



SE-3702

M. Sc. Biotechnology (Sem. VI) Examination

April / May – 2011

IBT-602 : Plant Biotechnology

Time : 3 Hours]

[Total Marks : 70

Instructions :

नीचे दशावेक निशानीवाणी विगतो उत्तरवडी पर अवश्य क्षभवी.
Fillup strictly the details of signs on your answer book.

Name of the Examination :
M. SC. BIOTECHNOLOGY (SEM. 6)

Name of the Subject :
IBT-602 : Plant Biotechnology

Subject Code No. : 3 7 0 2 Section No. (1, 2.....) : NIL

Seat No. :

Student's Signature

1. All questions are compulsory
2. Make neat diagrams where ever necessary
3. Marks for each question are mentioned against the question

Q1 Answer any two of the following :

(18)

- a) Discuss the regulation of chloroplast gene expression. Explain promiscuous DNA with example.
- b) Discuss the salient features of chloroplast and mitochondrial genome.
- c) Describe post transcriptional and post translational modifications in plants

Q2 Answer any three of the following:

(18)

- a) Describe the essential components of plant tissue culture media.
- b) Discuss in detail sequence of steps involved in aseptic culture of plant tissue
- c) What are the natural and artificial auxins and cytokinins commonly used in plant tissue culture media? Explain with example the role of antiauxin and antioxidant in the tissue culture media.
- d) Discuss in detail precautions to be taken to avoid microbial contamination in plant tissue culture

Q3 Answer **any two** of the following:

(18)

- a) Discuss the application of embryo culture in embryo rescue. Write a note on other applications of embryo culture.
- b) What are the significances of triploid plants? Discuss in detail factors affecting triploid plant production in tissue culture.
- c) Describe the stages of micropropagation. Discuss the advantages and limitations of micropropagation.

Q4. Answer **any two** of the following:

(16)

- a) Write a note on important secondary metabolite isolated from plants and their applications.
 - b) Discuss the uses and applications of synthetic seeds.
 - c) Describe different methods of cryopreservation. Add a note on the difficulties of cryopreservation
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