



Code No. : 9261

FACULTY OF SCIENCE
M.Sc. II Semester Examination, May/June 2012
MICROBIOLOGY
Paper – IV : Enzymology and Biochemical Technics

Time : 3 Hours]

[Max. Marks : 80

- Note :** 1) Answer *all* questions.
2) Section – **A** questions carry 4 marks and Section – **B** questions carry 12 marks.

SECTION – A **(8×4=32 Marks)**
(Short Answer Type)

1. Competitive enzyme inhibition
2. Isoenzymes
3. Thiamine pyrophosphate
4. Feed back inhibition
5. Lambert Beer's laws and measurement of absorbance
6. Ultracentrifugation
7. Auto radiography
8. Counter current distribution.

SECTION – B **(4×12=48 Marks)**
(Essay Type)

9. a) Describe the effect of pH, substrate concentration temperature and inhibitors on enzyme activity.

OR

- b) What are the various steps involved in purification of enzymes ? What are the changes in specific activity of the enzyme at each step ?

(This paper contains 2 pages)



10. a) What are the various mechanisms involved in regulation of enzyme activity ?
Add a note on allosteric enzymes.

OR

- b) Describe the mechanism of action of chymotrypsin and trypsin. Add a note on their 3D structure and active site conformation.

11. a) Describe the instrumentation of a fluorimeter. What are the applications of fluorimetry ?

OR

- b) What is the principle of gel filtration chromatography ? Mention its applications in biology.

12. a) Classify the various electrophoretic techniques used in biology and mention their applications.

OR

- b) Describe the principle and procedures involved in measurement of radioactivity using liquid scintillation counters.
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