

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

P. Pages : 2

Time : Three Hours



GUG/S/25/11540

Max. Marks : 50

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- Notes : 1. All questions are compulsory & carry equal marks.
2. Draw well labelled diagram wherever necessary.

1. Describe the mechanism of transport of O₂ by blood. **10**

OR

- a) What are the plasma protein? Give their functions. **2½**
- b) Discuss the functions of WBC. **2½**
- c) Write a note on iron deficiency anemia. **2½**
- d) Discuss the structure of hemoglobin. **2½**

2. Describe the digestion and absorption of carbohydrates in GIT. **10**

OR

- a) Explain the sliding mechanism of muscle contraction. **2½**
- b) Briefly discuss the structure of striated muscle fiber. **2½**
- c) Discuss the digestion of protein in the stomach. **2½**
- d) What is Sarcomere? Explain its structure & functions. **2½**

3. Discuss in detail the mechanism of synaptic transmission of nerve impulse. **10**

OR

- a) Discuss the mechanism of transmission of impulse in myelinated nerve fiber. **2½**
- b) Discuss the process of Spermatogenesis. **2½**
- c) What are the functions of HCG Hormone. **2½**
- d) With the help of diagram explain the depolarization and repolarization of nerve fiber. **2½**

4. Discuss in detail the functions of pituitary hormones. **10**

OR

- a) Explain the mechanism of action of steroid hormones. **2½**

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| b) Discuss the functions of PTH. | 2½ |
| c) Explain how Pancreas maintain blood sugar level. | 2½ |
| d) Discuss the functions of hormones of adrenal medulla. | 2½ |

5. Attempt any ten of the following:

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| a) What is the role of Vitamin K in blood coagulation? | 1 |
| b) Name the natural anti-coagulant present in blood. | 1 |
| c) Give the name of non-protein clotting factor in blood. | 1 |
| d) What is the multipolar neuron? | 1 |
| e) What is the functions of relaxin hormone in female? | 1 |
| f) Name the hormone synthesized by corpus luteum. | 1 |
| g) Give the name of proteolytic enzyme present in Pancreatic juice. | 1 |
| h) What are smooth muscles? | 1 |
| i) What is the functions of liver in fat digestion? | 1 |
| j) What are second messenger? | 1 |
| k) What are hormones? | 1 |
| l) Which endocrine gland synthesized calcitonin hormone. | 1 |
