

KNT/KW/16/5092

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. Give detailed account of different stages of menstrual cycle. 10

OR

Describe in brief the following mechanisms of urine formation :

- (a) Glomerular filtration 5
(b) Tubular reabsorption of Na^+ and Water. 5
2. Explain the mechanism of coagulation of blood by Intrinsic pathway. 10

OR

Write notes on :

- (a) Chloride shift 2½
(b) Draw structure of granulocytes 2½
(c) Transport of O_2 2½
(d) Functions of platelets. 2½
3. (a) Describe in brief the mechanism of synaptic transmission. 5
(b) Describe the structure of neuron with the help of a well labeled diagram. 5

OR

- (c) Describe the physiological properties of nerve fibers. 5
(d) Explain the conduction of nerve impulse along with non myelinated nerve fibre. 5
4. (a) Describe the mechanism of action of steroid hormones. 5
(b) Name and describe the functions of hormones secreted by posterior pituitary. 5

OR

- (c) Classify hormones on the basis of chemical nature. 2½
- (d) Write a note on adrenal medullary hormones. 2½
- (e) Describe the role of parathyroid hormones in the regulation of calcium level. 2½
- (f) Describe the disorders associated with thyroid hormones. 2½
5. Solve any **ten** of the following :
- (i) What are podocytes ? 1
- (ii) Define spermatogenesis. 1
- (iii) Name the protein present in plasma in highest concentration. 1
- (iv) Name the different types of lymphocytes. 1
- (v) What is Bohr's effect ? 1
- (vi) Name the tissue that secretes the hormone progesterone. 1
- (vii) What is meant by bipolar neurons ? 1
- (viii) Name any two neurotransmitters. 1
- (ix) Name any two hormones of anterior pituitary. 1
- (x) Name any two second messengers involved in action. 1
- (xi) Name the ions responsible for generation of nerve action potential. 1
- (xii) Name any two functions of pancreatic hormones. 1