

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY WAKNAGHAT

T2 Examination

Dr. Hemant Sood

B.Tech Biotechnology (7th Semester)/Ph.D

COURSE: Industrial Plant Tissue Culture /Plant Tissue Culture Technologies MARKS:25

COURSE CODE: 10B1WBT735/18M1WBT132

TIME:1hr30min

Q1. How you can produce secondary metabolites by using biotechnological interventions which are biosynthesized in the roots of *Swertia chiraita*? Explain the methodology for the same and draw diagrams. (5) CO1

Q2. Explain the protocol followed for the development of one crop or plant except Golden rice which has genetic modification for the significant traits. How those modifications would be useful for the betterment of the masses, explain it by referring the research paper? (5) CO4

Q3. What are Flavonoids and how their biosynthesis is carried out? Explain their classifications and benefits in daily life with examples. (5) CO2

Q4. Explain the followings with examples and diagrammatic representations:

- a. How phytoalexins induce defense mechanism in plants?
- b. How structural defense is exhibited by plants? (5) CO2 and CO4

Q5. How volatile oils are classified as per the commercial requirement? What are factors responsible for the good yield and how much extraction procedures have impact for the same? Explain (5) CO3