D 43206 (Pages : 2) Name.....

Reg. No.....

SECOND SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2018

(CUCBCSS–UG)

Microbiology

MBY 2B 02 – MICROBIAL PHYSIOLOGY AND TAXONOMY

Time : Three Hours Maximum : 80 Marks

Section A

Answer **all** *the* **twelve** *questions.*

1. The virulent factor helps the bacteria to attach to the host is _____.
2. Name the growth factors.
3. Name the asexual chlamydospores in fungi.
4. A molecule helps in uptake of iron in microorganisms is _____.
5. Cellular currency is _____.
6. Photosynthetic pigments present in phototrophic bacteria are _____.
7. Diagram showing evolutionary relationships among biological species are called _____.
8. An example for mutualistic association between a fungus and a cyanobacterium is _____.
9. The dormant structure produced by bacteria is called _____.
10. The period of time required for a quantity to double in size is _____.
11. The distinct variation within a species of bacteria are called _____.
12. The method of preservation by freezing in high vacuum are called _____.

(12 × ½ = 6 marks)

Section B

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

13. What is photophosphorylation?
14. What is transport media, give example?
15. Comment on numerical taxonomy.
16. Comment on energy production by fermentation.
17. What do you mean by 16 S RNA studies?
18. Define microaerophiles with example.

Turn over

19. Define nutritionally fastidious organisms.
20. Explain on taxonomic hierarchy.
21. Importance of plaque assay.
22. Differentiate lytic and lysogenic cycle.

(10 × 2 = 20 marks)

Section C

Answer briefly any **six** *questions.*

23. Comment on modes of bacterial nutrition.
24. Differentiate chemostat and turbidostat.
25. Mechanism of electrogenic and electro neutral transport.
26. Describe about various anaerobic culture methods.
27. Explain on bacterial pure culture techniques.
28. Comment on DNA hybridization technique.
29. What are the biochemical tests used for identification of bacteria?
30. What are the viral cultivation methods?

(6 × 5 = 30 marks)

Section D

Answer any **two** *questions in detail.*

31. Describe the major differences between cell wall of bacteria with diagram.
32. Explain fungal system of classification.
33. Discuss the growth of microbial cells.

(2 × 12 = 24 marks)