

Total No. of Questions :8]

**P2240**

SEAT No. :

[Total No. of Pages :2

**[5332] - 46**

**M.Sc.**

**BIOTECHNOLOGY**

**BT - 44C : Agricultural Biotechnology**

**(2008 Pattern) (Semester - IV)**

*Time : 3 Hours]*

*[Max. Marks :60*

*Instructions to the candidates:*

- 1) Attempt a total of five questions selecting atleast two questions from each section*
- 2) Answer to the sections must be written on separate answer books.*
- 3) Neat diagram must be drawn wherever necessary.*
- 4) Figures to the right indicate full marks.*

**SECTION - I**

**Q1)** Write notes on any two: **[12]**

- a) Polyembryony.
- b) Embryo rescue technique.
- c) Somaclonal variation.

**Q2)** What are triploids? write methods for the production of triploids in agriculture.  
Add notes on their importance. **[12]**

**Q3)** Explain multiplication of elite varieties of cereals by micropropagation with suitable examples. **[12]**

**Q4)** Write in detail the methods of homogygous plant production by another culture.  
Write its applications. **[12]**

**P.T.O.**

## **SECTION - II**

**Q5)** Write notes on any two: [12]

- a) Metabolic engineering.
- b) Bio fertilizers.
- c) Virus indexing.

**Q6)** Explain with the help of suitable example herbicide resistant transgenic crop development in agriculture. [12]

**Q7)** Write the role of molecular markers for crop improvement giving example for biotic stress. [12]

**Q8)** What are bioreactor? Explain how they can be used for large scale production of plants. [12]

