

2016

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 question from each Group, in which

Q. No. 1 is compulsory.

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

(a) Which one is essential amino acid ?

- (i) Cystine
- (ii) Alanine
- (iii) Valine
- (iv) None of the above

(b) Scurvy is caused by the deficiency of :

- (i) Vitamin B Complex
- (ii) Vitamin A
- (iii) Vitamin C
- (iv) Vitamin K

(c) The enzyme catalyzing glycolytic reactions are located in :

- (i) Mitochondria
- (ii) Cytoplasm
- (iii) Endoplasmic reticulum
- (iv) Lysosome

(d) Which one is the essential fatty acid :

- (i) Palmitic acid
- (ii) Arachidic acid
- (iii) Arachidonic acid
- (iv) Decanoic acid

(e) Vasopressin is concerned with :

- (i) increasing heart beat
- (ii) Contracting blood vessels
- (iii) Urine formation
- (iv) Respiration

(f) Normal pH of blood is :

- (i) 6.8
- (ii) 7.1
- (iii) 7.4
- (iv) 8.0

(g) Carboxypeptidase is secreted by :

- (i) Salivary gland
- (ii) Stomach
- (iii) Pancreas
- (iv) Intestine

(h) In mannose epimerization occur at :

- (i) 1st carbon
- (ii) 2nd carbon
- (iii) 3rd carbon
- (iv) 4th carbon

(i) Oxygen – haemoglobin dissociation curve is :

- (i) Sigmoidal
- (ii) Hyperbolic
- (iii) Hypobolic
- (iv) Straight in nature

(j) Which one of the following participates in the utilization of CO₂ :

- (i) Calciferol
- (ii) Biotin
- (iii) Tocoferol
- (iv) Vitamin K

(k) Secretion of which enzyme increases in summer :

- (i) Vasopressin
- (ii) Somatotropin
- (iii) Luteotropin
- (iv) Prolactin

(l) Hormone responsible for puberty in man is :

- (i) Thyroxin
- (ii) Calcitonin

(iii) Cortisol

(iv) Testosterone ✓

(m) In female, ovulation is controlled by :

(i) FSH

(ii) LH ✓

(iii) SH

(iv) ACTH

(n) Deficiency of which hormone leads to the development of Addison's disease :

(i) Thyroid hormone

(ii) Pituitary hormone

(iii) Hormone of adrenal cortex ✓

(iv) Hormone of adrenal medulla

(o) Starch is formed by condensation of

(i) α - D glucose ✓

(ii) β - D glucose

(iii) Both (i) and (ii)

(iv) None of the above

(p) Mammalian corpus luteum produces

(i) Progesterone ✓

(ii) Estrogen

(iii) LTH

(iv) LH ✓

(q) Digestion of fat starts from :

(i) Mouth

(ii) Stomach ✓

(iii) Small intestine

(iv) Large intestine

(r) Anaemia may develop due to deficiency of :

(i) Folic acid ✓

(ii) Cholic acid

(iii) Glutamic acid

(iv) Fatty acid

(s) Goiter is caused by :

(i) Hyper secretion of thyroid ✓

(ii) Hypo secretion of thyroid ✓

(iii) Both (i) and (ii)

(iv) None of the above

(t) Possible number of isomers of glucose is :

(i) 4

(ii) 8

(iii) 12

~~(iv) 16~~

Group – A

2. Give an account of structure and classification of Fatty acid. 20

3. Describe the different steps of Kreb's cycle. Add a note on the generation of ATP. 15+5 = 20

4. Describe the various types of B-Complex vitamins and add their physiological role. 10+10 = 20

Group – B

5. Describe the various steps of urea synthesis and its mechanism of removal. 15+5 = 20

VK – 120/4

(7)

(Turn over)

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6. Enumerate the mechanism of muscle contraction in man. 20

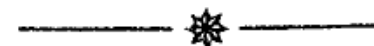
7. Describe the chemical nature and physiological actions of the estrogen secreted in man. 5+15 = 20

Group – C

8. Describe the chemistry and physiological actions of the hormones of Islets of Langerhans. 5+15 = 20

9. Describe the chemical natural and physiological actions of hormones secreted by Adenohypophysis and their feed back mechanism. 5+15 = 20

10. Describe the chemistry of mineralocorticoides, and physiological actions. 5+15 = 20



VK – 120/4 (1,500)

(8)

AA(H-3) – Z (5)

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