



GE-034016

Seat No. _____

B. Sc. (Microbiology) (Sem. IV) Examination

March / April – 2019

BSC - 405 (A) : Microbial Physiology : Metabolism

Time : 3 Hours]

[Total Marks : 70

- Instructions :**
1. All questions carry equal marks.
 2. Draw a neat and labeled diagram when required.
 3. Write the question numbers clearly

1. Write on any two of the following **14**

1. Gibbs free energy and its importance in cell metabolism.
2. ATP and its importance in metabolism
3. Metabolism and its importance
4. Oxidative phosphorylation

2. Describe any two of the following **14**

1. Mechanism of enzyme action
2. Factors affecting enzyme activity
3. Double reciprocal plot and its significance
4. Metabolic channeling

3. Write a note on any two of the following **14**

1. Anaerobic respiration in microbes
2. Pentose phosphate pathway
3. Aerobic chemolithotrophs
4. Cyclic photosynthesis

4. Write on any two of the following **14**

1. Principles governing biosynthesis
2. Calvin cycle
3. Beta keto adipic pathway
4. Synthesis of nitrogen base

5. Write in one or two sentences **14**

1. Define entrophy
2. Define O/R potential
3. Define holoenzyme
4. Two name of hydrolase class of enzymes

5. M-M equation is written as _____
 6. What is allosteric site?
 7. Give two example of precursor molecules
 8. What is Stickland reaction?
 9. Define phosphorolysis.
 10. What is deamination?
 11. What is the importance of light reaction in photosynthesis?
 12. What is bacteriorhodopsin?
 13. What are central metabolic pathway?
 14. What is anaplerotic pathway?
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