

001/20

**The West Bengal University of Health Sciences  
MBBS 1<sup>st</sup> Professional Examination, January 2020**

Subject: Physiology

Full Marks: 50

Paper: I

Time: 2 ½ hours

*Attempt all questions. The figures in the margin indicate full marks.***Group A**

1. a) Define Hemostasis. Describe the sequence of events leading to hemostasis. What is the role of platelets in clotting? Enumerate the common laboratory tests for investigation of bleeding disorders. 2+4+3+3
- or*
- b) Identify the receptors, afferent pathways, integrating centre, efferent pathways & effectors in the arterial baroreceptor reflex. When the arterial baroreceptors decrease or increase the rate of firing? What changes in the autonomic outflow & cardiovascular function occur? Explain how tachycardia occurs in Cardiovascular shock. 5+ 1+2+2+2

**Group B**

2. Answer *any two* of the following: 2 x7
- a) Compare & contrast the transmission of electrical activity at a neuromuscular junction with that at a synapse. What are Myasthenia Gravis? 5+2
- b) What is the compensatory mechanisms developed during acclimatization in high altitude? 7
- c) Outline the mechanism of HCl synthesis & secretion in the stomach. What are the paracrine & endocrine regulators of HCl secretion? 4+3

**Group C**

3. Write a brief account on *any four* of the following: 4x3
- a) Receptor mediated endocytosis.
- b) Megaloblastic anemia.
- c) Pulmonary Surfactant.
- d) P-R interval.
- e) CCK-PZ.

**Group D**

4. Give the physiological explanation of the following: 4x3
- a) Relative lymphocytosis occurs in bone marrow depression in adults.
- b) Cyanide poisoning causes high  $PO_2$  in venous blood.
- c) Capillaries are also called 'exchange vessels'.
- d) Absence of bile salts in the small intestine may cause steatorrhea.