

C 24747

(Pages : 2)

Name.....

Reg. No.....

**SECOND SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2017**

(CUCBCSS—UG)

Core Course—Microbiology

**MBY 2B 02—MICROBIAL PHYSIOLOGY AND TAXONOMY**

Time : Three Hours

Maximum : 80 Marks

**Section A**

*Answer all the twelve questions.*

1. Mutant strains of bacteria require some growth factor are \_\_\_\_\_.
2. Organisms that obtain energy by oxidizing inorganic chemical sources are called \_\_\_\_\_.
3. \_\_\_\_\_ are special king of chlamydospores of rusts.
4. Transport of molecule across the membrane with the help of membrane proteins is \_\_\_\_\_.
5. Molecular Unit of currency is \_\_\_\_\_.
6. The Photoreceptor in photosynthetic bacteria are \_\_\_\_\_.
7. Diagram showing evolutionary relationships among biological species are called \_\_\_\_\_.
8. The preservation method using liquid nitrogen are called \_\_\_\_\_.
9. Bacterial endospore is chemically \_\_\_\_\_.
10. The time required for a cell to double is called \_\_\_\_\_.
11. The distinct variation within a species of bacteria are called \_\_\_\_\_.
12. An example for mutualistic association between fungus and a cyanobacterium.

(12 × ½ = 6 marks)

**Section B**

*Answer all ten questions in one or two sentences.*

13. Differentiate lytic and lysogenic cycle.
14. What is Pock assay ?
15. Explain Binomial nomenclature.
16. What are Thermodurics ?

**Turn over**

17. Comment on PAGE technique.
18. Explain taxonomic hierarchy.
19. What are nutritionally fastidious organisms ?
20. What is Packed cell volume ?
21. What are Microaerophiles ?
22. Comment on fimbriae.

(10 × 2 = 20 marks)

### Section C

*Answer briefly any six questions.*

23. What are the nutritional groups of microbes ?
24. What are the different viral cultivation methods ?
25. Explain briefly on viral quantification methods.
26. What are DNA sequencing methods ?
27. Comment on bacterial pure culture techniques.
28. What are the different anaerobic culture methods ?
29. Different types of nutrient uptake in bacteria.
30. Differentiate chemostat and turbidostat.

(6 × 5 = 30 marks)

### Section D

*Answer any two questions in detail.*

31. Explain different biochemical tests used for identification of bacteria.
32. Explain fungal system of classification.
33. Discuss the growth of microbial cells.

(2 × 12 = 24 marks)