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)