

[2½ Hours]

[Total Marks: 75]

- N.B:**
1. Attempt all questions.
 2. Each question carries 15 marks.

Q.1) Do as directed (attempt any fifteen)

15

1. Define: life.
2. State True or False: *E. coli* is an eukaryotic organism.
3. Mention two characteristics of gymnosperms.
4. Define alternation of generation.
5. Name any two fruiting bodies formed in fungi during reproduction.
6. What do you mean by naked virions?
7. Define: Viropexis.
8. Explain the term eclipse period.
9. Name any one filamentous phage.
10. Give the function of delayed early genes in phage replication.
11. State the use of embryonated eggs in virology.

Fill in the blanks

12. Reptiles have _____ chambered heart.
13. Crab belongs to the phylum _____.
14. Most organelles in a eukaryotic cell are found in the _____.
15. Organism which lack mitosis division and use binary fission method for cell division are known as _____.
16. Some species of bacteria forms, chain or trichomes that are enclosed by a hollow tube called a _____.
17. _____ is responsible for the association of ribosome with ER _____ are also called as dictyosomes.
18. Polysaccharide granules can be stained by _____.
19. _____ is the major protein of microtubules.
20. One of the first viruses studied by electron microscopy was the _____.

Q.2)

- A) Describe the theory of Spontaneous generation 8
- B) Explain the salient features of Algae 7

OR

- C) Describe general characteristics of Eumycota 8
- D) Give an account of salient features Class Amphibia 7

Q.3)

- A) Differentiate between slime layer and Capsule 8
- B) Describe the ultrastructure of Plasma membrane 7

OR

- C) Describe the structure of gram negative bacterial cell wall 8
- D) Write the structure and function of Microtubule 7

Q.4)

- A) Explain in detail the mechanism of lysogeny 8
- B) Discuss in detail the structure of Phage 7

OR

- C) Describe the morphology of Plant and Animal Viruses 8
- D) Elaborate on different modes of cell division in Bacteria. 7

Q.5) Write short notes on (any three) 15

- A) Actinomycetes
- B) Genetic diversity
- C) Phagocytosis
- D) Autophagy
- E) Types of bacteria based on their nutritional requirements.