

Seat No.	
----------	--

B.Sc. (Part - III) (Semester - VI) (CBCS)

Examination, March - 2024

MICROBIOLOGY (Paper-XIV) (26 B)

Microbial Biochemistry

Sub. Code : 81705

Day and Date : Wednesday, 27-03-2024

Total Marks : 40

Time : 02.30 p.m. to 04.30 p.m.

- Instruction :**
- 1) All questions are compulsory.
 - 2) Figures to the right indicate full marks.
 - 3) Draw neat labelled diagrams wherever necessary.

Q.1) Choose the correct alternative and rewrite the sentence.

[8]

- i) The word enzyme was firstly proposed by
 - a) Lewis
 - b) Koshland
 - c) Kuhne
 - d) Lederberg
- ii) is the protein part of an enzyme.
 - a) Apoenzyme
 - b) Cofactor
 - c) Co-substrate
 - d) Prosthetic group
- iii) The enzymes which are produced in the cell and function outside the cell are called as
 - a) Intracellular enzymes
 - b) Inducible
 - c) Extracellular enzymes
 - d) Holoenzymes
- iv) pathway shows Amphibolic pathway.
 - a) Glyoxylate
 - b) TCA
 - c) EMP
 - d) Lipid Metabolism
- v) During RNA synthesis Thymine is replaced by in RNA.
 - a) Adenine
 - b) Guanine
 - c) Cytosine
 - d) Uracil

- vi) Nucleotides are linked together by
- | | |
|--------------------|------------------------|
| a) peptide bond | b) phosphodiester bond |
| c) glycosidic bond | d) hydrogen bond |
- vii) The primary acceptor of CO_2 is in carbon assimilation.
- | | |
|------------------------------|----------------------------|
| a) ribose-5-phosphate | b) ribulose-5-phosphate |
| c) ribulose-1-5-di-phosphate | d) ribose-1-5-di-phosphate |
- viii) The Z gene in Lac operon is transcribed for
- | |
|--|
| a) β -galactosidase |
| b) β -galactoside permease |
| c) β -galactoside transacetylase |
| d) β -galactoside dehydrolase |

Q.2) Attempt any two of the following :

[16]

- i) Write in brief about classes of enzymes with their examples.
- ii) Write an essay on enzyme regulation : positive control, negative control and catabolic repression.
- iii) Explain in detail assimilation of carbon.

Q.3) Write short notes on : (Any four)

[16]

- i) Active site of enzyme
- ii) KM
- iii) Effect of temperature on enzyme activity
- iv) Structure of mRNA
- v) Peptidoglycan
- vi) ED pathway