

Seat No. : _____

NI-105
December-2015
B.Sc. Sem.-III
CC-201 : Microbiology

Time : 3 Hours]

[Max. Marks : 70

1. Answer any **two** : **14**
- (a) What is a culture medium ? Explain routine and specialized media.
 - (b) Explain entry of nutrition in a cell by Active transport.
 - (c) Classification of bacteria on the basis of temperature and pH.
 - (d) Write a note on : Transport of nutrients that cannot enter the cell.
2. Explain any **two** : **14**
- (a) Explain factors affecting enzyme activity.
 - (b) Mention general properties of enzymes.
 - (c) Explain IUB system of enzyme classification.
 - (d) Explain inhibition of enzyme activity.
3. Explain any **two** : **14**
- (a) Methods of reproduction in prokaryotes.
 - (b) General mode of action of any two chemotherapeutic agent.
 - (c) Normal growth curve of bacteria.
 - (d) Measurement of growth on the basis of cell number.
4. Explain any **two** : **14**
- (a) Properties and Biological significance of carbohydrates.
 - (b) Structural organization of proteins.
 - (c) Energy rich compounds in cell metabolism.
 - (d) Properties and biological significance of nucleic acids.

5. Answer in **one** or **two** lines/words.

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- (a) Name two selective ingredients used in microbiology media.
 - (b) What is the chemical nature of agar-agar powder ?
 - (c) Which nutrients can be transported via passive transport ?
 - (d) What is an assay medium ?
 - (e) Give examples of extra-cellular enzymes.
 - (f) Who proposed Lock and Key theory of enzyme action ?
 - (g) What is the relationship of generation time and growth rate ?
 - (h) What is a co-enzyme ?
 - (i) Bacteria are most active in which phase of their growth ?
 - (j) Who discovered streptomycin ?
 - (k) Write full name of ATP.
 - (l) Give two examples of saturated fatty acids.
 - (m) Give general formula for amino acids.
 - (n) What is difference between primary and secondary metabolism ?
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