



**R-3927-28**

**M. Sc. (Sem. VIII) (Biotechnology) (Reg.) Examination**

**May / June – 2010**

**IBT-803 : Agriculture Biotechnology**

Time : 3 Hours]

[Total Marks : 70

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**Instructions :**

(1)

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

Name of the Examination :  
**M. Sc. (Sem. 8) (Biotechnology)**

Name of the Subject :  
**IBT-803 : Agriculture Biotechnology**

Subject Code No. : **3** **9** **2** **7** Section No. (1, 2,.....) : **1**

Seat No. :

Student's Signature

(2) Figures to the right indicate full marks of the question.

(3) Draw neat and labelled diagrams whenever necessary.

(4) Both sections must be written in **separate** answer books.

1 Give a detailed description of the process of protoplast fusion. 10

**OR**

1 Explain the following : 10

(a) Vectors

(b) Variation and mutation

2 Discuss the origin of somaclonal variation. What are different methods for isolating somaclonal variants? 10

**OR**

2 Differentiate : 10

(a) Hybrid and Cybrid

(b) Plasmid and Cosmid

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**1**

**[Contd...**

- 3 Discuss the advantages and disadvantages of various gene transfer technology. 10

OR

- 3 Explain : 10
- (a) Importance of transgenic forms
- (b) Advantages of somatic hybridization
- 4 Write a brief note on (any one) 5
- (a) *Agrobacterium tumefaciens* as a remarkable vector.
- (b) Confirmation of transgenic forms.

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**Instructions :**

(1)

नीचे दशांशके निशानीवाणी विगतो उत्तरवडी पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="M. Sc. (Sem. 8) (Biotechnology)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="IBT-803 : Agriculture Biotechnology"/>	<input type="text"/>
Subject Code No. : <input type="text" value="3"/> <input type="text" value="9"/> <input type="text" value="2"/> <input type="text" value="8"/>	<input type="text"/>
Section No. (1, 2,.....) : <input type="text" value="2"/>	<input type="text"/>
	Student's Signature

- (2) Figures to the right indicate full marks of the question.
- (3) Draw neat and labelled diagrams whenever necessary.
- (4) Both sections must be written in **separate** answer books.
- 5 Define molecular markers. Explain their role in plant breeding. 10

OR

- 5 Explain the following : 10
- (a) The role of transgenic plant in phytopharmaceuticals.
- (b) Importance of resistance in plants.
- 6 What is secondary metabolite? Write in details about the production of pharmaceutical proteins by molecular farming. 10

OR

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[Contd...

- 6** Discuss : **10**  
(a) The risk and environmental issues related with GMOs.  
(b) The role of culture filtrates for fungal resistance.

- 7** What are RAPD and AFLP? Discuss them in detail **10**  
with advantages and disadvantages with their applications.

**OR**

- 7** Discuss : **10**  
(a) Advantages and disadvantages of Bt cotton and Bt brinjal.  
(b) Disease free and disease resistance plants and their importance.

- 8** Write a short note on : (any **one**) **5**  
(a) Methods for generating herbicide resistance  
(b) Vaccine and edible vaccine  
(c) Bacterial and viral resistant plants.
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