

[Dec-16]

[SPDBT-104]  
M.Sc. Degree Examination

Biotechnology  
I YEAR

ENZYMOLGY AND METABOLISM  
(Effective from the admitted batch 2009-10)

Time: 3 Hours

Max.Marks: 70

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**Instructions:** All parts of the unit must be answered in one place only.  
Figures in the right hand margin indicate marks allotted.

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1. Answer any **Four** of the following: (4x5=20)

- a) Nomenclature of enzymes
- b) Metallo enzymes
- c) Phosphorylation
- d) Isozymes
- e) Ketone bodies
- f) Lesch-Nyhan syndrome
- g) Transamination

Answer all questions: (5x10=50)

**UNIT-I**

2. a) Explain the factors affecting enzyme activity

**OR**

b) Determine  $K_m$  and  $V_{max}$  of enzyme through MM equation

**UNIT-II**

3. a) Types of enzyme inhibition

**OR**

b) Describe the mechanism of enzyme regulation

**UNIT-III**

4. Explain the following  
a) Glycolysis and its regulation

**OR**

- b) HMP shunt

**UNIT-IV**

5. Explain the following:  
a) Urea cycle

**OR**

- b) Inborn errors of amino acid metabolism

**UNIT-V**

6. a) De novo synthesis of purine nucleotides

**OR**

- b) Describe the formation of deoxyribonucleotides

[29/1 Y/216]