

S.Y.B.SC. SEM – III (2014 Course) : WINTER - 2018
SUBJECT: MICROBIOLOGY: MICROBIAL METABOLISM (MB – 31)

Day : Thursday
Date : 11/10/2018

Time: 12.00 NOON TO 02.00 PM
Max. Marks: 40

W-2018-0800

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagrams **WHEREVER** necessary.

Q.1 Attempt **ANY TWO** of the following: [10]

- a) Explain the effect of temperature on enzyme activity.
- b) Discuss the role of ATP in bacterial metabolism.
- c) Describe investigation of active site of an enzyme using 'Trapping of Enzyme substrate complex'.

Q.2 Answer **ANY TWO** of the following: [10]

- a) Comment on 'Acid-Base catalysis'.
- b) Give an outline of 'EMP pathway'.
- c) What is purple membrane? Give its significance in *Halobacterium*.

Q.3 Write short notes on **ANY TWO** of the following: [10]

- a) Lock and key hypothesis
- b) Quinones
- c) Anaerobic respiration

Q.4 Attempt **ANY FIVE** of the following: [10]

- a) Define the term allosteric enzymes.
- b) Mention any two examples of chemical agents which modifies the side chains of amino acids.
- c) Mention any two features of *Cynobacterial* photosynthesis.
- d) Enlist examples of bacteria using CO₂ as terminal electron acceptor.
- e) Define the term 'Turn over number of enzyme'.
- f) What is EC number? Give any one example indicating significance of EC number.
- g) Give any two medicinal uses of enzymes.

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