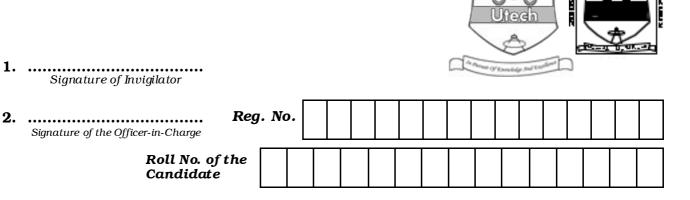
PHARMACEUTICAL CHEMISTRY (BIOCHEMISTRY) (SEMESTER - 4)

CS/B.Pharm/SEM-4/PT-404/09



CS/B.Pharm/SEM-4/PT-404/09

ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE - 2009 PHARMACEUTICAL CHEMISTRY (BIOCHEMISTRY) (SEMESTER - 4)

Time: 3 Hours [Full Marks: 70

INSTRUCTIONS TO THE CANDIDATES:

- 1. This Booklet is a Question-cum-Answer Booklet. The Booklet consists of **32 pages**. The questions of this concerned subject commence from Page No. 3.
- 2. a) In **Group A**, Questions are of Multiple Choice type. You have to write the correct choice in the box provided **against each question**.
 - b) For **Groups B** & **C** you have to answer the questions in the space provided marked 'Answer Sheet'. Questions of **Group B** are Short answer type. Questions of **Group C** are Long answer type. Write on both sides of the paper.
- 3. **Fill in your Roll No. in the box** provided as in your Admit Card before answering the questions.
- 4. Read the instructions given inside carefully before answering.
- 5. You should not forget to write the corresponding question numbers while answering.
- 6. Do not write your name or put any special mark in the booklet that may disclose your identity, which will render you liable to disqualification. Any candidate found copying will be subject to Disciplinary Action under the relevant rules.
- 7. Use of Mobile Phone and Programmable Calculator is totally prohibited in the examination hall.
- 8. You should return the booklet to the invigilator at the end of the examination and should not take any page of this booklet with you outside the examination hall, **which will lead to disqualification**.
- 9. Rough work, if necessary is to be done in this booklet only and cross it through.

No additional sheets are to be used and no loose paper will be provided

FOR OFFICE USE / EVALUATION ONLY

Marks Obtained

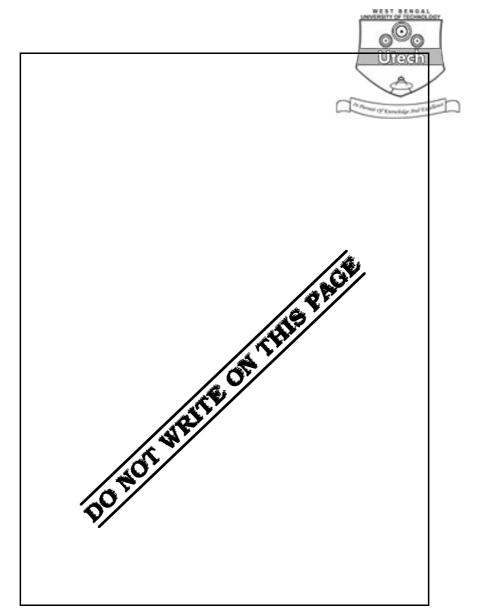
	Group – A									Group - B Group - G			- C				
Question Number																Total Marks	Examiner's Signature
Marks																	
Obtained																	

Head-Examiner/Co-Ordinator/Scrutineer

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ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE - 2009 PHARMACEUTICAL CHEMISTRY (BIOCHEMISTRY) SEMESTER - 4

Time: 3 Hours [Full Marks: 70

GROUP - A

(Multiple Choice Type Questions)

1.	Choose the correct alternatives for any ten of the following:											
	i)	Which is not an essential amino acid?										
		a)	Threonine	b)	Tryptophan							
		c)	Valine	d)	Glutamine.							
	ii)	er of calories per gram ?										
		a)	Fats	b)	Carbohydrates							
		c)	Proteins	d)	Vitamins.							
	iii)	Aerobic oxidation of carbohydrate is mediated via										
		a)	Urea cycle	b)	Tricarboxylic acid cycle							
		c)	E.M.P. Pathway	d)	Pentose phosphate shunt							
	iv)											
		a)	Acetyl S-enzyme									
		b)	Acyl malonyl enzyme									
		c)	B-ketoacyl-ACP reductase									
		d)	Acetyl CoA Carboxylase Biotin	ı.								

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	v)	v) The term 'standard free energy' is represented by											
		a)	Λ G	b)	Δ H Ulech								
		c)	ΔS	d)	Δ G°.								
	vi)	Biotin is a/an											
		a)	Enzyme	b)	Vitamin								
		c)	Isoenzyme	d)	Coenzyme.								
	vii)	Ninl	nydrin reaction is given by										
:		a)	amino acids	b)	GABA								
5		c)	ALA	d)	DOPA.								
5	viii)	The two final products in the β -oxidation of odd chain fathy acids are											
:		a)	Acetyl CoA & Malonyl CoA										
		b)	Acetyl CoA & Acetyl CoA										
-		c)	Acetyl CoA & Propionyl CoA										
		d)	Acetyl CoA & Succinyl CoA.										
	ix)	Glyc	cogenesis takes place mainly in										
		a)	pancreas	b)	intestine								
		c)	spleen	d)	liver.								
	x)	In man, the major nitrogenous excretion product is											
		a)	Ammonia	b)	Urea								
		c)	Amino acid	d)	Purine & Pyrimidines.								
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xi) Which of the following is not a Sulphur containing Amino Acid?

- a) Cysteine
- b) Cystine
- c) Methionine
- d) Serine.
- xii) Enzyme responsible for the synthesis of Leukotrienes is
 - a) COX-I
 - b) COX-II
 - c) LOX
 - d) Isomerase.

GROUP – B (Short Answer Type Questions)

Answer any three of the following.

 $3 \times 5 = 15$

- 2. Write a note on oxidative phosphorylation and its control.
- 3. What do you mean by protein denaturation? Explain it with example.
- 4. Describe how polysaccharides are converted to glucose-1 phosphate.
- 5. Write a short note on the EMP Pathway.
- 6. Explain schematically how various Eicosanoids are biosynthesized from membrane phospholipid mentioning the various enzymes responsible.

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GROUP - C

(Long Answer Type Questions)

Answer any three of the following.



 $3 \times 15 = 45$

- 7. a) What is redox potential?
 - b) Describe briefly the different oxidation reactions.
 - c) Discuss the superoxide metabolism.

2 + 8 + 5

- 8. a) Give an account of β -oxidation of palmitic acid (C $_{16}$) & its energetics.
 - b) What do you mean by essential fatty acids?
 - c) What are ketone bodies? How are they formed & utilized?

8 + 2 + 5

- 9. Describe the role of adipose tissue in lipid metabolism. Describe the process of fatty acid transport from extracellular place to mitochondrial matrix. 10 + 5
- 10. Discuss the essential features of Kreb's cycle. Name the various enzymes and co-enzymes, that are involved in the aerobic oxidation of glucose. State the significance of Kreb's cycle towards body metabolism.
- 11. a) Write an account on the Fluid Mosaic Model with diagram.
 - b) Write a few lines about the IUB system of nomenclature for enzymes.
 - c) What are the characteristics of the Active Site of an enzyme?

5 + 5 + 5

- 12. a) Discuss about the energy rich compounds in the light of bond strain, ionization, isomerization and resonance.
 - b) What are the factors that can affect enzyme activity?

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END

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