

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: MSC
BRANCH: BIOTECHNOLOGY

SEMESTER : II
SESSION : SP/19

SUBJECT: BT425 PLANT BIOTECHNOLOGY

TIME: 3.00 Hrs.

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Discuss about the various components of plant tissue culture media components. [5]
Q.1(b) Analyze the advantages and limitations of plant tissue culture. [5]
- Q.2(a) Differentiate between organogenesis and embryogenesis. [5]
Q.2(b) How are artificial seeds produced? Discuss the significance of artificial seeds. [5]
- Q.3(a) Compare Somatic hybrids and Cybrids. Give an outline of the protocol for hybrid selection through Biochemical methods. [5]
Q.3(b) How will you isolate protoplast from leaf tissue? How do you check the protoplast viability? [5]
- Q.4(a) Compare RAPD and AFLP molecular markers. [5]
Q.4(b) Explain briefly DNA Microarray technique. [5]
- Q.5(a) Comment upon advantages of molecular farming. Justify "Plants are considered as the suitable expression vectors for transgenic development for production of biopharmaceuticals". [5]
Q.5(b) Discuss the social, ethical and health concerns arose after release of GMOs. What is terminator technology? [5]

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