

**SAMPLE PAPER  
FIRST TERMINAL EXAMINATION  
CLASS-XI  
SUBJECT-BIOLOGY**

**Time: 3 Hrs**

**Max Marks: 70**

**General Instructions:**

- (i) All questions are compulsory.
- (ii) This question paper consists of four Sections A, B, C and D. Section A contains 5 questions of one mark each, Section B is of 7 questions of two marks each, Section C is of 12 questions of three marks each and Section D is of 3 questions of five marks each.
- (iii) There is no overall choice. However, an internal choice has been provided in one question of 2 marks, one question of 3 marks and all the three questions of 5 marks weightage. A student has to attempt only one of the alternatives in such questions.
- (iv) Wherever necessary, the diagrams drawn should be neat and properly labelled.

**SECTION-A**

1. Name the member of
  - a) Ascomycetes, which has been extensively used in biochemical and genetic work.
  - b) phycomycetes which is found to be a parasite of mustard plant .
2. What do you understand by the Quiescent stage of the cell cycle?
3. Name the components that constitute the stele in plants
4. Name two constituents of neural or the nervous tissue.
5. Define the following terms:
  - a) polyadelphous
  - b) Epiphyllous

**SECTION-B**

6.
  - a) Name the only cell organelle found in a typical prokaryotic cell.
  - b) Name the extra chromosomal circular piece of DNA found in prokaryotic cells and assign its function.
7. What do you understand by a satellite in context to chromosome?

8. a) Identify the phylum for the following species and write one identifying feature for each of them.

i) Balanoglossus

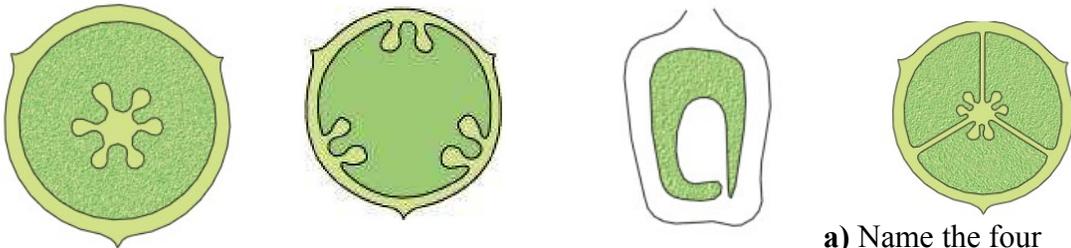
ii) Petromyzon

b) Name the following

i) A limbless amphibian and

ii) A gregarious arthropod

9. Observe the following diagrams and answer the questions that follow:

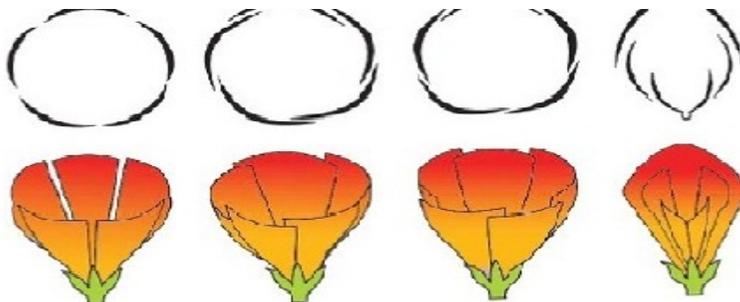


a) Name the four arrangements of ovules within different

Ovaries in the above diagrams.

b) What is it called as? Is the term applicable for members of division bryophyta? Justify giving reasons.

OR



a) Name the four arrangements of petals in floral bud with respect to the other members of the same whorl in the above diagrams.

b) What is it called as? Explain vexillary arrangement in detail.

10. a) Differentiate the gametophyte of Gymnosperms from that of Bryophytes and pteridophytes.

b) The spread of living pteridophytes is limited and restricted to narrow geographical regions. Why?

11. Write one characteristic features of:
- The chief producer of the oceans
  - The smallest living cell known that can survive without oxygen
12. Draw Zwitterionic state of an amino acid.

### SECTION-C

13. a) Draw a well labeled diagram showing the basic chordate body plan.  
b) Name three sub phylum of phylum chordata.  
c) What is the basis of classification of these subphylums?
14. a) Dung of several ruminant animals is used for production of bio gaas. Explain Why?  
b) How do chemosynthetic autotrophic eubacteria derive energy? What is their significance in the ecosystem?

**OR**

- Differentiate between a Virus and a Viriod.
  - Name the biological indicator:
    - that bloom in polluted water bodies
    - that do not grow in polluted areas.
15. a) What is periderm? How periderm formation does takes place in dicot stems?  
b) If one de-barks a tree which parts of plant are been removed?
16. Write the three basic components of a connective tissue. Describe the structure of a mammalian bone.
17. a) Write the floral formula of an actinomorphic, bisexual , hypogynous flower with six united tepals six stamens tricarPELLary, syncarpous , superior ovary .  
b) Identify the plant family to which this formula belongs.  
c) Name one plant that is a source of medicine and one ornamental plant from this family.
18. What are annual rings? How can they help in estimating the age of a tree? Write 4 points of difference between heart wood and sap wood.
19. Explain the life cycle of a Gymnosperm ( cyclic presentation only)

20. What are cell junctions? Describe the various types of cell junctions present in epithelium and other tissues.
21. Name the special membranous structure formed by the extension of plasma membrane, typically into a prokaryotic cell . Mention any 4 functions of this structure.
22. Briefly describe the sequence of events taking place during prophase I occurring in the cells of testes of a Grasshopper.
23. a) What do you understand by endomembrane system? Write components of this system.  
 b) Both lysosomes and vacuoles are the endo-membrane structures , yet they differ in terms of their function . Comment.  
 c) Though Mitochondria is also a membranous organelle yet it is not considered as part of endomembrane system . Give reason.
24. a) Name the stage of cell cycle at which the following events occur:  
 i) Chromosomes are moved to spindle equator  
 ii) centromere splits and chromatids separate  
 iii) Pairing between homologous chromosomes takes place
- b) How does cytokinesis in a plant cells differ from that in animal cells?

#### SECTION-D

25. a) Describe in detail the anatomy of a dicot stem.  
 b) Identify the following  
 i) The anatomical layer of root from which lateral branches of root arises.  
 ii) The cells that make leaves of monocot plants curl during water stress

**OR**

- a) Explain the process of secondary growth in the stems of woody Angiosperms with the help of schematic diagrams. What is its significance?  
 b) How is secondary growth accomplished in a dicot root?
26. Where would you find hepatic caeca and malpighian tubules in a cockroach? Write function of each of them. Draw and describe the digestive system of Cockroach.

**OR**

What is the position of ovary in cockroach? What are ootheca Draw and

describe male reproductive system of a Cockroach.

- 27. a)** Briefly describe the structural details of cell membrane as seen under the electron microscope.
- b)** What do you understand by the fluidity of cell membrane? State the importance of fluid nature of cell membrane
- c)** Throw light on method of transport of polar molecules across the plasma membrane

**OR**

- a)** Briefly describe the structural details of Golgi apparatus as seen under the electron microscope.
- b)** Give reason why Golgi apparatus remains in close association with endoplasmic reticulum