

**VINAYAKA MISSION'S RESEARCH FOUNDATION  
(DEEMED TO BE UNIVERSITY), SALEM**

**B.H.M.S. DEGREE EXAMINATION – July 2020  
First Year**

**PHYSIOLOGY INCLUDING BIOCHEMISTRY– PAPER - I**

Time: Three hours

Maximum: 100 marks

I. Write long essays on any **TWO** of the following: (2 x 15 = 30)

- 1) Define hemostasis. Name the stages of hemostasis. Explain the intrinsic pathway of coagulation.
- 2) Define blood pressure. Write the normal value. Explain the long term regulation of blood pressure.
- 3) Name the various buffer system of the body. Explain the mechanism of each.

II. Write short essays on any **TEN** of the following: (10 x 5 = 50)

- 4) Describe ABO system of blood grouping.
- 5) Explain the transport of oxygen in the blood.
- 6) Define cardiac output. Explain eth factors influencing COP.
- 7) Describe the counter current mechanism.
- 8) Define core temperature. How it is regulated when exposed to cold environment.
- 9) Explain the walk along theory of muscle contraction.
- 10) List the types of immune- globulins. Describe its structure.
- 11) Name the respiratory centres. Explain the neural regulation of respiration.
- 12) Mention the 4 heart sounds. Write the cause and features of each.
- 13) Explain the various modes of sodium reabsorption by the kidney.
- 14) Mention the normal types of hemoglobin. Explain the synthesis of Hb.
- 15) Describe the structure and function of neuromuscular junction.

III. Write short notes of the following: (**Answer ALL**): (10 x 2 = 20)

- 16) Outline the mechanism of primary active transport.
- 17) Sketch the pathophysiological basis of erythroblastosis fetalis.
- 18) Outline mouth to mouth breathing.
- 19) Name the 10 layers of retina.
- 20) Define refractory period. Mention the types and differences.
- 21) Sketch the mechanism of Hemo- dialysis.
- 22) Name the sweat glands and write their differences.
- 23) Write the mechanism of glucose reabsorption by the kidney.
- 24) Define haemophilia. Mention the types and causes.
- 25) Inulin clearance test.