

00808

11819

3 Hours / 80 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Solve any EIGHT of the following :

8 × 2 = 16

- (a) Give structure of (i) Glycine (ii) Tyrosine.
- (b) Define and classify “Vitamins”.
- (c) Define :
 - (i) Anabolism
 - (ii) Catabolism
- (d) Differentiate between “Fats and Oils”.
- (e) Define “Biochemistry” and state its importance.
- (f) Explain in brief “Benedicts Test”.
- (g) Give biological functions of Calcium.

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P.T.O.

- (h) Define :
 - (i) Acid value
 - (ii) Iodine value
- (i) Define cell and give functions of Mitochondria.
- (j) Define essential fatty acids with examples.
- (k) Explain in short "Iodine Test".
- (l) What is active site of an enzyme ?

2. Solve any FOUR of the following :

4 × 3 = 12

- (a) Mention the names of water soluble vitamins and their respective co-enzymes.
- (b) Explain Water-balance of normal individual.
- (c) Give physiological role of Iodine & Iron.
- (d) Explain "Lock and Key Model" of enzyme action.
- (e) Draw a neat and well labelled diagram of typical animal cell.
- (f) Explain "Oxidation of D-Glucose".

3. Solve any FOUR of the following :

4 × 3 = 12

- (a) Give structure and colour reactions of cholesterol.
- (b) Define pathological urine. Name abnormal constituents of urine with diseases associated with them.
- (c) Define and classify lipids.
- (d) Explain "Osazone formation" of D-Glucose.
- (e) Give functions of Vit. C.
- (f) Define electrolytes. Write functions of electrolytes.

4. Solve any FOUR of the following :**4 × 3 = 12**

- (a) How will you detect (i) Sugar (ii) Ketone bodies from the given sample of urine ?
- (b) Write biological functions of lipids.
- (c) State, what do you mean by essential and non-essential amino acids. Give examples.
- (d) Classify proteins with examples.
- (e) Write pharmaceutical and therapeutic significance of enzymes.
- (f) Explain in brief :
 - (i) Ninhydrin Test
 - (ii) Biuret Test

5. Solve any FOUR of the following :**4 × 3 = 12**

- (a) Explain in brief :
 - (i) Kwashiorkor
 - (ii) Marasmus
- (b) Enlist factors affecting enzyme activity. Explain the effect of temperature.
- (c) Describe “Role of Vit. A in vision”.
- (d) Define and classify carbohydrates with example.
- (e) Give structure of
 - (i) D-Glucose
 - (ii) D-Fructose
 - (iii) D-Galactose
- (f) Explain “Mutarotation” of D-Glucose.

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6. Solve any FOUR of the following :

4 × 4 = 16

- (a) Explain in brief reactions of “Glycolysis”.
 - (b) Explain “Formation of urea” in body.
 - (c) Discuss in brief reactions involved in “B-oxidation of fatty acids”.
 - (d) Explain “Denaturation of Proteins”.
 - (e) Explain in detail “Kreb’s Cycle”.
 - (f) Define enzymes. Classify them on the basis of type of reaction catalysed by them.
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