

2022

Microbiology

[HONOURS]

(CBCS)

(B.Sc. Third Semester End Examination-2022)

PAPER-CC5T

Full Marks: 40

Time: 02 Hrs

*The figures in the right hand margin indicate marks
Candidates are required to give their answers in their own words as
far as practicable
Illustrate the answers wherever necessary*

Microbial Physiology and Metabolism

Group-A

Answer any five questions of the following:

5x2=10

1. What are the difference between ED pathway and glycolysis? 2
2. State the differences among symport, uniport & antiport? 2
3. What is coricycle? 2
4. What is facilitated diffusion? 2
5. How are cyanobacteria different from green bacteria? 2
6. What is meant by dissimilatory nitrate reduction? 2
7. Write down the function of nitrogenase enzyme 2
8. Write down the role of insulin incarbohydrate metabolism. 2

(2)

Group-B

Answer any four questions of the following:

4x5 = 20

1. Write short note on
 - a) Methanogenesis
 - b) Siderophore
2. Describe electron Transport Chain (ETC) with labelled diagram.
3. Differentiate between anoxygenic and oxygenic photosynthesis. Describe the process of photosynthesis in purple bacteria.
4. Why Pentose Phosphate Pathway is called bypass or shuttle Pathway? Give a brief account on group translocation.
5. Describe diauxic growth curve. Why is iron uptake important for a cell? Give reason.
6. Describe TCA cycle with proper labelled diagram. Why TCA cycle is called Amphibolic in nature?

Group -C

Answer any one question:

1x10 = 10

1. How turn arginine translocation pathway done in prokaryotes & Eukaryotes? State with proper diagram. What are the differences between chemolithotrophs and photo lithotrophs?

4+2+4

(3)

2. What is aerobic respiration? Briefly describe the Homolactic fermentation. Write short note on extremophiles.

1+4+5
