

**First Professional BHMS Degree Supplementary Examinations
March 2025**

**Physiology & Biochemistry I
(2015 Scheme)**

Time: 3 hrs

Max marks: 100

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answer
- Draw diagram wherever necessary

Long Essay**(2x15=30)**

1. Define haemostasis. Name 13 clotting factors in a order. Mention the stages of Haemostasis. Explain the intrinsic mechanism of blood coagulation. (1+3+2+9)
2. Explain blood pressure in terms of
 - a) Define blood pressure.
 - b) Mention the components of blood pressure.
 - c) State the normal value
 - d) Explain the long-term regulation of the blood pressure.
 - e) How the blood pressure is determined (2+2+1+8+2)

Short Essay**(5x8=40)**

3. Define diffusion. Mention the types with their differences. Explain the factors affecting the diffusion (2+3+3)
4. Describe the plasma proteins in terms of
 - a) Name the plasma proteins.
 - b) Mention the normal albumin: globulin ratio
 - c) Explain any Four functions of plasma proteins
 - d) Mention the significance of plasma pheresis (2+1+4+1)
5. Name the muscles of respiration. Explain the mechanism of respiration (3+5)
6. Describe the structure of the Juxta glomerular apparatus (JGA). Explain the functions (4+4)
7. Describe the excitation –contraction coupling mechanism in skeletal muscle

Short notes**(10x3=30)**

8. List the types of endoplasmic reticulum. Mention the functions
9. Define active transport. Classify it
10. Classify WBCs. Mention their functions
11. Name the waves recorded in the electrocardiogram. Mention the significance of each wave
12. Enumerate the functions of spleen
13. Tidal volume with normal value
14. Define Glomerular filtration rate. Mention the normal value.
15. Types of sweat glands.
16. Outline the sarcotubular system. Mention their functions
17. Name the heart sounds. Mention the causes for each heart sound
