



Code No. : **072**

FACULTY OF SCIENCE
M.Sc. I Semester Examination, November/December 2012
MICROBIOLOGY
Paper – IV : (Biochemistry)

Time: 3 Hours]

[Max. Marks: 80

Note : Answer *all* questions in Section **A** and **B**.

SECTION – A

Short answer type :

(8×4=32 Marks)

1. Equilibrium constraints
2. Concept of entropy
3. Ubiquinone
4. Biological membranes
5. Gout
6. Role of phospholipids
7. Ketogenic aminoacids
8. Properties of proteins.

SECTION – B

Essay answer type :

(4×12=48 Marks)

9. a) Derive Henderson-Hasselbach equation and solve the following :

Calculate the pH of mixture of 0.1 M acetic acid and 0.2 M sod. acetate. The pKa of acetic acid is 4.76.

OR

- b) Write in detail about biological redox systems.



10. a) Write in detail how electron carriers function in multienzyme complexes.

OR

b) Describe various steps in bacterial photosynthesis.

11. a) Write an essay on pyrimidine nucleotides biosynthesis and its regulation.

OR

b) Describe the classification of lipids.

12. a) Describe the secondary structure of a protein.

OR

b) Write on catabolic pathways of phenylalanine and tyrosine and genetic disorders involved with them.
