

S-46

Total Pages : 3

Roll No.

MBOT-609

Biotechnology

M.Sc. Botany (MSCBOT)-20

4th Semester Examination, 2022 (Dec.)

Time : 2 Hours]

[Max. Marks : 35

Note : This paper is of Thirty Five (35) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION-A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Nine and Half (9½) marks each. Learners are required to answer any Two (02) questions only.

(2×9½=19)

1. What is plant tissue culture? Describe the methods of plant tissue culture.

2. Write an essay on organogenesis and its application.
3. What is cryopreservation? Describe the method of cryopreservation.
4. What is Bt technology? Give comprehensive account of Bt genes, mechanism of protein action with suitable examples.
5. Write short notes on the following :
 - (a) Type of promoter.
 - (b) Embryo rescue.
 - (c) Intellectual Property Rights (IPR).

SECTION-B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Four (04) marks each. Learners are required to answer any Four (04) questions only. (4×4=16)

1. What is genomics? Give a brief account of genome sequencing project.
2. What is proteomics? Write different type of proteomics studied by you.

3. Write short notes on the following :
 - (a) SNPs.
 - (b) DNA chips.
 - (c) Somaclonal variants.

 4. What is golden rice? How was it created? Write the benefits of using Golden rice.

 5. What are Bio-safety? How are they are useful in our environment ?

 6. Write Short notes on the following :
 - (a) Somatic Hybridization.
 - (b) GM plants.

 7. Discuss virus resistant transgenic plants and their benefits.

 8. What is protoplast culture? Describe it.
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