JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

MSc-I Semester (BT)

COURSE CODE (CREDITS): 20MS1BT113 (2) MAX. MARKS: 15

COURSE NAME: Plant and Animal Biotechnology

COURSE INSTRUCTOR: Dr. Udayabanu, Dr. Hemant Sood 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

(c) Use of calculator is not allowed

Q.No	Question	Marks
Q1	Discuss how manipulation of plant growth regulators can influence callus induction, shoot regeneration, and root formation under in vitro conditions.	2.5
Q2	A researcher wants to reduce the cost of production of micropropagated plants of Rose by shortening the process and using lateral buds of field grown mother plants How you would like to carry out the in vitro propagation for the mentioned objective and explain in details?	5
Q3	You are instructed to prepare a primary culture. Devise a protocol for the preparation of single cell suspension of neurons isolated from the hippocampus region of the mouse brain. Calculate % of cell death. 10^4 Cells are stained with tryphan blue. 3000 cells did not retain blue color.	5
Q4	Justify the use of inorganic salts and phenol red in the culture media for the maintenance of animal cell lines.	2.5

UNIVERSITY EXAMINATION AUG-2026