Reg. No. : ....

Name : ....

Second Semester B.Sc. Degree Examination, September 2022

Career Related First Degree Programme under CBCSS

Group 2 (a) : Biochemistry and Industrial Microbiology

Foundation Course II

IM 1222 – MICROBIAL TAXONOMY AND PHYSIOLOGY

(2014 – 2019 Admission)

Time : 3 Hours   Max. Marks : 80

SECTION – A

Answer **all** questions. Answer in a word to a maximum of **two** sentences. Each question carries **1** mark.

1. Bergy's manual
2. Give 2 examples of fungi
3. Dendrogram
4. Diatoms
5. 16S rRNA
6. Synchronous growth
7. Proton symport
8. Mycology
9. ——————— proposed the phylogenetic tree for living things.
10. Taxon

                               (10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions. Answer not to exceed **one** paragraph. Each question carries **2** marks.

11. Differentiate Passive and facilitated diffusion

12. Distinguish between Batch and continuous culture.

13. Three kingdom classification.

14. Chemoorganotrophic bacteria.

15. Binary fission.

16. What is active transport?

17. Halo bacteria.

18. Phenetic classification.

19. Lag phase.

20. Importance of Bioluminescence.

21. Critically comment on species concept.

22. Systematic Bacteriology.

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions. Answer not to exceed **120** words. Each question carries **4** marks.

23. Explain the Objectives and practical value of taxonomy.

24. What is the criteria for classification of bacteria?

25. Discuss Biosynthesis of cell wall peptidoglycan.

26. Distinguish sporozoa and ciliates.

27. Differentiate symbiotic and non-symbiotic nitrogen fixation.

28. Anoxygenic photosynthesis.

29. What is the role of DNA hybridization techniques to differentiate bacteria?

30. Mechanism of nutrient uptake in bacteria.

31. Five Kingdom Classification

(6 × 4 = 24 Marks)

SECTION – D

Answer any two questions in detail. Each question carries 15 marks.

32. Explain Bacterial growth curve and factors affecting bacterial growth.

33. Classify algae with suitable examples.

34. What is a phylogenetic tree? Explain how it is constructed.

35. Bacterial Photosynthesis

(2 × 15 = 30 Marks)

_____