	Utech
Name :	
Roll No.:	A disease of Exemple of Explored
Invigilator's Signature :	

CS/B.PHARM(N)/SEM-5/PT-504/2012-13 2012

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

			(Mu	ıltiple Cl	noice Ty	pe Qu	estic	ons)			
1.	Choose following			correct	alternat	ives	for	any		of × 1 =	
	i)	Which of the following is not a termination codon?									
		a)	UAA	Λ		b)	UAC	3			
		c)	AUC	3		d)	UG	A.			
	ii) Hormone action on adjacent cells of origin is								is ref	errec	l as
		a)	End	locrine ac	tion	b)	Exo	crine	actio	n	
		c)	Auto	ocrine act	ion	d)	Para	acrine	actio	on.	
	iii)	Which of the following is a left handed DNA?									
		a)	A D	NA		b)	ВD	NA			
		c)	cDN	ΙA		d)	Z D	NA.			
	iv)	The short DNA fragments formed in the elongation step is called							step		
		a)	Oka	zaki fragi	nents	b)	Kleı	now fr	agme	ents	
		c)	Maj	or groove		d)	Min	or gro	ove.		

5144(N) [Turn over

CS/B.PHARM(N)/SEM-5/PT-504/2012-13

Which of the following is a dietary carcinogen v) Diethylstilbesterol b) Aflatoxin c) Phenobarbitone d) X-ray. Sulphur containing amino acid is vi) Methionine b) Glycine c) Arginine d) Alanine. Transaminases require Co-enzyme vii) Pyridoxal phosphate a) NAD +. **NADP** d) c) viii) Parkinson's disease is linked with decreased synthesis of a) Dopamine b) Epinephrine c) Nor-epinephrine d) Tyrosine. Initiating codon for protein synthesis is ix) **GUA** b) **UAG** a) c) **AUG** d) UAA. The enzyme which catalyzes the Pepide bond formation x) a) RNA-polymerase-I b) Peptidyl transferase *t*-aminoacl transferase d) RNA-olymerase-III. c) Melanin is produced from xi) Methionine a) b) Tyrosine c) Cystine d) Cysteine. Direction of transcription is b) $5^{\prime} \rightarrow 3^{\prime}$ $3^{\prime} \rightarrow 5^{\prime}$ a)

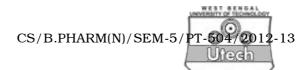
5144(N)

c)

d)

none of these.

may be both



xiii) Replication of DNA is

- a) semiconservative
- b) conservative
- c) both (a) and (b)
- d) none of these.

xiv) Source of DNA polymerase in PCR is

- a) E.coli
- b) Thermus aquaticus
- c) Pseudomonas aeruginosa
- d) Bacillus subtilis.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

- 2. Classify hormones according to their chemical nature and mechanism of action.
- 3. Draw the structure of t-RNA with labelling along with the function of its arms.
- 4. What is meant by Genetic code ? Write down its characteristics.
- 5. What do you mean by hypothyroidism and hyperthyroidism?
- 6. Write a short note on B-DNA or Z-DNA.

5144(N) 3 [Turn over

CS/B.PHARM(N)/SEM-5/PT-504/2012-13



(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

- 7. Explain how insulin can be prepared by Recombinant DNA Technology. What are various applications of PCR? 12 + 3
- 8. a) What is carcinogenesis? Classify the different carcinogens with suitable example.
 - b) What is oncogene? Write its mechanism of action. What do you mean by tumour suppressor gene? 5
 - c) How is tyrosine converted to epinephrine and norepinephrine?
- 9. What is the significance of Urea cycle? Explain urea cycle in brief. Mention the metabolic defects of urea cycle.

2 + 10 + 3

- 10. What is replication? Write down a short note on proof reading activity. 10 + 5
- 11. a) Write a short note on CAMP Pathway.
 - b) Discuss on the biochemical functions of oxytocin.
 - c) Mention the different types of RNA. Mention their functions. 5+5+5

5144(N)