

S.Y.B.SC. SEM – III (CBCS - 2016 COURSE) : SUMMER - 2018

SUBJECT : MICROBIOLOGY: MB-31, MICROBIAL METABOLISM

Day : **Saturday**
Date : **21/04/2018**

S-2018-0652

Time : **03.00 PM TO 06.00 PM**
Max. Marks: 60

N. B. :

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
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Q.1 Attempt **ANY TWO** of the following: **(12)**

- a) Enlist physicochemical properties of enzymes.
- b) Discuss 'EMP pathway' of bacteria.
- c) Explain the investigation of active site of 'Fructose biphosphate aldolase'.

Q.2 Answer **ANY TWO** of the following: **(12)**

- a) Justify the statement that, 'Though other high energy, compounds are present, bacteria prefers ATP'.
- b) What is 'Reducing Power'? Give its significance in bacterial metabolism.
- c) Give the uses of enzymes.

Q.3 Attempt **ANY TWO** of the following: **(12)**

- a) Explain 'Cynobacterial Photosynthesis'.
- b) Discuss 'TCA cycle'.
- c) Describe the role of hydrogen carriers.

Q.4 Write notes on **ANY THREE** of the following: **(12)**

- a) Induced Fit Hypothesis.
- b) Iron sulphur proteins.
- c) Nomenclature of enzymes.
- d) Active transport.

Q.5 Attempt **ANY FOUR** of the following: **(12)**

- a) Explain 'Group translocation' by Bacteria.
- b) Describe photosynthesis in *Halobacterium*.
- c) What is 'Covalent Catalysis'?
- d) Enlist different classes of enzymes.
- e) Discuss the effect of 'Temperature' on enzyme activity.
- f) What is 'Group specificity' and 'Absolute specificity' of enzymes?

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