#### Code No.: B03/308

(C) Explain, how edible vaccine are produced? 4

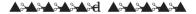
Or

Write note on Biodegradable plastic.

(D) Explain in detail mechanism of production of plant secondary metabolites with special reference to phenyl propanoid pathway.
12

Or

What is flavour savour tomato? Explain, how it is developed using techniques of plant biotechnology.



Roll No	Total No. of Sections: 4
	Total No. of Printed Pages: 4

Code No.: B03/308

## **III Semester Examination**

# M.Sc. BIOTECHNOLOGY

### Paper III

[Plant Biotechnology]

Time : Three Hours ] [ Maximum Marks : 80 [ Min. Passing Marks : 16

Note: Part A and B of each question in each unit consists of Very Short Answer Type Questions which are to be answered in one or two sentences. Part C (Short Answer Type) of each question will be answered 200-250 words. Part D (Long Answer Type) of each question should be answered within the word limit 400-450.

#### Unit-I

- 1. (A) Define totipotency of plant cell. 2
  - (B) Define De-differentiation and Re-differentiation.
  - (C) Explain shoot tip culture technique.

2

4

## Code No.: B03/308

(D) What is somatic embryogenesis in plant tissue culture? Explain different factors responsible in S.E. 12

Or

Explain in detail callus induction and cell suspension culture technology. What are their applications?

#### Unit-II

2. (A) What are Ti and Ri plasmids?

(B) What is somatic hybridization?

(C) Explain germplam conservation. 4

Or

Explain the mechanism of T-DNA transfer in plants.

(D) Explain anther culture technique and its application in plants. 12

Or

Describe protoplast isolation, culture and fusion.

Code No.: B03/308

Unit-III

**3.** (A) What is Bt toxin?

2

(B) What is AFPs?

2

(C) What are transgenic plants? Give their significance.

Or

Explain how disease resistant transgenic plants are developed?

(D) Explain development of herbicide resistance transgenic plants. 12

Or

Describe how virus resistance transgenic plants are developed?

## Unit-IV

**4.** (A) What is biodegradation?

2

(B) What are vectors for chloroplast transformation?

[ 2 ]