

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS-2022

B.Tech-4 Semester (BT)

COURSE CODE: Cell Culture Technology

MAX. MARKS: 25

COURSE NAME: 10B11BT412

COURSE CREDITS: 04

MAX. TIME: 1hr30 min

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

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Q1. What do you understand by endosperm culture? How it is applicable in crop improvement programmes? Explain with examples [2 +2] (CO1&2)

Q2. How large scale production of phytochemicals is carried out? Which type of bioreactor you would like to use and why? [2 +2] (CO3)

Q3. Explain the steps for carrying out direct and indirect somatic embryogenesis of Orchids . How you can develop artificial seeds for the same? [2.5+1.5 ] (CO3 &4)

Q4. Materials move in and out of the cell using different mechanisms. Passive transport involves three different methods, explain. [2 Marks] (CO1,2)

Q5. Why is diffusion important to cells and human? Justify. [2 Marks] (CO1,2)

Q6. What is facilitated diffusion? Which types of molecules undergo facilitated diffusion?

[2+2] (CO1,2)

Q7. Based on the solute concentration of the solution outside the cell, three types of condition exist. What types of condition are they? Explain. [3 Marks] (CO1,2)

Q8. Explain the function and importance of sodium potassium pump. [2 Marks] (CO1,2)