

**General Human Physiology and Biochemistry****Time: 3 Hours****Max Marks: 100**

- Answer all questions
- Draw diagrams wherever necessary
- Write **SECTION A** and **SECTION B** in separate Answer books(32 Pages). Do not mix up questions from Section A and Section B.

**QP CODE:102002****Section A - PHYSIOLOGY****Marks: 50****Essay****(14)**

1. Describe the phases of gastric secretion and its regulation. List the composition and functions of gastric juice. (4+4+2+4=14)

**Short essays****(2x8=16)**

2. Draw a neat labeled diagram of neuromuscular junction. Explain how an impulse is transmitted across the neuromuscular junction
3. Explain the action of insulin on carbohydrate, protein and fat metabolism. List the common complaints during diabetes mellitus.

**Short notes****(5x4=20)**

4. Complications of blood transfusion.
5. Factors affecting glomerular filtration rate.
6. Explain the stages of spermatogenesis. List the factors influencing it.
7. Mention the important differences between first and second heart sounds.
8. Explain the transport of carbon dioxide in blood.

**QP CODE:103002****Section B - BIOCHEMISTRY****Marks: 50****Essay****(14)**

1. Name the aromatic amino acids. Discuss the metabolism of any one of them. Add a note on the associated metabolic disorders (2+8+4=14)

**Short essays****(2x8=16)**

2. List the functions and deficiency manifestations of ascorbic acid
3. Explain the transamination reaction with example and its significance

**Short notes****(5x4=20)**

4. Fluoride
5. Structure of DNA
6. Significance of HMP( hexose mono phosphate) pathway
7. Lipoprotein
8. Hemoglobin structure and function

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