

**BACHELOR IN PROSTHETICS AND ORTHOTICS****FIRST YEAR****PAPER II – PHYSIOLOGY***Q.P. Code: 802452***Time: Three Hours****Maximum : 100 Marks****Answer All questions****I. Elaborate on:****(3 x 10 = 30)**

1. Describe in brief the mechanism by which coagulation (clotting of blood) occurs?
2. What is a reflex? Describe the reflex arc. What are monosynaptic and polysynaptic reflexes? What are superficial reflexes?
3. Describe the secretion, action and regulation of insulin. Add a note on diabetes mellitus.

**II. Write notes on:****(8 x 5 = 40)**

1. Describe the different types of neuroglia and their functions.
2. Describe the transmission of a nerve impulse across a synapse.
3. Describe the composition and functions of lymph.
4. Describe the structure and function of the kidney.
5. Describe the normal electrocardiogram (ECG) with the help of a diagram.
6. Describe the mechanics of breathing. List the muscles of inspiration and expiration.
7. Describe the functions of the lung.
8. Describe the functions of skin.

**III. Short answers on:****(10 x 3 = 30)**

1. What is meant by  
(a) Tactile localization      (b) Stereognosis
2. Define cardiac output.
3. Define the term vital capacity.
4. What is meant by the term “pacemaker of the heart”?
5. Describe the features of cardiac muscle.
6. List the different body fluid compartments.
7. What is meant by the terms active transport and passive transport?
8. What is a cystometrogram?
9. Describe the function of the following  
(a) Mitochondria      (b) Endoplasmic reticulum
10. Explain the cause of the first and second heart sound.

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