

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_2 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_3 and T_4 . 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) Prothrombine 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