

**NRT/KS/19/2059**

**Bachelor of Science (B.Sc.) Semester-II Examination**  
**BIO-CHEMISTRY (Human Physiology)**  
**Optional 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 in detail the different phases of menstrual cycle. 10

**OR**

Describe the tubular-reabsorption process of urine formation. 10

2. (a) Write a note on T & B lymphocytes. 5

(b) Describe the fate of RBC. 5

**OR**

Describe the intrinsic mechanism of blood coagulation. 10

3. Give a detailed account of generation of action potential in neurons. 10

**OR**

Write notes on :

(a) Structure of synapse. 5

(b) Cholinergic transmission. 5

4. Describe the mechanism of action of peptide hormones using cAMP as second messenger. 10

**OR**

Give a detailed account of pituitary hormones. 10

5. Answer any **ten** of the following :

(i) Mention one difference between efferent arteriole and afferent arteriole.

(ii) Define Oogenesis.

(iii) Name the tissue producing progesterone.

(iv) Name the Vitamin having important role in blood coagulation.

(v) What is the metal ion present in heme ?

(vi) What is the function of platelets ?

(vii) What is meant by a unipolar neuron ?

(viii) What is "All or None" law ?

(ix) Name any one neurotransmitter.

(x) What is meant by  $T_3$  ?

(xi) What is the main function of calcitonin ?

(xii) Name any two hormones produced by the pancreas. 10