

B.Sc. F.Y. (CBCS Pattern) Semester-I  
**USBCT-C01 - Biochemistry Paper-I - Human Physiology**

P. Pages : 2

Time : Three Hours



**GUG/W/24/11540**

Max. Marks : 50

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- Notes : 1. All questions are compulsory and carry equal marks.  
2. Draw labelled diagrams wherever necessary.

**1. Explain extrinsic pathway of blood clotting? 10**

**OR**

- a) Discuss the hemoglobin structure. 2½
- b) Give the functions of WBC. 2½
- c) Write a note on thalassemia. 2½
- d) Discuss the role of vitamin k in blood clotting. 2½

**2. Discuss molecular organization of muscle fiber. 10**

**OR**

- a) Discuss digestion of protein in pancreatic juice. 2½
- b) Write short note on digestion lipid. 2½
- c) Discuss mechanism of absorption of carbohydrate. 2½
- d) Discuss structure of actin filaments. 2½

**3. Discuss in detail the menstrual cycle. 10**

**OR**

- a) Draw well diagram of neuron? Enlist type of neuron. 2½
- b) Discuss impulse generation. 2½
- c) Give the functions of male sex hormones. 2½
- d) Give the functions of HCG. 2½

**4. Explain functions of adrenal and thyroid hormone. 10**

**OR**

- a) What are hormones? How they are classified on the basis of their chemical nature? 2½
- b) Explain the mechanism of action of peptide hormone. 2½
- c) What is second messenger? Draw structure of cAMP. 2½
- d) Give the functions of parathyroid hormone. 2½

**5.** Attempt **any ten** from following. **10x1**

- i) What is chloride shift?
- ii) Name any two-blood clotting factor.
- iii) Give two functions of RBC.
- iv) Name digestive juices involve in protein digestion.
- v) Name the cell which secrete hydrochloric acid in stomach.
- vi) Name the monomer present in actin filament.
- vii) What is cholinergic transmission.
- viii) Define the term oogenesis.
- ix) Draw structure of progesterone.
- x) Give the function TSH.
- xi) Draw structure of cGMP.
- xii) Name two hormone secreted by pituitary gland.

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