

## 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. Enumerate the respiratory centers in brain. Explain the neural regulation of respiration. (4+10=14)

**Short essays**

**(2x8=16)**

2. Describe the neuromuscular transmission with the help of a neat diagram
3. List the hormones involved in calcium homeostasis and describe its actions.

**Short notes**

**(5x4=20)**

4. Conducting system of heart
5. Functions of thalamus
6. Rh blood group
7. Micturition reflex
8. Temporary contraceptive methods

**QP CODE:103002**

**Section B - BIOCHEMISTRY**

**Marks: 50**

**Essay**

**(14)**

1. List the different sources of ammonia and explain how ammonia is transported. Describe the reactions of ammonia detoxification in liver and mention the causes of increased blood urea level. (2+3+6+3=14)

**Short essays**

**(2x8=16)**

2. Mention the sources, daily requirement, biochemical functions and deficiency manifestations of vitamin C.
3. What is the normal pH of the blood. Explain the role of blood buffers and lungs in acid base balance. List the causes of metabolic acidosis.

**Short notes**

**(5x4=20)**

4. Fluorosis
5. Define genetic code and mention its features.
6. Name four phospholipids and mention their functions.
7. Features of competitive inhibition and list two examples of clinical importance.
8. Define BMR. What are the factors that affect BMR.

\*\*\*\*\*