

2 ½ Hours

Total Marks: 75

Note:

1. Attempt all questions.
2. All questions carry equal marks.
3. Draw neat labelled diagrams wherever necessary.
4. For Q 2, Q 3 and Q 4 attempt A and B OR C and D.

Q.1 Do as directed: (Any fifteen)

1. Define: Life.
2. _____ are the prokaryotes which appear to have diverged from true bacteria very early in evolution.
3. Give one example of Prokaryotes.
4. Give one example of Gymnosperm.
5. Name any one fruiting bodies formed in fungi during reproduction.
6. Earthworm belongs to Phylum _____.
7. Give one example of Phylum *Platyhelminthes*.
8. Give one example of photoautotrophs.
9. Many bacteria possess membrane invaginations in the form of system of convoluted tubules and vesicles termed as _____.
10. The _____ complex may play a role in the heat resistance of endospore.
11. Light reaction of photosynthesis is takes place in the _____ of the chloroplast.
12. Volutin granules are reserve source for _____.
13. Ribosomes are NOT associated with _____.
14. Define: Capsid.
15. Give one example of aerobic spore forming rod.
16. Define : Prophage.
17. Give one example of a Gram positive bacterium.
18. _____ is the causative organism for bacillary dysentery.
19. State true or False : HIV is not an example of retrovirus.
20. Give one example of animal virus.

- Q 2 A Explain Oparin hypothesis of origin of life.
- Q 2 B Describe salient features of Algae.

OR

- Q 2 C Describe General characteristics of Eubacteria.
- Q 2 D Discuss the salient features of Phylum Arthropoda.

Q 3 A Elaborate on the structure and functions of Chloroplast.

Q 3 B Discuss the cell wall of Gram negative bacteria.

OR

Q 3 C Differentiate between Eukaryotic cell and a Prokaryotic cell.

Q 3 D Explain Phagocytosis with a neat and labelled diagram.

Q 4 A Discuss Adsorption and Penetration events during phage infection.

Q 4 B Elaborate on the one-step multiplication cycle of lytic phages.

OR

Q 4 C What is lysogeny? Explain its mechanism.

Q 4 D Explain in detail the structure of a phage.

Q.5 Write Short notes on: (Any three)

- a. Characteristics of *Actinomycetes*.
- b. Genetic Diversity.
- c. Microfilament.
- d. Structure of a Flagellum.
- e. General characteristics of Bacterial viruses.