

Subject: Physiology
Paper: I

Full Marks: 100
Time: 3 hours

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

1. a) What is erythropoiesis. What are the (sites) of erythropoiesis? List with diagram the various stages of development of RBC. How is erythropoiesis regulated? What is polycythaemia? 2+2+4+5+2
b) What is systemic arterial blood pressure? How it is kept within normal range? What is hypertension and what are the basic physiological principles of the treatment of hypertension? 3+6+2+4
2. a) Explain how oxygen is transported from lungs to tissues in details. Add a note on " P_{50} ". 6+4
b) Draw a diagram of neuromuscular junction. Explain the mechanism of transmission across neuromuscular junction. Name three neuro-muscular blockers and mention their mechanism of action. 3+4+3
c) Describe the mechanism of secretion of Hydrochloric acid in stomach. Enumerate the neural and chemical mechanisms that control gastric secretion. 5+5
3. Write a short notes on the following: 5x2
a) G-Protein.
b) Discuss the importance of communication skill for a doctor.
4. Explain the following statements: 5x4
a) Alcohol intoxication can be avoided if it is consumed with fatty food.
b) Hypoxic hypoxia causes polycythemia.
c) Action potentials are propagative in nature.
d) Coagulation is an example of positive feedback mechanism.
e) Low dose aspirin is used in prevention of myocardial infarction.

P.T.O.