

D (Printed Pages 3)  
(20721) Roll No.  
B.Sc.(Bio-tech.)-III Year

**NS-3473(CV-II)**

**B.Sc. (Biotechnology) Examination,**

**June - 2021**

**PLANT BIO-TECHNOLOGY**

**(B-301)**

**(B.Sc. Biotech.)**

*Time : 1½ Hours ] [Maximum Marks : 75*

**Note :** Attempt any **two** questions, out of **ten** questions.

1. Describe the process of meristem culture. Mention the applications of meristem culture.
2. Write notes on the following:
  - (i) Procedure of embryo culture
  - (ii) Production of haploid

**P.T.O.**

3. (a) What are the growth regulators and how they are useful in plant tissue culture media.  
(b) Describe the multi-level regulatory framework for GM crops in India.
4. Describe the methods of isolation and fusion of protoplast. Explain their applications.
5. Describe the Agrobacterium tumefaciens mediated genetic transformation in plants.
6. Explain the procedure for obtaining somaclonal variations. Mention their applications.
7. Write notes on the following:
  - (i) Biotransformation
  - (ii) Elicitors

**NS-3473(CV-II)/2**

8. Discuss about the following:
  - (i) Physical gene transfer methods
  - (ii) Edible vaccines
9. Write notes on the following:
  - (i) Overy culture
  - (ii) In vitro pollination
10. Explain the practical applications of transgenic plants.