

BACHELOR OF SCIENCE (CBCS-2018 COURSE)
T. Y. B. Sc. Sem-VI :SUMMER- 2022
SUBJECT : MICROBIOLOGY : MICROBIAL METABOLISM & BIOCHEMICAL
EVOLUTION

Day : Tuesday
Date : 12/7/2022

S-18490-2022

Time : 11:00 AM-02:00 PM
Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labeled diagram **WHEREVER** necessary.
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Q.1 Attempt **ANY TWO** of the following: **[12]**

- a) Explain with proper diagrams the various modes of active transport mechanisms.
- b) Describe the structure of ATP.
- c) Explain the steps in the biochemistry of bioluminescence. What are the factors affecting the property of bioluminescence?

Q.2 Attempt **ANY TWO** of the following: **[12]**

- a) Describe the process of RETC.
- b) Explain the various steps in Anapleuratic reactions.
- c) Elaborate the steps involved in the synthesis of amino acids from glutamate family.

Q.3 Attempt **ANY TWO** of the following: **[12]**

- a) What are the various steps in the synthesis of pyrimidine nucleotides?
- b) How is triacyl glycerol synthesized?
- c) What is NiF gene? Describe its structure and function.

Q.4 Attempt **ANY THREE** of the following: **[12]**

- a) What is amphibolism?
- b) Comment on – The Primordial cloud theory.
- c) Write on assimilation of Nitrite.
- d) Describe the process of transcription.

Q.5 Write short notes on **ANY FIVE** of the following: **[12]**

- a) Synthesis of starch
- b) Singer and Nicholson model
- c) Ionophores
- d) Activation of amino acids
- e) Role of C55 protein in peptidoglycan synthesis

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