

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2025

M.Tech-I Semester (BT/BI)

COURSE CODE (CREDITS): 13M11BT111 (3)

MAX. MARKS: 25

COURSE NAME: Advances in Cell and Molecular Biology

COURSE INSTRUCTORS: Dr. Udayabanu

MAX. TIME: 1 Hour 30 min

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	Explain genetic code with emphasis on degeneracy and the importance of wobble base.	5
Q2	Differentiate prokaryotic and eukaryotic ribosome. Explain the role of micro RNA in the inhibition of eukaryotic mRNA translation.	5
Q3	Assess the outcome of phosphorylation of the poly A tail during transcription. Discuss the role of GTF's in the initiation of transcription in eukaryotes.	5
Q4	Demonstrate the splicing mechanisms involved in the processing of mRNA in eukaryotes. Define the role of "snurps"	5
Q5	DNA damage may be caused by exogenous agents. Give one example: a. Alkylating agent b. Cross linking agent c. Toxin d. Food Preservative e. Polycyclic aromatic hydrocarbon	5