

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -I EXAMINATIONS-2024

B.Tech-4 Semester (BT)

COURSE CODE: Cell Biology and Culture Technology (4)

MAX. MARKS: 15

COURSE NAME: 18B11BT411

COURSE Coordinator: Dr Hemant /Dr Udaybanu

MAX. TIME: 1 Hour

*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Marks are indicated against each question in square brackets.*

Q1. Why Plant Tissue Culture be utilized for improving horticulture and forestry plant species?

Cite some examples with reasoning. (CO1) (2.5)

Q2. For *in vitro* rhizogenesis of *Dendrobium* plants, which media components would be required and why? Explain their respective functions in growth and development.(CO3) (2.5)

Q3. How you would establish the shoot cultures from field-grown plants of the Apple rootstock M9 variety? How you can develop clones in a 3-month duration of time?(CO1 &3) (2.5)

Q4. Wedge-shaped and cylindrical lipid molecules spontaneously arrange themselves into different structures in aqueous conditions. Explain with a diagram. (2.5 ) (CO1,2)

Q5. Animals exploit the phospholipid asymmetry of their plasma membranes to distinguish between live and dead cells. justify (2.5 ) (CO2)

Q6. Differentiate prokaryotes and eukaryotes. (2.5 )(CO1)