



K21U 2097

Reg. No. :

Name :

III Semester B.Sc. Degree (CBCSS – Sup./Imp.)
Examination, November 2021
(2015-18 Admission)
CORE COURSE IN MICROBIOLOGY
3B03 MCB : Microbial Physiology

Time : 3 Hours

Max. Marks : 40

Instruction : Draw diagrams wherever necessary.

SECTION – A

Answer **all** questions. **Each** question carries **1** mark.

1. The interval of time between successive binary fissions of a cell or population is known as _____.
2. If the growth curve is plotted by measuring growth by turbidimetry which phase is not observed ?
3. The light harvesting pigment system present in *Cyanobacteria* and chloroplasts of red algae is _____.
4. The chemolithotrophic microorganisms which require organic compounds as carbon source is called _____. (4×1=4)

SECTION – B

Answer briefly on **any seven** questions. **Each** question carries **2** marks.

5. Microaerophiles.
6. Extremophiles.
7. Binary fission.
8. Synchronous culture.
9. Cyclic photophosphorylation.

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10. RubisCo

11. Hydrogenases.

12. Denitrification.

13. Heterocyst.

14. NOD factor.

(7×2=14)

SECTION – C

Answer **any four** questions. **Each** question carries **3** marks.

15. Nutritional classification of microorganisms.

16. Methods for measurement of microbial growth.

17. Calvin cycle.

18. Anoxic hydrocarbon metabolism.

19. Nitrogenase enzyme complex.

20. Anaerobic respiration.

(4×3=12)

SECTION – D

Answer **any two** questions. **Each** question carries **5** marks.

21. Write a note on nutritional requirements for microbial growth. Write on common ingredients used to prepare artificial media for cultivation of microorganisms.

22. Explain with suitable diagram the photosynthetic electron flow in purple bacteria.

23. Describe the mechanisms of methanogenesis from different substrates.

24. Write a note on nitrogen fixing bacteria. Describe the process of symbiotic nitrogen fixation.

(2×5=10)
