



Reg. No. :

Name :

III Semester B.Sc. Degree (CBCSS – Sup./Imp.)

Examination, November 2020

(2014 – '18 Admns)

CORE COURSE IN MICROBIOLOGY

3B03MCB : Microbial Physiology

Time : 3 Hours

Max. Marks : 40

Instruction : Draw diagrams wherever necessary.

SECTION – A

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

1. Microorganism requiring CO_2 for optimum growth is called
2. The specific protein that directs cell shape of microorganism is
3. Microorganisms which can fix atmospheric CO_2 into organic compounds are called
4. Specialized cells of Cyanobacteria that can fix atmospheric nitrogen is **(4×1=4)**

SECTION – B

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

5. Acidophiles
6. D-value
7. Synchronous growth
8. Breed's count
9. Antenna pigments
10. *Heliobacteria*

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11. Methanopyrus
12. Photoautotrophic lithotrophs
13. Azoll-Anabaena interaction
14. *Bradyrhizobia*.

(7×2=14)

SECTION – C

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

15. Bacterial growth curve.
16. Influence of temperature on bacterial growth.
17. Cyclic photophosphorylation.
18. Anaerobic respiration in bacteria.
19. Nitrogenases.
20. Microbial transformation of hydrocarbons.

(4×3=12)

SECTION – D

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

21. Write a note on nitrogen fixing microorganisms.
22. Discuss the mechanisms of methanogenesis and acetogenesis.
23. Discuss the pigments involved in bacterial photosynthesis. Describe Calvin cycle.
24. Discuss the nutritional requirements of microorganisms. Add a note on bacterial reproduction.

(2×5=10)
