

**FIRST BHMS (NEW SYLLABUS)**  
**Physiology and Biochemistry - Paper I**

Time: - 3 Hrs.

100 Marks

**Instructions:-** [1] All the Questions are compulsory. [3] Draw Diagrams where ever Necessary.  
 [2] Write the Both Sections in Separate answer Book. [4] Figures to the right indicate full Marks

**Section - I**

- Q-1 Define arterial blood pressure. Which are the regulatory mechanism to regulate it. Explain hormonal regulation of blood pressure in detail. 15
- OR**
- Q-1 Described morphology, development & functions of each Leucocytes. 15
- Q-2 Define blood clotting. Which are main steps of blood clotting. Explain extrinsic pathway of blood clotting with diagram in detail. 15
- OR**
- Q-2 1. Hemoglobin(definition, types, derivative & functions) 07  
 2. Define cardiac out put. Which are factors affecting on it's. 08
- Q-3 Write Short Note ( Any three) 15
- (a) Mitochondria (b) Difference between Red bone marrow & white bone marrow.  
 (c) Heart sounds (d) Surface tension  
 (e) Thymus gland
- Q-4 Write short questions. 05
1. Define electrocardiogram.  
 2. Define Lymph node.  
 3. Enumerate morphological classification of anemia.  
 4. What is acid base buffer system? Which are?  
 5. What is Gene?

**Section - II**

- Q-1 Explain the transport of oxygen by the blood from alveoli to the tissue cells. 15
- OR**
- Q-1 Describe in detail physiology of Micturation. 15
- Q-2 What is glomerular filtration? What is normal rate of it's? Described factors affecting on GFR in detail. 15
- OR**
- Q-2 1. Nervous regulations of respiration. 08  
 2. Reabsorption of water through renal tubules. 07
- Q-3 Write Short Note ( Any three) 15
- (a) Dead space (b) Peculiarities of renal circulation  
 (c) Neuromuscular junction (d) Role of hypothalamus in regulations of body temperature.  
 (e) Halden's effect
- Q-4 Write short questions. 05
1. Define motor unit  
 2. What is sebum? Give it's function ?  
 3. What is counter current mechanism ?  
 4. Define compliance.  
 What is full from of FRC & ERV?