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CS/B.OPTM/SEM-1/BO-104/2009-10 2009

BIOCHEMISTRY (GENERAL & OCULAR)

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: $10 \times 1 = 10$
 - i) Which of the following is not an essential amino acid?
 - a) Phenylalanine
- b) Isoleucine

c) Lysine

- d) Prothrombin.
- ii) In glycolysis fluoride inhibitor, inhibits the enzyme
 - a) phosphotriose isomerase
 - b) enolase
 - c) lactate dehydrogenase
 - d) hexokinase.

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iii)	The number of ATP obtained in TCA cycle is			
	a)	30	b)	20 A Annual Ly Exemple for State Consideral
	c)	8	d)	38.
iv)	•	oxidation of fatty ac on cycles to produce	id Pa	almitoyl CoA undergoes
	a)	6 Acetyl CoA	b)	4 Acetyl CoA
	c)	8 Acetyl CoA	d)	2 Acetyl CoA.
v)	Deficiency of Vitamin B cause may			
	a)	Scurvy	b)	Anaemia
	c)	Xeropthalmia	d)	Rtarded bone growth.
vi)	The	origin of glucagon horn	none	is
	a)	pancreas	b)	anterior pituitary
	c)	adrenal cortex	d)	stomach.
vii)	The	co-enzyme of tr	ansaı	minase required for
transaminatino is				
	a)	NADP	b)	c-AMP
	c)	NADH	d)	PLP.
viii)	The	photopigment responsi	ble fo	or dim light vision is
	a)	rhodopsin	b)	iodopsin
	c)	melanin	d)	cyanin.
ix)	Alph	na-crystalline is present	in	
	a)	cornea	b)	tear film

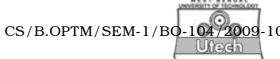
d)

retina.

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lens

c)



- x) α -helix is a type of
 - a) primary structure of protein
 - b) secondary structure of protein
 - c) tertiary structure of protein
 - d) quaternary structure of protein.
- xi) The deoxy form of haemoglobin exist in
 - a) T-form

b) B-form

c) R-form

- d) D-form.
- xii) Albumin is synthesized in the
 - a) pancreas
- b) stomach

c) liver

d) duodenum.

GROUP – B (Short Answer Type Questions)

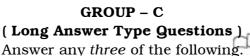
Write short notes on any three of the following.

 $3 \times 5 = 15$

- 2. Gamma globulins.
- 3. TCA cycle
- 4. Haemoglobin.
- 5. TPP as co-enzyme
- 6. Deamination.

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- Classify hormone on the basis of their mechanism of action.Discuss briefly the origins & major functions of estrogen,glucagons & glucocorticoid.3 + 12
- 8. Discuss briefly the oxidative phases of Hexose Mono Phosphate shunt. What is the difference between haemoglobin & myoglobin ? What is Bohr effect ? 6 + 4 + 5
- 9. Discuss briefly about the sources of nutrients and metabolic pathway in cornea.
- 10. Explain the reaction rhodopsin bleaching when light fall on the retina. Discuss the process of β -oxidation of unsaturated fatty acid. 8+7
- 11. Deduce Michaelis-Menten equation for a single substrate uninhibited reactor. What are the basic differences between Michaelis-Menten equation and Birggs-Haldane theory? Outline the methods for determining Michaelis-Menten constants.

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