

2012
B.A./B.Sc. (General) First Semester
Microbiology
MIC-102: Microbial Physiology Metabolism I

Time allowed: 3 Hours

Max. Marks: 33

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting one question from each Unit.

x-x-x

I. Define/explain/comment:-

- a) Organotrophs
- b) Differential medium
- c) Michaelis constant
- d) Apoenzyme V/s holoenzyme
- e) Net rxn of ED pathway.
- f) Transketolase V/s transldolase
- g) Competence factor
- h) Repressor V/s inducer
- i) Temperate and prophage

(9x1)

UNIT - I

II. a) Classify the microorganisms on the basis of pH requirement. Give suitable examples.

b) Write a note on anaerobic growth media.

(3+3)

III. a) How enrichment culture medium is used for that isolation of specific microorganisms. Explain taking suitable example.

b) What the different constituents of a culture medium for the growth of M.O.? How chemical defined medium is different from complex medium?

(3+3)

UNIT - II

IV. Explain in detail the different factors which affect enzyme activity.

(6)

P.T.O.

(2)

- V. Explain the action of activators and inhibitors on enzyme activity. Giving suitable example. (6)

UNIT - III

- VI. a) Give flow chart of TCA cycle.
b) Explain glyoxylate cycle and its significance. (3+3)
- VII. a) Write down net reaction of glycolysis.
b) Explain substrate level phosphorylation. (3+3)

UNIT - IV

- VIII. a) How specialized transduction occur in λ phage?
b) How attenuator regulates gene expression in trp operon? (3+3)
- IX. a) How Hfr sharing develop from F+?
b) Write down molecular mechanism of transformation. (3+3)

x-x-x

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