(20518) Roll No. .....

B. Sc. (Biotech.)-III Year

NS-3473

B. Sc. (Biotechnology) Examination, May 2018

Plant Biotechnology

(B-301)

(New)

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

Note : Attempt any *five* questions. All questions carry equal marks.

1. What are cybrids and how can they be produced ? What is their importance in crop improvement programmes ? 15

2. (a) What are the current concerns for the GM crops and how are the GM crops regulated ? 7½
   (b) What are the growth regulators and what is their use in plant tissue culture media ? 7½

3. Write short notes on the following, supporting your answer with relevant examples : 5×3
   (a) Edible vaccines
   (b) Immobilized cells
   (c) Elicitors.

4. Write in detail about the physical gene transfer methods for plant transformation. Mention merits and demerits of each method. 15

5. Discuss the various methods for protoplast fusion, mentioning their merits and demerits. 15

6. What are the various methods of haploid production ? Mention their applications. 15

7. What are somaclonal variations and how can they be induced ? What are their applications in crop improvement. 15

8. What are the practical applications of transgenic plants ? Give adequate examples. 15

9. Write detailed notes on the following : 7½+7½
   (a) Ovary culture
   (b) Embryo culture.
   Mention their application.

10. What is micropropagation and how can it be used for multiplication of elite plants ? Mention the various advantages and disadvantages of micropropagation. 15