

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. 2
- (C) Explain shoot tip culture technique. 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 ? **2**
(B) What is somatic hybridization ? **2**
(C) Explain germplasm 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. **4**

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**