



Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/B.OPTM/SEM-1/BO-104/2012-13  
2012**

**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 the following :  $10 \times 1 = 10$

i) Phospholipid is a

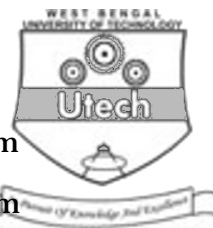
- |                  |                   |
|------------------|-------------------|
| a) simple lipid  | b) complex lipid  |
| c) derived lipid | d) neutral lipid. |

ii) All hormones are secreted from anterior pituitary *except*

- |                   |                |
|-------------------|----------------|
| a) growth hormone | b) vasopressin |
| c) ACTH           | d) LH.         |

iii) Albumin is synthesized in

- |             |              |
|-------------|--------------|
| a) stomach  | b) liver     |
| c) pancreas | d) duodenum. |



- iv) Average thickness of tear film varies from
- a) 1 - 3  $\mu\text{m}$                       b) 6 - 8  $\mu\text{m}$   
c) 2 - 3  $\mu\text{m}$                       d) 4 - 8  $\mu\text{m}$ .
- v) Deficiency of EFA leads to
- a) colour blindness              b) phrynoderma  
c) night blindness                d) pelagra.
- vi) End product of protein is
- a) fat                                  b) carbohydrate  
c) amino acids                      d) none of these.
- vii) ACTH is secreted from
- a) liver                                b) parathyroid gland  
c) pituitary gland                 d) thyroid gland.
- viii) Hormone that lowers cAMP concentration in liver cell is
- a) Glucagon                        b) Insulin  
c) Epinephrine                    d) Thyroxine.
- ix) The co-enzyme of transaminase required for transamination is
- a) NADP                              b) NADH  
c) cAMP                                d) PLP.
- x) The number of ATPs obtained by complete oxidation of glucose is
- a) 36                                  b) 42  
c) 38                                  d) 48.



**GROUP - B**

**( Short Answer Type Questions )**

Write short notes on any *three* of the following.

3 × 5 = 15

2. Test for tear film adequacy.
3. Beta oxidation of fatty acids
4. Oestrogen
5. Transamination and deamination
6. Insulin
7. Definition and classification of protein.

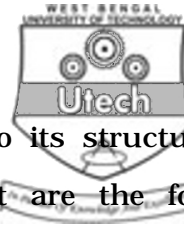
**GROUP - C**

**( Long Answer Type Questions )**

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

8. Discuss the factors affecting enzyme activity. What do you mean by reversible and irreversible enzyme inhibition ? 8 + 7
9. Describe sources, importance and clinical features of Vitamin A deficiency. 5 + 10
10. Describe the bio-chemical composition of cornea. How does cornea get its nutrition ? What is the role of HMP shunt in corneal metabolism ? 8 + 4 + 3

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11. Define protein. Classify protein according to its structure. What are essential amino acids ? What are the four structures of protein ? Discuss the major functions of protein.  $2 + 3 + 2 + 3 + 5$

12. Describe the process of citric acid cycle. Mention the three main regulatory enzymes of TCA cycle. Discuss the significance of pentose cycle.  $8 + 3 + 4$

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