

Seat No. : _____

ND-102

November-2013

B.Sc. Sem.-III (CBCS)

MI-201 : Microbiology

(Microbial Physiology)

Time : 3 Hours]

[Max. Marks : 70

- Instructions :** (1) Mention your answer number in margin.
(2) Attempt **all** questions.
(3) Draw figures wherever necessary.

1. (a) Name the ingredients of MacConkey's agar and describe. 7

OR

Enlist the modes of solute transport in E.coli. Describe facilitated transport.

- (b) Describe classification of bacteria based on oxygen requirement. 7

OR

Describe classification of bacteria based on salt requirement.

2. (a) Explain localization and structure of enzymes. 7

OR

Describe mechanism of enzyme action.

- (b) Describe effect of pH and temperature on enzyme activity. 7

OR

Explain nomenclature of enzymes.

3. (a) Describe "Chemostat" and its use. 7

OR

Describe methods for measurement of cell-mass.

- (b) Define antibiotics. Write a note on streptomycin. 7

OR

What is chemotherapy ? Write a note on polymyxins.

4. (a) Describe biological role of proteins with examples. 7

OR

Write a note on : Reducing power and precursor metabolites.

- (b) Explain classification of lipids. 7

OR

Give an overview of metabolism.

5. Answer the following in **one** or **two** lines : 14

- (i) Give use of Blood agar.
 - (ii) Name a medium for cultivation of molds.
 - (iii) Give examples of hyperthermophiles.
 - (iv) Give examples of thermobarophiles.
 - (v) Give the role of SOD in obligate aerobes.
 - (vi) Give use of membrane filter technique.
 - (vii) What is the role of niacin ?
 - (viii) Name the structural analog of sulfonamide.
 - (ix) Give examples of two disaccharides.
 - (x) What is the difference between starch and cellulose ?
 - (xi) What is synchronous growth ?
 - (xii) Give an application of acidophile.
 - (xiii) What is NAM ?
 - (xiv) What is active transport of solute ?
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