

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2024

B.Tech-5th Semester (BT)

COURSE CODE(CREDITS):21B1WBT531(03)

MAX. MARKS: 25

COURSE NAME: Industrial Plant Tissue Culture

COURSE INSTRUCTORS: Dr Hemant Sood

MAX. TIME: 1Hr 30Min.

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q.No	Question	CO	Marks
Q1	How meristem tip culture would be more effective for the production of pathogen-free <i>Cymbidium sp.</i> ? Why are thermotherapy and chemotherapy required as additional treatments for the same? How you can pursue virus indexing for the detection of virus-free plants?	CO2	5
Q2	How secondary metabolism of plants is utilizable for the production of volatile compounds? Name the contributing biosynthetic pathways for the production of secondary metabolites. How you can classify the production of these compounds?	CO1 &2	5
Q3	How interspecific hybrid of <i>Catharanthus</i> and <i>Podophyllum</i> is produced carrying a good yield of medicinal compounds? Explain the methodology for the production of terpenoids under <i>in vitro</i> conditions.	CO4	5
Q4	Conceptualize the methodology for the production of the genetically modified plant of <i>Datura innoxia</i> having gene DR -1 of disease resistance from <i>Bacillus thuringensis</i> . Do you think the principles of bioethics need to apply before the release of these plants.	CO3	5
Q5	For the development of a new wheat variety named PBW1 has gluten free characteristic? Which genetic modification technique you would like to use for its commercial production and How?	CO4&5	5