

B.Sc. Regular-Semester 2017 (CBCS Pattern) Sem I
USBCT-C01 : Biochemistry Paper-I (Human Physiology)

P. Pages : 2

Time : Three Hours



GUG/S/18/10074

Max. Marks : 50

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

1. Describe intrinsic and extrinsic mechanisms of blood coagulation. **10**

OR

- a) Describe the structure of hemoglobin. **2½**
b) Describe the functions of plasma proteins. **2½**
c) Explain the phenomenon of chloride shift. **2½**
d) Give the composition of blood. **2½**

2. Describe in detail digestion and absorption of proteins in the alimentary canal. **10**

OR

- a) Briefly describe different types of muscle fibres. **2½**
b) Describe absorption of glucose in the intestine. **2½**
c) Describe the structures of actin and myosin. **2½**
d) Briefly describe the digestion of fats by enzymes of pancreatic juice. **2½**

3. What are synapses? Describe in detail the mechanism of cholinergic synaptic transmission. **10**

OR

- a) Write a short note on saltatory conduction of nerve impulse. **2½**
b) Enlist the functions of female sex hormones. **2½**
c) Describe the mechanism of development of action potential in a nerve fibre. **2½**
d) What are HCG? Describe their functions. **2½**

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

OR

- a) Describe the functions of pancreatic hormones. **2½**

- b) Write a short note on different hormones of adenohypophysis. 2½
- c) Describe the role of Ca⁺⁺ ion as second messenger. 2½
- d) Classify hormones. 2½

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

- a) What is Bohr's effect? 1
- b) Name any one anticoagulant. 1
- c) What is the meaning of 'T' in T - lymphocyte? 1
- d) What is Sarcoplasm? 1
- e) Name any one carbohydrate splitting enzyme. 1
- f) Name any protein, other than actin and myosin, present in a muscle fibre. 1
- g) What is the function of Sertoli cell? 1
- h) Name any one phase of menstrual cycle. 1
- i) What is meant by a multipolar neuron? 1
- j) Name any hormone secreted by parathyroid gland. 1
- k) Pancreas is both endocrine as well as exocrine gland. (True or False). 1
- l) What are tropic hormones? 1
