

**M B B S Phase I Supplementary Examinations, Jan 2024**

**Time: 180 Minutes**

**Max Marks: 80 Marks**

**Physiology Paper I**

**QP CODE: C1021**

*Your answer should be specific to the question asked*

*Draw neat labeled diagrams wherever necessary*

**Long Essay 10 × 2 = 20 Marks**

1. A 52-year-old female arrives to OPD with complaints of itching in her hands along with headaches. A routine complete blood count (CBC) shows red blood cells (RBCs) of 8.2million/ $\mu$ l, white blood cells (WBCs) 37,000/ $\mu$ l, and platelets 640,000/ $\mu$ l. Her erythropoietin levels are lower than normal. 1. Describe the steps involved in erythropoiesis with neat labelled diagrams (6) 2. Describe the regulation of erythropoiesis (4)
2. Define blood pressure & Mention normal range of systolic & diastolic blood pressure. Describe the hormonal regulation of Blood Pressure.(2+8)

**Short Essay 5 × 12 = 60 Marks**

3. Diagrammatically represent intrinsic pathway of coagulation
4. Describe carrier mediated transport with examples
5. With a neat labeled diagram Describe ionic basis of Pacemaker potential
6. Describe the composition, formation & functions of lymph.
7. Describe the mechanism of HCl secretion in the stomach.
8. Describe the role of Autonomic nervous system on regulation of GI functions
9. Mr Somu was told to get a health checkup for the fitness test who was 40 yrs and working in the quarry factory as he underwent the pulmonary function test there was decrease in the rate of maximal expiratory air flow and his vital capacity 800 ml FVC 1. Define Vital capacity and give its normal value (2) 2. List one probable cause for decrease in forced vital capacity in the above patient (1) 3. Describe two factors influencing vital capacity (2)
10. Describe the reason for increased occurrence of respiratory distress syndrome in preterm infants.
11. Define & classify hypoxia.
12. Describe the etiology, clinical features and management of Caisson's disease.
13. GFR rises with increase in renal blood flow. Justify.
14. Give the normal pH of blood. Describe the body's major buffer system.