

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

**B.H.M.S. DEGREE EXAMINATION – October 2019
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 erythropoiesis. Name the sites of production of erythropoiesis in fetal life. Explain the stages of erythropoiesis.
- 2) Define cardiac cycle. Name the phases of cardiac cycle. Explain the events taking place during the cardiac cycle.
- 3) Name the muscle of respiration. Explain the mechanism of respiration.

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

- 4) Define diffusion. List the types. Explain the factors influencing diffusion.
- 5) Name the plasma proteins. Explain the functions of plasma proteins.
- 6) Mention the structure of Juxtaglomerular apparatus. Explain the functions.
- 7) Define venous return. Explain the factors influencing venous return.
- 8) Name lung volume. Explain them in regard to definition, normal value and determination.
- 9) Classify reticulo endothelial cells. Write their functions.
- 10) Explain the structure and functions of Sarco – tubular system.
- 11) Classify WBCs. Explain their functions.
- 12) Define GFR. Enumerate the factors affecting the GFR.
- 13) Explain ECG in terms of definition, waves and their significance. Mention the leads.
- 14) Describe the mechanism of micturition.
- 15) Explain the regulation of body temperature.

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

- 16) Name the types and differences of endoplasmic reticulum.
- 17) State the Landsteiner's law.
- 18) Define dead space. List the types. Write the normal volume.
- 19) Outline the conductive system of the heart.
- 20) Define sarcomere. Write the components of sarcomere.
- 21) Enumerate the functions of spleen.
- 22) Define nephron. Mention the types. Write three differences of them.
- 23) Define osmosis. Classify it.
- 24) List the functions of skin.
- 25) Define asphyxia. Enumerate the stages.