

- N.B. : (1) All question are compulsory.  
(2) All questions carry equal marks.  
(3) Draw diagrams wherever necessary.

1. Do as directed (any fifteen) :

15

Fill in the blanks :

1. \_\_\_\_\_ are the prokaryotes which appear to have diverged from true bacteria very early in evolution.
2. Scoliodon is a \_\_\_\_\_ fish.
3. Mollusc have \_\_\_\_\_ as a respiratory pigment.
4. The walls of many Gram positive bacteria can be easily destroyed by treating with an enzyme called \_\_\_\_\_.
5. The cell shape determining part of the cell wall is largely composed of \_\_\_\_\_.
6. The granular consistency of the cytoplasm is because of the presence of \_\_\_\_\_.
7. Volutin granules are reserve source for \_\_\_\_\_.
8. Ribosomes are associated with \_\_\_\_\_ ER.
9. \_\_\_\_\_ provide buoyancy to the cell.
10. \_\_\_\_\_ coined the term bacteriophage.
11. Give one example of a virus with icosahedral symmetry.
12. Give one function of capsule in Bryophyte.
13. Give example of any one bacteria with chemotropic mode of nutrition.
14. Name any one threat to biodiversity.
15. Name any one Eumycota.
16. Name the first virus that was studied under electron microscope.
17. Define : Taxonomical diversity.
18. Define : Alternation of generation.
19. Define : Burst size.
20. State the role of carborundum for the cultivation of plant viruses.

2. (a) Write a note on Miller's Experiment. 8  
(b) Describe the salient features of Chordate. 7  
OR  
(c) Give salient features of Gymnosperms. 8  
(d) Discuss the general characteristics of Eubacteria. 7
3. (a) Describe the structure of Gram negative bacterial cell wall. 8  
(b) Describe the Fluid mosaic model of plasma membrane. 7  
OR  
(c) Explain the process of Endospore formation. 8  
(d) Describe the structure of microtubule. 7
4. (a) With the help of a diagram elaborate on viral multiplication cycle. 8  
(b) Describe in detail any two methods for cultivation of animal viruses. 7  
OR  
(c) Discuss classification of animal viruses on the basis of their transcription process. 8  
(d) Elaborate on classification & types based on morphology of Bacteria. 7
5. Write Short Notes on (any three) : 15  
(a) General characters of Arthropoda  
(b) Economic importance of Fungi  
(c) Capsule  
(d) Mitochondria  
(e) Nutritional requirements of bacteria
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