Total No. of Questions : 9]
(2034)

Roll No. .....

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UG (CBCS) IInd Year Annual Examination

2814

B.Sc. ZOOLOGY

(Physiology and Biochemistry)

(DSC-IC)

Paper : ZOOL 201 TH

Time : 3 Hours] **[Maximum Marks : 50**

Note :– Attempt *five* questions in all, selecting *one* question from each Section. Question No. **1** is compulsory. Draw neat and well labelled diagrams wherever necessary.

Section–A

(Compulsory Question)

1. Fill in the blank/Choose correct answer :

(i) Apoenzyme and cofactor join to form a ..... .

(ii) ..... is smallest known protein.

(iii) Urea cycle operate in :

(a) Mitochondria of liver cells

(b) Golgi body of liver cells

(c) Mitochondria of kidney cells

(d) Golgi body of kidney cells

(iv) The enzyme ATP synthetase is located in ..... .

(v) Aldosterone is secreted by :

(a) Zona glomerulosa

(b) Zona fasciculata

(c) Zona reticulata

(d) Adrenal medulla

(vi) Process of transformation of spermatid into sperm is called ..... .

(vii) Largest leucocytes are ..... .

(viii) Glomerular filtration rate (GFR) is about ..... ml per minute.

(ix) F_0–F_1 particles participate in the synthesis of ..... .

(x) Intestinal juice is also called ..... $1\times10=10$

Section–B

2. (a) Explain the electrical and biochemical charges in muscle contraction.

   (b) Describe saltatory conduction of nerve impulse. 6,4

3. (a) Explain digestion of protein in alimentary canal of man.

   (b) Describe Bohr's effect. Give its physiological significance. 6,4

Section–C

4. (a) Explain the process of urine formation in a nephron.

   (b) Draw a neat and labelled diagram of internal structure of human heart. 6,4

5. (a) Describe the process of spermatogenesis in detail.

   (b) Explain the structure of pancreas. 6,4

Section–D

6. (a) Describe the pentose phosphate pathway in detail.

   (b) Explain ornithine cycle and its significance. 6,4

7. (a) Define β–oxidation of fatty acid. Enumerate the mechanism of β–oxidation of palmitic acid.

   (b) Differentiate between Glycolysis and Kreb's cycle. 6,4

Section–E

8. (a) Describe the induced fit hypothesis of enzyme action.

   (b) Explain the process of glycogenolysis. 6,4

9. (a) Explain various factors affecting the enzyme activity.

   (b) What is meant by feedback inhibition of an enzyme ? Explain with an example. 6,4