9. (a) Explain the mechanism of action and regulation of pyruvate dehydrogenase complex.

Or

(b) Describe the different methods of enzymes immbolisation.

10. (a) Write an account on the industrial uses of enzymes.

Or

(b) Discuss the biotechnological uses of enzymes.

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S.No. 3 **12PBC03**

(For the candidates admitted from 2012–2013 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

First Semester

Biochemistry

ADVANCED ENZYMOLOGY

Time : Three hours Maximum : 75 marks

SECTION A — ($5 \times 5 = 25$ marks)

Answer ALL the questions.

All questions carry equal marks.

1. (a) Explain the methods of intracellular localization of enzymes.

Or

(b) Define the following :

(i) International enzyme unit

(ii) Turn over number.

2. (a) Differentiate metalloenzymes and metal activated enzymes. Give examples.

Or

(b) Discuss the mechanisms of bisubstrate enzymatic reactions.

3. (a) Explain feedback enzyme inhibition with an example.

Or

(b) Explain irreversible enzyme inhibition with an example.

4. (a) What are multienzyme complexes? Explain their advantages.

Or

(b) What are immobiolized enzymes? Explain their advantages.

5. (a) Discuss the analytical uses of enzymes.

Or

(b) Discuss the medicinal uses of enzymes.

SECTION B — (5 × 10 = 50 marks)

Answer ALL the questions.

All questions carry equal marks.

6. (a) Write an account on the classification and Nomenclature of enzymes.

Or

(b) Describe any two methods of determination of active site amino acid residues of enzymes.

7. (a) Explain the Michaelis – Menten hypothesis and derive the MM-equation.

Or

(b) Write a detailed account on the mechanism of action of chromotrypsin.

8. (a) Explain the properties of allosteric enzymes.

Or

(b) Discuss the different types of reversible enzyme inhibition. How are they distinguished kinetically?