

INDIAN SCHOOL SOHAR
FIRST TERM EXAM-2013
BIOLOGY

26.09.13
 STD XI

Marks:70
 Time:3Hrs

General Instructions:-

- (i) This question paper consists of four sections **A, B, C, D**. Section **A** contains **5** questions of **1** mark each, section **B** is of **5** questions of **2** marks each, section **C** is of **12** questions of **3** marks each, **1** question of **4** marks and section **D** is of **3** questions of **5** marks each.
- (ii) All questions are compulsory.
- (iii) There is no overall choice. However, an internal choice is provided in one question of **2** marks, one question of **3** marks and all questions of **5** marks weightage. Attempt only **one** of the choices in such questions.
- (iv) Questions of section **A** are to be answered in one word or **one sentence** each, section **B** in approximately **20-30** words each, section **C** in **30-50** words each and section **D** in **80-120** words each.

SECTION-A

1. How are viruses different from viroids? (1)
2. Name the most abundant protein in the animal world and in the whole of the biosphere. (1)
3. State the two main tenants of the cell theory. (1)
4. How is a 'key' helpful in the identification and classification of organisms? (1)
5. How does ureotelic animals differ from uricotelic animals? (1)

SECTION-B

6. How important are the following characteristic features to organisms? (2)

a) nephridia in annelids	b) water vascular system in Echinodermata
c) ostia in porifera,	d) cnidoblast in coelentrata.
7. Draw a neat labeled sketch of the longitudinal section of phloem with its components. (2)
8. A boy walking through the forest finds small plants like _____ as mats on the rocks (2)

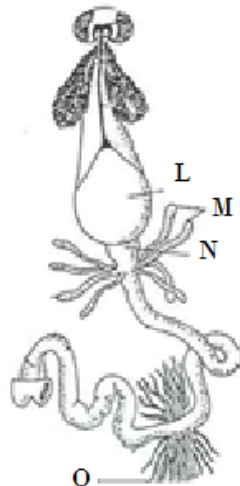
another looking like _____ appressed to the moist ground. Give two similarities and differences between them.
9. Differentiate between the following: (2)

(a) Centrosome and flagella.	a) Peptide bond and ester bond.
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OR

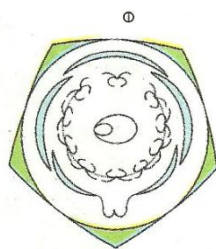
How does the position of centromere form the basis of classification of chromosomes? Support your answer with diagrams.

10. In the given figure of the alimentary canal of cockroach. Label the parts marked L to O. (2)



SECTION-C

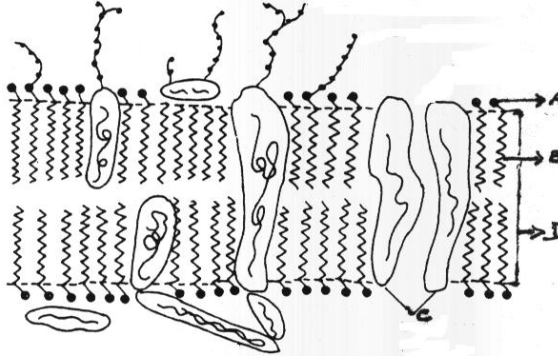
11. a) List the salient features that distinguish chordates from non-chordates. (3)
 b) Subphyla urochordata and cephalochordate are often referred to as protochordates. Justify. (3)
12. Describe the Watson and Crick model of DNA structure. (3)
13. Given below is the floral diagram of *Pisum sativum* belonging to family fabaceae. (3)



- a) What was this family earlier known as?
 b) Comment on the aestivation of petals here.
 c) Describe the reproductive parts using technical terms.
14. Fungi constitute a unique kingdom of heterotrophic organism, it reproduces by asexual and sexual means. What are the three steps involved in the sexual cycle of fungi. (3)
15. How are eubacteria classified based on the mode of nutrition. Cite an example each. (3)
16. A student prepared a transverse section of a plant stem taken from the school garden. How would he ascertain that it is a dicot stem and not a monocot stem? (three main points) (3)
- OR**
- How are simple tissues found in the flowering plants classified based on the structural and functional difference.
17. Enzymes accelerate the biochemical reactions. Enumerate the steps in the catalytic cycle of enzymes. List two factors affecting enzyme action. (3)
18. The interphase, though called the resting phase is the time when the cell is preparing for division. Explain the three phases into which it's further divided. (3)
19. During the life cycle of any sexually reproducing plant there is alternation of generation. How do plant groups differ in their life cycle patterns? Give an example each. (3)

20. Biologists describe the protein structure at four levels. Explain them give an example each. (3)

21. Study the diagram of the plasma membrane and answer the following:- (3)



- Label the parts marked A, B, C and D.
- How does the quasi- fluid nature of the membrane serve the cell?

22. Angiosperms and gymnosperms bear seeds. Explain the structure of reduced female gametophyte in angiosperms. In what way does the female gametophyte differ from that of gymnosperms? (3)

23. A woodcutter felled old temperate trees and he then used the dark brown portion having series of concentric rings for making furniture. Seeing such an act Raju an environmentalist informs him about the consequences of deforestation. (4)

- How would Raju, explain to him the significance of these rings?
- Why would the woodcutter prefer the dark brown wood for making furniture?
- List any two ways by which trees contribute in maintaining ecological balance.
- What values are displayed by Raju?

SECTION-D

24. Enumerate the key meiotic events that can be grouped under prophase I of meiosis. (5)

OR

M Phase is the most dramatic period of the cell cycle. Explain the key events that occur during the four stages of the M Phase. Why is mitosis also called equational division?

25. a) Explain, the process of periderm formation in the stem of woody angiosperms. (5)
b)Mention the role played by the companion cells and guard cells found in plants.

OR

- Muscles play an active role in all the movements of the body. Tabulate the structural and functional differences between the different types of muscle tissues.
- Areolar and adipose tissue are loose connective tissue. How do they differ in their function?

26. Give a broad outline of classification of kingdom Animalia based on common fundamental features. (5)

OR

Draw an outline of the five kingdom classification highlighting the criteria used.

*****THE END*****