? List any two categories of people which possess higher vital capacity.
- Q.25. Give the full form of ADH. Name the gland that secretes it. Under what condition of the body is it released? What is its role in forming hypertonic urine? What is the disease caused due to the failure of its secretion?
- Q.26. Calvin cycle consists of three phases, what are these? Mention where this cycle takes place and explain the phases involved.
- Q.27. **Give one word scientific term for the following:**
- (i) Blood filled cavity in arthropods. (ii) Excretory organs of annelid.
- (iii) Opening of spongocoel in sponges. (iv) Covering of gills in fishes.
- (v) Larva of *Herdmania* has advance character than adult, this type of metamorphosis is called.....
- (vi) Bone of birds has air cavities, this type of bone are called.....

OR

Differentiate between

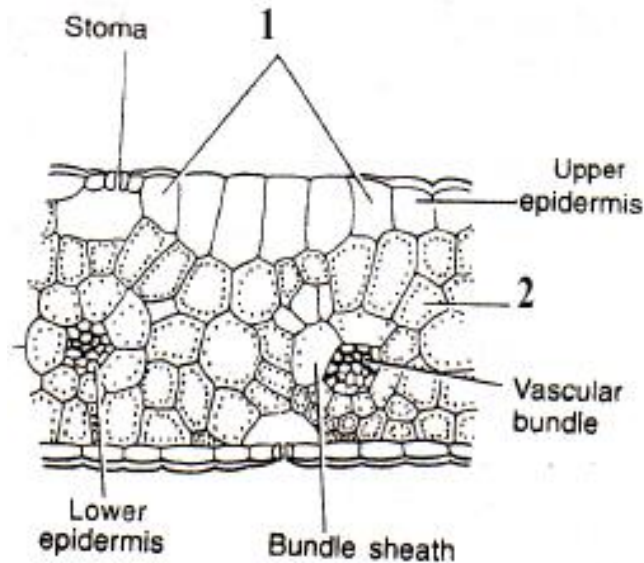
- (i) Cyclostomes and fishes
- (ii) Amniotes and anamniotes
- (iii) Schizocoelome and Enterocoelome.

[Section - D]

- Q.28. (i) What are the two heart sounds? How these sounds produced?
- (ii) What is the function of chordae tendineae?
- (iii) Right ventricular wall is thinner than the left ventricular wall. Why so?

OR

What is ascent of sap? Give most acceptable theory of ascent of sap in higher plants.



- Q.29. (i) It is a diagram of monocot leaf. Identify the 1 and 2 and give function of each.
 (ii) Draw T.S. of dried mammalian bone.
 (iii) What is cork cambium? Give the name of tissue form by cork cambium.

OR

- (i) Draw a well labeled diagram of digestive system of Frog.
 (ii) **Give one word scientific term for the following**
 (a) Longitudinal fold in intestine of earthworm
 (b) Flow of blood from posterior to anterior direction in earthworm by blood vessel
 (c) Structure of earthworm in which fertilization takes place
 (d) Structure of respiratory system of cockroach comparable to nostrils are ...
 (iii) How is merocrine gland differing from holocrine gland.

- Q.30. (i) Every time fertilization occurs, the chromosome number is doubled. Yet, the chromosome number of a species remains constant. Comment!
 (ii) What are homologous chromosomes?
 (iii) A cell has 10 metacentric, 10 acrocentric, 10 submetacentric and 10 telocentric chromosomes. Give number of V and I shape chromatids in anaphase of same cell.
 (iv) Describe the sequence of the events in meiosis I.

OR

- (i) Discuss the various evidences available to show that mitochondria and plastids have come to live symbiotically in a eukaryotic cell.

(ii) What are gram positive bacteria? Give the differences between the cell walls of gram positive and gram negative bacteria.

(iii) Two lamellar modal can not explain the permeability of water through plasma membrane. How it is explain by fluid mosaic modal.
