



SE-3723

M. Sc. Biotechnology (Sem. VIII) Examination

April / May – 2011

IBT-803 : Agriculture Biotechnology

Time : 3 Hours]

[Total Marks : 70

Instructions :

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

Name of the Examination :
M. SC. BIOTECHNOLOGY (SEM. 8)

Name of the Subject :
IBT-803 : Agriculture Biotechnology

Subject Code No. : 3 7 2 3 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) Describe different methods for induction, isolation and applications of somaclonal variations.
- b) Discuss in detail different methods for protoplast isolation and culture.
- c) Describe the methods for selection of hybrid cells. Discuss the application of somatic hybridization technique in plant improvement.

Q2 Answer any two of the following:

(18)

- a) Discuss in detail role of viral vectors for production of transgenic plants.
- b) Explain in detail *Agrobacterium* mediated gene transfer. Discuss the advantages and disadvantages of the method.
- c) Draw the genetic map of Ti plasmid. Diagrammatically show the difference between octopine and nopaline Ti plasmid.

Q3 Describe **any three** of the following: (18)

- a) Chilling and freezing as stress to plants.
- b) What are phytoalexins? Describe the manipulation of disease resistance genes.
- c) Development of draught resistant crops
- d) AFLP as a molecular marker.

Q4 Answer **any two** of the following: (16)

- a) What is molecular farming? Differentiate between vaccine and edible vaccine.
 - b) What are molecular markers? Describe any two PCR based techniques used in agriculture biotechnology.
 - c) Discuss the risk and environmental impact of Genetically modified organisms.
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