



Name :

Roll No. :

Invigilator's Signature :

CS/B.PHARM (NEW)/SEM-4/PT-404/2011

2011

**PHARMACEUTICAL CHEMISTRY
(BIOCHEMISTRY)**

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

GROUP - A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any ten of the following :
10 × 1 = 10
- i) In liver disease, level of SGOT
 - a) increases
 - b) decreases
 - c) no change
 - d) none of these.
 - ii) Which of the following is required for the activity of cytochrome oxidase enzyme ?
 - a) Copper
 - b) Iron
 - c) Both (a) & (b)
 - d) None of these.
 - iii) Which of the following membrane transport is energy mediated and occurring against concentration gradient ?
 - a) Active transport
 - b) Passive diffusion
 - c) Facilitated diffusion
 - d) All of these.
 - iv) Which of the following is not an essential fatty acid ?
 - a) Linolenic acid
 - b) Linoleic acid
 - c) Arachidonic acid
 - d) oleic acid.

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[Turn over



GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following.

3 × 5 = 15

2. What is an iso-enzyme ? Write a note on the clinical significance of iso-enzyme.
3. What are eicosanoids ? Schematically represent the biosynthesis of various eicosanoids. 1 + 4
4. Write in brief about the disease galactosemia (including its cause, clinical manifestation, biochemical findings and treatments).
5. Define and give examples of the following
 - a) Symport system
 - b) Endocytosis
6. Define Glyconeogenesis. Where does it take place. Explain the scheme. 1 + 1 + 3

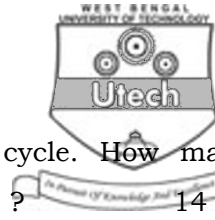
GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. What do you mean by entropy, enthalpy, and free energy? What is bioenergetics ? What do you mean by high energy and low energy compounds ? Describe about bond strength, resonance and isomerization of high energy compounds. 3 + 1 + 2 + 9
8. What is K_m ? Deduce Lineweaver - Burk double reciprocal equation. Discuss about the significance of Michaelis-Menten graph in case of allosteric inhibition. 2 + 10 + 3

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9. Describe schematically the Citric acid cycle. How many molecules of ATP are produced in the cycle ? 14 + 1
10. Explain β - oxidation pathway for palmitic acid. Enumerate cholesterol biosynthesis pathway. 8 + 7
11. a) What is an Allosteric protein ?
b) Write about the tertiary structure of protein.
c) Write a note on denaturation of proteins.

3 + 7 + 5

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