



**K20U 1840**

Reg. No. : .....

Name : .....

**III Semester B.Sc. Degree CBCSS (OBE) – Regular  
Examination, November 2020  
(2019 Admission Only)  
CORE COURSE IN MICROBIOLOGY  
3B03 MCB : Microbial Physiology and Metabolism**

Time : 3 Hours

Max. Marks : 40

**PART – A**

Short Answer. Answer **all** questions. **Each** question carries 1 mark : **(6×1=6)**

1. Photoorganotrophs.
2. Alkalophiles.
3. Stenothermal bacteria.
4. Acid mine drainage.
5. Nitrite oxidase.
6. Acetogenesis.

**PART – B**

Short Essay. Answer **any 6** questions. **Each** question carries 2 marks : **(6×2=12)**

7. Classification of bacteria based on their oxygen requirement.
8. Describe the process of binary fission.
9. Anoxygenic photosynthesis.
10. Comment on hydrogen oxidising bacteria.
11. Iron oxidising bacteria.

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12. Denitrification.
13. Cytochromes.
14. Coenzyme Q.

PART – C

Essay. Answer **any 4** questions. **Each** question carries **3** marks.

(4×3=12)

15. Comment on the logarithmic phase of bacterial growth curve.
16. Briefly describe Reductive Tricarboxylic acid cycle pathway.
17. Methanogens.
18. Comment on sulfur oxidation.
19. Explain EMP pathway.
20. Explain PP pathway.

PART – D

Long Essay. Answer **any 2** questions. **Each** question carries **5** marks.

(2×5=10)

21. Describe the nutritional requirements for microbial growth.
  22. Describe different methods for quantitation of bacterial growth.
  23. Briefly explain photosynthesis in Algae.
  24. Explain Electron transport chain and ATP synthesis.
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