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

Day : **Friday**
Date : **13/04/2018**

S-2018-0707

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

N.B.:

1) All questions are **COMPULSORY.**
2) Figures to the **RIGHT** indicate full marks.

Q.1 Attempt any **TWO** of the following: **(10)**

a) What are 'Allosteric Enzymes'? Give their significance.
b) Give an outline of 'EMP pathway.'
c) Explain 'IUB system' for nomenclature of enzymes.

Q.2 Attempt any **TWO** of the following: **(10)**

a) Discuss 'Anaerobic Respiration' using nitrate as terminal electron acceptor.
b) Explain the generation of ATP through ETC.
c) With suitable examples, describe the effect of 'Temperature' on enzyme activity.

Q.3 Attempt any **TWO** of the following: **(10)**

a) Lock and Key Hypothesis
b) Cynobacterial photosynthesis
c) Quinones.

Q.4 Answer any **FIVE** of the following: **(10)**

a) Mention any two industrial uses of enzymes.
b) Give the significance of 'Purple membrane' in *Halobacterium.*
c) Enlist any two chemical agents and respective enzymes which, modifies the side chains of amino acids.
d) Define the term 'Turnover number' of enzymes. What it indicates?
e) Mention any two aspects of an ATP to justify its high energy compound role in bacterial metabolism.
f) Mention one example each of 'Absolute specificity' and 'Group specificity' of an enzymes.
g) What is 'Proximation effect'?

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