Instruction: All questions carry equal marks.

Q. 1 Give a detailed account on the ultrastructure and function of mitochondria.

or

Q. 1 Write an account on structure and functions of plasma membrane.

Q. 2 Describe in detail the regulation of cell cycle.

or

Q. 2 Explain:
(a) Light reaction in photosynthesis
(b) Mechanism of solute adsorption

Q. 3 Write an account on DNA replication in eukaryotes.

or

Q. 3 Explain:
(a) Okazaki fragments
(b) Intron and exon concept in eukaryotes

Q. 4 Give a detailed account on factors involved in RNA transcription.

or

Q. 4 Give an account on:
(a) Inhibition of DNA and RNA biosynthesis
(b) Reverse transcriptase

Q. 5 Write an account on PCR and its importance in biotechnology.

or

Q. 5 Explain the control of gene expression in prokaryotes.