

**JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT**

**B.Tech (BT/DD).- Semester 4<sup>th</sup> , Test 1 (Feb. 2016)**

**Course Code: 10B11BT412**

**Max. Marks: 15**

**Course Name: Cell Culture Technology**

**Course Credit: 04**

**Max. Time: 1:00 Hr**

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Attempt all questions.

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Q1.How would you like to proceed for the establishment of large scale cell suspension culture of *Catharanthus* sp. ?What are the pros and cons of this technique? (3)

Q2.What do you understand by hardening of tissue culture plantlets? What is the significance of this at commercial scale ? How would you like to carry it out successfully?(3)

Q3. Distinguish the followings:

- a) Zygotic and somatic embryo
- b) Conventional propagation and micropropagation
- c) Direct and indirect embryogenesis (3)

Q4. Write briefly:

- a) cell viability test
- b) Two important discoveries lying in the years ( 1990s and 2000s) in plant biotechnology only
- c) Write the botanical names of two plant species according to latest ICN classification schemes
- d) Role of gibberellins in plant growth and development
- e) Role of ground tissue in plant physiology and morphology (6)