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School of Biomedical Science

Master of Science in Medical Biotechnology

Mid Term Examination - Nov 2023

Duration : 90 Minutes

Max Marks : 50

Sem I - Q1PO113B - Molecular and Genetic EngineeringGeneral Instructions*Answer to the specific question asked**Draw neat, labelled diagrams wherever necessary**Approved data hand books are allowed subject to verification by the Invigilator*

- 1) How will you distinguish between a nucleotide and a nucleoside? K2 (2)
- 2) Show what important role does SSB proteins play in DNA replication. K1 (3)
- 3) Identify the important roles of telomeres. K2 (4)
- 4) Explain the different structures of DNA that are found in nature. K2 (6)
- 5) Describe the structure of nucleosome. K3 (6)
- 6) Inspect the importance of telomerase enzyme, while explaining its mechanism of action. K3 (9)
- 7) Elaborate the meaning of histone code and its importance in the condensation and decondensation of the chromosomes. K4 (8)
- 8) Enlist the states in which an interphase chromatin exists. Explain the mechanism of condensation of chromatin. K4 (12)

OR

- Elaborate each of the three types of bacterial DNA polymerases. K4 (12)