

T.Y.B.SC. SEM – VI (2014 COURSE) : SUMMER - 2018
SUBJECT: MICROBIOLOGY: MICROBIAL METABOLISM &
BIOCHEMICAL EVOLUTION

12.00 NOON TO 02.00 PM

Day: **Monday**
Date: **23/04/2018**

S-2018-0788

Time:
Max. Marks: 40

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labelled diagrams **WHEREVER** necessary.
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Q.1 Attempt **ANY TWO** of the following: **(10)**

- a) Describe in brief the biosynthesis of serine and glycine.
- b) Comment on transport of sugars by group translocation mechanism.
- c) Explain with the help of a suitable diagram initiation in protein synthesis.

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

- a) Write a note on anaplerotic reactions.
- b) Explain synthesis of any one polyisoprenoid compound.
- c) Write a note on β oxidation of fats.

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

- a) Explain biochemistry of symbiotic nitrogen fixation with the help of suitable diagram.
- b) Write a note on synthesis of phospholipids.
- c) Write a note on: Formation of polypeptides during biochemical evolution.

Q.4 Attempt **ANY FIVE** of the following: **(10)**

- a) State first law of thermodynamics and give its significance.
- b) What are cytochromes? Comment on their role.
- c) Write a note on Stickland reaction.
- d) Name and give structure of any two modified bases in t-RNA.
- e) Define free energy and give its significance.
- f) Define active transport and give any one example.
- g) Define- Entropy and Enthalpy.

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