BIO-CHEMISTRY AND ANIMAL PHYSIOLOGY–I

Semester - IV

Time Allowed : Three Hours] [Maximum Marks : 35

Note : The candidates are required to attempt *two* questions each from Section A and B carrying 12 marks each and the entire Section C consisting of 11 short answer type questions carrying 2 marks each.

Section : A

1. (a) What are Nucleotides ? Write their types (only names) and also write the functions of each type.
   (b) What are Energy Carriers ? Write their examples and discuss their functions. 8+4
2. (a) Describe the Hexose Monophosphate Pathway or Shunt. Also list its significance.
   (b) Describe the transmination of amino acids. 10+2
3. (a) Describe the Betaoxidation of fatty acids.
   (b) Draw Kreb's cycle and indicate various enzymes involves in it. 6+6
4. (a) Give outlines classification of lipids. Discuss functions of Phospholipics and Prostagladins.
   (b) Discuss the functions of Proteins. 9+3

Section : B

5. (a) What is digestion ? Discuss the action of Pancreatic Juice on food during digestion.
   (b) Define blood transfusion. Describe the blood groups of man. 7+5
6. (a) Why S–A node is called Pacemaker ?
   (b) Give the functions of Liver. (c)Discuss the process of Erythropoisis. 2+2+8
7. Name the hormones secreted by pituitary body. Give their functions. Why is pituitary gland called Master Gland ? 12

8. (a) Describe the generation and propagation of nerve impulse along a non-medullated nerve fibre.
(b) Give the causes of diabetes mellitus and diabetes insipidus.
(c) How do Urea and Urine differ ? Where are they formed ? 8+2+2

Section : C

9. Explain the following in short :
(a) What are Cardiolipins ?
(b) Differentiate between catalyst and biocatalyst.
(c) What is Cori's cycle ?
(d) What is Oxygen-debt ?
(e) What do you mean by Haldane's effect ? Explain.
(f) What do you mean by synaptic delay ? How is it different from synaptic fatigue ?
(g) What do you mean by universal blood donor and universal recepient ?
(h) Write pH values of Bile and Intenstinal Juice.
(i) Give the source and name of hormone regulating the uterine contraction during child birth.
(j) What is adrenal virilism ?
(k) What is tubular secretion ? 2×11=22