

Seat No. : _____

N28-106

December-2014

B.Sc., Sem.-III

MI-201 : Microbiology

(Microbial Physiology)

Time : 3 Hours]

[Max. Marks : 70

Instructions : (1) **All** questions carry equal marks.
(2) Draw diagrams wherever needed.

1. Answer the following : (Any 2) **14**
 - (a) Explain facilitated diffusion with figure.
 - (b) Classify the bacteria on basis of carbon and energy sources.
 - (c) Enlist various types of media. Discuss selective and enriched media in details.
 - (d) Describe the gaseous requirements of microbes.

2. Give details of : (Any 2) **14**
 - (a) Mechanism of enzyme action.
 - (b) Effect of pH and temperature on enzyme activity.
 - (c) Competitive inhibition of enzyme activity.
 - (d) Classification of enzymes.

3. Describe the following : (Any 2) **14**
 - (a) Draw the growth curve of bacteria and explain Lag and Log phase.
 - (b) Mode of action of Penicillin.
 - (c) Synchronous growth.
 - (d) Methods of measurement of cell number.

4. Answer the following : (Any 2) **14**
 - (a) Classification of lipids.
 - (b) Role of energy rich compounds.
 - (c) Chemical structure and significance of DNA.
 - (d) Basic concept of fermentative metabolism.

5. Answer in short :

14

1. Name the methods of reproduction in bacteria.
 2. Give two examples of enzymes.
 3. Name the selective agent used in preparation of Rose Bengal Agar medium.
 4. What is maintenance of energy ?
 5. What are chemotherapeutic agents ?
 6. Give an example of semi-synthetic antibiotic.
 7. What is catabolism ?
 8. Define fastidious organisms.
 9. What are halophiles ?
 10. Give the full form of NADP.
 11. What is primary metabolism ?
 12. Name the methods of continuous growth.
 13. Give two examples of Sulfonamides.
 14. What is the use of differential media ?
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