

**Total number of printed pages – 3**      **B. Pharm**  
**PH. 4.5**

**Fourth Semester Examination – 2008**

**BIOCHEMISTRY**

**Full Marks – 70**

**Time : 3 Hours**

*Answer Question No. 1 which is compulsory  
and any **five** from the rest.*

*The figures in the right-hand margin  
indicate marks.*



1. Answer the following questions :      2 × 10
- (a) Give the names of Gluconeogenic substrates.
  - (b) Write down the structure of Thyroid Hormones.
  - (c) Give any two examples of non-competitive inhibitors of Enzymes.

- (d) Mention the irreversible reactions of Glycolysis.
- (e) What is the significance of  $\alpha$ - Oxidation of fatty acids ?
- (f) Write down the reactions of Carnitine Transport System.
- (g) Define Transcription.
- (h) What is the biochemical role of the Co-enzyme Biotin ?
- (i) Give the names of essential fatty acids.
- (j) Define Michaelis Constant.

2. Define and classify enzymes with suitable examples. Give a note on the competitive inhibition of enzymes.      6+4
3. Describe the reactions involved in HMP pathway. What is its significance ?      8+2

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**2**

**Contd.**

4. Explain the Biosynthesis of fatty acids. 10
5. What is Detoxification ? What are the different phases involved in Biotransformation ? Explain Phase-II Biotransformation Reactions. 2+2+6
6. Write about :
- (a) Catabolism of Phenyl Alanine 6
  - (b) Keto Genesis. 4
7. Define Hormone. Explain the Biosynthesis and functions of the Hormones of Adrenal Gland. 1+5+4
8. Explain the following :
- a) Glycogenolysis 6
  - (b) Essential Amino Acids. 4