

**B.Sc. PROSTHETICS & ORTHOTICS  
FIRST YEAR  
PAPER II – PHYSIOLOGY**

*Q.P. Code: 802402*

**Time: Three hours**

**Maximum : 100 Marks**

**Answer All questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Draw a labeled diagram of a cell. List the various organelles present and write one function of each of them.
2. List the hormones produced by the pancreas. Describe the action of the hormone insulin. What is diabetes mellitus?
3. Describe the different phases of the cardiac cycle. Add a note on the heart sounds.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Describe the process of coagulation of blood.
2. Describe the structure of the neuromuscular junction with the help of a diagram.
3. Describe the conducting system of the heart.
4. With the help of a diagram describe the different lung volumes and capacities.
5. Describe the differences between an Upper Motor Neuron lesion and a Lower Motor Neuron Lesion.
6. List the functions of the hypothalamus.
7. Describe the Micturition reflex.
8. Describe the structure and function of Red Blood Cells.

**III. Short answers on:**

**(10 x 3 = 30)**

1. List the functions of Skin.
2. Define the terms dyspnoea and orthopnoea.
3. What is meant by the term Resting Membrane Potential?
4. What is a cystometrogram?
5. List the muscles of inspiration and expiration.
6. Describe the features of cardiac muscle.
7. List the functions of the cerebellum.
8. What is meant by the term Erythrocyte Sedimentation Rate (ESR)? Mention the Normal value of ESR.
9. Explain the terms active transport and passive transport.
10. List the functions of the respiratory System.