

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS-2022

M.Sc-I Semester (BT)

COURSE CODE (CREDITS): 20MS1BT113 (2)

MAX. MARKS: 25

COURSE NAME: Plant and Animal Biotechnology

COURSE INSTRUCTORS: Dr. Hemant Sood/Dr. Udayabanu, M.

MAX. TIME: 1 Hour 30 Minutes

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*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

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- Q1. Consider a condition where a sheep is expected to secrete clotting factor XI in its milk. How would you achieve this? Design an experimental protocol. (3)
- Q2. Differentiate Slow freezing and vitrification. Which of these methods is suitable for the cryopreservation of oocytes and embryos (3 )
- Q3. How can we manipulate the Follicular Wave for Superstimulation to obtain a maximum number of transferable embryos with a high probability of producing pregnancies? (3 )
- Q4. Does the semen collection method affect the quality of the semen? How can we obtain a high-quality ejaculate used for semen collection? (3 )
- Q5. Which technology would be utilized for the production of disease-free plants of *Orchids*? Which treatments can be tested for decreasing the disease infestation in the *in vitro*-raised plants? (4)
- Q6. How you can carry out the production of somatic embryos of *Aconitum* sp. continuously for 3 months? Conceptualize a complete protocol for the above-mentioned project and explain the expected bottlenecks also. (5)
- Q7. Double homozygous 100 *in vitro* raised plants of Cherry are required by NBPGR. Which technology you would like to apply for its production and mention the influencing factors for the whole process? (4)