

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2024

M.Sc-I Semester (CSE/IT/ECE/CE/BT/BI)

COURSE CODE (CREDITS): 20MS1BT113 (2)

MAX. MARKS: 25

COURSE NAME: Plant and Animal Biotechnology

COURSE INSTRUCTORS: Dr. Uday and Dr. Hemant

MAX. TIME: 1 Hour 30 Minutes

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	Lily plants have good color variations and orchids have variability with petal shapes. For the production of a hybrid having both the characteristics mentioned, which technology would be the most appropriate for the production of the desired plants? Explain the complete methodology.	5
Q2	Virus-free <i>Dendrobium</i> is in high demand in the market. Which technique you would like to use for its production and why? Explain the complete methodology for the cost-effective and large-scale production of the same.	5
Q3	Why somatic embryogenesis is one of the best alternatives for growing exotic plants? Conceptualize a protocol with the production of somatic seeds for any desirable plant variety of tree species.	2.5
Q4	Analyze the process of embryo transfer technology (ETT) in cows by breaking down its key stages. How do these stages interrelate to improve reproductive efficiency?	4
Q5	Compare the advantages of artificial insemination over natural breeding. Analyze the economic benefits of using artificial insemination in commercial livestock production.	4
Q6	Apply your understanding to assess apoptosis. Identify the key factors to be considered in confirming apoptotic cell death.	2.5
Q7	Demonstrate the use of 3-(4,5-dimethylthiazol-2-yl)-2,5 diphenyl tetrazolium bromide salt and its mechanism.	2