

B.Sc. First Year (CBCS Pattern) Sem-I
USBCT-C01 - Biochemistry Paper-I (Human Physiology)

P. Pages : 2

Time : Three Hours



GUG/W/23/11540 (S)

Max. Marks : 50

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- Notes : 1. All questions are compulsory.
2. All questions carry equal marks.

1. Describe the mechanism of transport of O_2 the blood. **10**

OR

- a) Describe the structure of hemoglobin. **2½**
- b) Describe the functions of Platelets. **2½**
- c) Briefly describe the mechanism of coagulation of blood. **2½**
- d) Give the functions of plasma proteins. **2½**

2. Describe in detail the sliding mechanism of muscle contraction. **10**

OR

- a) Describe the structure of striated muscle fiber. **2½**
- b) How carbohydrates are digested in the intestine? **2½**
- c) Describe the role of bile salts in absorption of fats. **2½**
- d) How proteins are digested in the stomach? **2½**

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

OR

- a) Enlist the functions of male sex hormones. **2½**
- b) Describe saltatory conduction of nerve impulse. **2½**
- c) What is synapse? Discuss synaptic transmission of nerve impulse. **2½**
- d) Draw a well labelled diagram of typical neuron. **2½**

4. Describe in detail the functions of hormones secreted by anterior pituitary. **10**

OR

- a) Enlist the functions of adrenaline hormone. **2½**

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| b) Describe the mechanism of action of steroid hormone. | 2½ |
| c) How pancreatic hormones regulate blood sugar level? | 2½ |
| d) Write a note on second messengers. | 2½ |

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

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| a) Name the types of WBCs. | 1 |
| b) What is Bohr's effect? | 1 |
| c) Name the metal ions essential for coagulation of blood. | 1 |
| d) Name the heart muscles. | 1 |
| e) Cardiac muscles are voluntary or involuntary? | 1 |
| f) Name the enzyme which digest carbohydrates in mouth. | 1 |
| g) Name the gland that produce calcitonin hormone. | 1 |
| h) Name the cells which produce insulin and glucagon hormones. | 1 |
| i) What are hormone receptors? | 1 |
| j) Give one example of neurotransmitter. | 1 |
| k) What are the three types of nerve cells? | 1 |
| l) What is the function of Sertoli cell? | 1 |
