

NKT/KS/17/5092

**Bachelor of Science (B.Sc.) Semester—II (C.B.S.) Examination****BIO-CHEMISTRY (Human Physiology)****Compulsory Paper—1**

Time : Three Hours]

[Maximum Marks : 50

**N.B. :—** (1) **All** questions are compulsory and carry equal marks.

(2) Draw diagrams wherever necessary.

1. Describe the mechanism of urine formation. 10
- OR**
- Write notes on :
- (a) Spermatogenesis 5
- (b) Juxtaglomerular apparatus. 5
2. (a) Give the composition of blood. 5
- (b) Write a note on T and B lymphocytes. 5
- OR**
- Explain the mechanism of transport of CO<sub>2</sub> by blood. 10
3. Describe synapse and mechanism of synaptic transmission. 10
- OR**
- Explain the mechanism of conduction of nerve impulse along myelinated and non-myelinated nerve fibre. 10
4. Describe mechanism of action of peptide hormones using cAMP as a second messenger. 10
- OR**
- (a) Name the hormones secreted by anterior pituitary gland. Give one function of each hormone. 2½
- (b) Write the function of parathormone. 2½
- (c) Give the functions of T<sub>3</sub> and T<sub>4</sub>. 2½
- (d) Give the basic mechanism of action of steroid hormones. 2½
5. Answer any **ten** of the following :
- (i) Sertoli cells are present in which organ ? 1
- (ii) Name any two phases of menstrual cycle. 1
- (iii) \_\_\_\_\_ cells secrete a male sex hormone testosterone. 1
- (iv) Which metal ion is present in Heme molecule ? 1
- (v) Mention one function of Monocyte. 1
- (vi) Prothromine converts fibrinogen to \_\_\_\_\_ during clotting. 1
- (vii) What is meant by bipolar neuron ? 1
- (viii) What is all or none law ? 1
- (ix) \_\_\_\_\_ pump restore the original resting potential of nerve fibre. 1
- (x) Name two hormones secreted by adrenal gland. 1
- (xi) Name any two second messengers. 1
- (xii) Vasopressin is also known as \_\_\_\_\_. 1

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