Q.P. Code : 11235

Second Semester B.Sc. Degree Examination, May/June 2019

(CBCS – Semester Scheme)

Microbiology

Paper II — MICROBIAL TAXONOMY AND CULTURE TECHNIQUES

Time : 3 Hours] *[Max. Marks : 70*

Instructions to Candidates :

1. *Answers all Sections.*
2. *Draw diagrams wherever necessary.*

SECTION – A

I. Answer the following : **(5 × 2 = 10)**

1. How does a viroid differ from a virus?
2. Define phylogenetic tree.
3. What is the role of lamellosome?
4. What are growth factors?
5. What is the significance of synchronous culture?

SECTION – B

II. Answer any **FOUR** of the following : **(4 × 5 = 20)**

6. Describe in detail each stage in animal virus replication.
7. How does Carl Woese divide organisms into domains in his universal phylogenetic tree?
8. Draw labelled diagrams of sexual life cycle in yeast.
9. How to grow an anaerobic microorganism in the laboratory?
10. Why are vitamins, amino acids, purines and pyrimidines often known as growth factors?

SECTION – C

(3 × 10 = 30)

III. Answer any **THREE** of the following :

11. Explain the lytic and lysogeny cycle of bacteriophage T_4.

12. Describe in detail the composition and structure of gram-positive cell walls and gram-negative cell walls.

13. Discuss the salient features of the major groups of fungi with examples.

14. Describe the nutritional requirements of the four major nutritional groups with examples.

15. Briefly describe each technique by which microbial population numbers may be determined and give its advantages and disadvantages.

SECTION – D

IV. Answer the following in one sentence or a word : **(10 × 1 = 10)**

16. pfu

17. reverse transcriptase

18. strain

19. LPS

20. fried egg colony

21. haustorium

22. gas pack

23. Felix d'Herelle

24. psychrotroph

25. fastidiour microbe