

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS-2022

B.Tech-5Th Semester (BT)

COURSE CODE (CREDITS): 21B1WBT531(3)

MAX. MARKS: 25

COURSE NAME: Industrial Plant Tissue Culture

COURSE INSTRUCTORS: Dr Hemant Sood

MAX. TIME: 1HR 30 Mins

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

- Q1. How interspecific hybrid of *Picrorhiza* and *Podophyllum* is produced carrying good yield and cytoplasmic male sterility from the respective genera? Explain the methodology for their production under *in vitro* technologies. (2.5+2.5) CO3
- Q2. Conceptualize the methodology for the production of the haploid and sterile plant of *Datura innoxia*. Explain the procedure with diagram. (5) CO1
- Q3. Which technology would be utilized for the production of the soilless culture of the high content genotype of *Swertia*? Explain the steps of your developed protocol by the inclusion of aquaculture. (3+2) CO2
- Q4. How virus elimination & indexing is carried out in plants? Which different therapies can be used for the eradication of it? (2.5 +2.5) CO1&3
- Q5. How you can produce genetically modified plants of Orchid having disease resistance and bright blue color by using *Agrobacterium tumefaciens*? The complete methodology should be explained. (5) (CO3&4)