

M.SC (INSTRUMENTATION SCIENCE) FIRST YEAR SECOND SEMESTER – 2022

Subject: BIO-MEDICAL SCIENCE -II

Time: 2 hours

Full Marks: 40

Answer any four questions from the following.

1. What are the different types of leucocytes? Briefly discuss their formation. (3+7)
2. What do you mean by simple diffusion? Describe different factors which control diffusion. What are the differences between diffusion and osmosis? (3+4+3)
3. Describe different processes for the transport of large molecules across biological membrane. What is secondary active transport? (8+2)
4. Describe the blood stage of malaria parasite. Why cerebral malaria is fatal? Why *P. vivax* and *P. ovale* can cause relapsing malaria? (5+3+2)
5. Classify the hormones according to chemical structure and name the different embryologic tissue layers from which their respective glands are originated. Briefly describe the general mechanism of hormone action. What are the differences between pheromone and hormone? (2+6+2)
6. Discuss the similarities and differences between hemoglobin and myoglobin with special reference to the oxygen saturation. What is fetal hemoglobin? (8+ 2)