

Ref. No.: EX/SC/PHY/PG/CBS/TH/201/2024(S)

M. Sc. Physics Examination 2024(S)

(2nd Year, 1st Semester Special Supplementary Examination)

Biophysics (I)

Time: Two hours

Full Marks: 40

Answer any *two* questions from each group

GROUP-A

1. a) Explain with diagram the structure of neuron. 5 (COI)
b) What are axons and dendrites? Explain their importance in living system. 5 (COI)
2. a) Explain with diagram the structure of brain. 5 (COI)
b) Describe the important activities of the frontal and the parietal lobe of brain. 5 (COI)
3. a) Draw the structure of membrane. 4 (CO3)
b) What is active and passive transport? 4 (CO3)
c) Explain the importance of Sodium and Potassium ions in living system. 2 (CO3)

GROUP-B

1. a) "Describe Watson and Crick's model of DNA. 7 (CO2)
b) Name three different key enzymes in DNA synthesis. 3 (CO2)
2. a) What do you mean by gene? Draw a labeled diagram of a prokaryotic gene. 2 + 8 (CO2)
3. a) Discuss how molecular weight of a biological macromolecule can be determined by diffusion technique? 6 (CO4)
b) Define diffusion and osmosis. 4 (CO4)