

2012

Time : 3 hours

Full Marks : 100

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer five questions, selecting at least one from each Group, in which Q. No. 1 is compulsory.

1. Choose the correct answer from the options given below : 1×20 = 20

(a) Amylopectin is a :

- (i) Protein
- (ii) Lipoprotein
- (iii) Polysaccharide
- (iv) Oligosaccharide

(b) Starch is found by condensation of :

- (i) α - D glucose

(ii) β - D glucose

(iii) Both (i) and (ii)

(iv) None of the above

(c) Which one is an essential amino acid ?

(i) Valine

(ii) Alanine

(iii) Cystein

(iv) None of the above

(d) Proline is an/a :

(i) Aromatic amino acid

(ii) Imino acid

(iii) Heterocyclic amino acid

(iv) None of the above

(e) Chemical name of Vitamin E is :

(i) Calciferol

(ii) Tochopherol

(iii) Ascorbic acid

(iv) None of the above

(f) Enzyme involved in the phosphorylation of glucose to glucose - 6 - phosphate is :

(i) Phosphoglucomutase

- ✓ (ii) Hexokinase
 - (iii) Phosphorylase
 - ✓ (iv) Glucokinase
- ✓ (g) Nyctalopia and Keratomalacia is due to deficiency of :
- ✓ (i) Vitamin-A
 - (ii) Vitamin-D
 - (iii) Vitamin-C
 - (iv) Niacin
- (h) Which one of the following promotes synthesis of bile by the liver ?
- ✓ (i) Hepatocrinin
 - (ii) Cholecystokinin
 - (iii) Secretin
 - (iv) Enterocrinin
- (i) Casein is a protein present in :
- (i) Muscle
 - ✓ (ii) Milk
 - (iii) Serum
 - (iv) All of the above

Sucrose is hydrolysed into glucose and fructose by :

- (i) Maltase
- ✓ (ii) Invertase
- (iii) Lactase
- (iv) Amylase

✓ Deficiency of folic acid leads to :

- ✓ (i) Megaloblastic Anaemia
- ✓ (ii) Pernicious Anaemia
- (iii) Leucopenia
- ✓ (iv) Both (i) and (ii)

✓ Lacteals are associated with :

- (i) Stomach
- (ii) Liver
- ✓ (iii) Intestine
- (iv) Pancreas

✓ Myoglobin is found abundantly in muscles of :

- (i) Rat
- ✓ (ii) Sparrow
- (iii) Dolphin
- (iv) Man

(n) Stuart-Power factor is factor :

(i) X

(ii) VIII

(iii) XII

(iv) None of these

(o) Which one is considered as anti-pyretic, anti-inflammatory and immunosuppressive agent ?

(i) Glucocorticoides

(ii) Mineralocorticoides

(iii) Catecholamines

(iv) None of the above

(p) Insulin is secreted by :

(i) Alpha cell

(ii) Beta cell

(iii) Gamma cell

(iv) None of the above

(q) Which one is called as pregnancy hormone ?

(i) Estrogen

(ii) Progesterone

(iii) Androgen

(iv) All of the above

(r) Glucagon increases blood glucose level by increasing :

(i) Glycogenesis

(ii) Glycogenolysis

(iii) Gluconeogenesis

(iv) Both (ii) and (iii)

(s) Diabetes insipidus is caused due to deficiency of :

(i) Insulin

(ii) Glucagon

(iii) ADH

(iv) Oxytocin

(t) Which one of the following is known as "hormones of emergency" or "hormones of flight or fight" ?

(i) Mineralocorticoides

(ii) Glucocorticoides

(iii) Catecholamines

(iv) None of the above

Group – A

2. Write notes on any **two** of the following

10x

- (a) Essential Amino Acids
- (b) Glycogenesis
- (c) Vitamin D
- (d) Role of Saliva
- (e) ADH
- (f) Corpus luteum

3. Give an account of structure and classification of lipids.

4. Give a self-explanatory diagrammatic representation of Krebs's Cycle. Comment on the energetics of the cycle.

15+5 =

5. Describe the various types of Vitamins of the B-complex and their physiological role.

10+10 =

Group – B

6. What do you mean by lung ventilation? Give

HV – 142/4

(7)

(Turn c

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Account of the physiology of gaseous exchange in the lung alveoli as well as in the tissue.

5+15 = 20

7. Do you understand by Osmotic Anatomy? Discuss the mechanism of water and electrolyte balance in Man.

5+15 = 20

8. Describe various steps of urea synthesis and the mechanism of its removal.

20

Group – C

9. Describe the chemical nature and functions of the hormones secreted by the Adenohypophysis.

20

10. Give an account of the chemistry and physiological actions of the hormones secreted by Pancreatic islets.

20

11. Write the name of various ovarian hormones and their physiological notes in female.

20

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V-142/4 (500)

(8)

AA(H-3) — Z (5)

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