

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY WAKNAGHAT

TEST-2

SEMESTER : VII (BT/BTDD)

COURSE TITLE: Industrial Plant Tissue Culture

MAX.MARKS:25

COURSE CODE: 10B1WBT725

TIME: 1 hr 30 mins

Q1. *Swertia chirayita* with disease resistance characteristics were developed by genetic modification. How would you carry out the large scale production of those plantlets by using bioreactor system? Explain the methodology. (4.0)

Q2. What are volatile oils? Explain their classifications with examples and their mode of extractions. (4.0)

Q3. What are Plant Stem cells? How you can classify? What different theories applied for the development of plant stem cells? (4.0)

Q4. How would you quantify the amount of picrosides in different tissues of field grown plants? Explain the complete procedure along with equipment used for the same. (4.0)

Q5. Write about the followings:

- a) Products from the plant stem cells
- b) Terpenes are the important secondary metabolites
- c) Role of CLV and WUS genes in Plant stem cells

(3x3=9)