



Code No. : 619

**FACULTY OF SCIENCE**  
**M.Sc. II Semester Examination, April/May 2013**  
**MICROBIOLOGY**  
**Paper – IV : Enzymology and Biochemical Techniques**

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 **each**.

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

1. Enzyme nomenclature.
2. Isoenzymes.
3. Allosteric enzymes.
4. Secondary metabolite.
5. Colorimetry.
6. Affinity chromatography.
7. Autoradiography.
8. Use of mutants.

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

9. a) Describe the strategies involved in the purification and characterization of enzymes with suitable example.

OR

- b) Discuss the different methods used for the determination of enzyme activity. Add a note on Non-competitive enzyme inhibition.



10. a) Discuss the coenzymic functions of TPP with suitable example. Add a note on zymogen activation.

OR

b) Discuss the different mechanisms involved in the regulation of enzyme activity with example.

11. a) Discuss the principle, construction and applications of a Fluorimeter.

OR

b) Describe the principle and applications of different centrifugation techniques.

12. a) Discuss the different electrophoretic techniques used in Biological sciences. Mention their applications.

OR

b) Discuss the use of liquid scintillation counter in detection and measurement of radioactivity. Write a note on counter current distribution.

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