JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2025

M.Tech-I Semester (BT/BI)

COURSE CODE (CREDITS): 13M11BT111 (3) MAX. MARKS: 15

COURSE NAME: Advances in Cell and Molecular Biology

COURSE INSTRUCTORS: Dr. Udayabanu MAX. TIME: 1 Hour

Note: *(a) All questions are compulsory.*

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q.No	Question	Marks
Q1	If DNA synthesis always proceeds in the 5'-3' direction, Demonstrate that strands be synthesized simultaneously	3
Q2	Justify with an example that DNA polymerase has exonuclease activity for error correction	3
Q3.	Differentiate prokaryotic and eukaryotic replication process with respect to the origin of replication	3
Q4.	Summarize the properties and function of DNA polymerases	3
Q5	Consider a 84 bp segment of a circular DNA. Calculate the linking number in the relaxed state and in case two turns are removed or added.	3