

Total Pages : 3

Roll. No. :

Examination Session June-2022

(Fourth Semester)

MBOT-609

BOTANY (MSCBOT)

[Biotechnology]

Time : 2 Hours]

[Max. Marks : 40

Note : This paper is of Forty (40) marks divided into two (02) Section A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION—A

(Long-Answer-Type Questions)

MBOT-609/3

(1)

[P.T.O.]

Note : Section 'A' contains five (05) long-answer-type questions of Ten (10) marks each. Learners are required to answer any two (02) questions only. $2 \times 10 = 20$

1. Discuss the factors affecting *in-vitro* morphogenesis in plants.
2. Explain the various methods of *in-vitro* conservation of plants.
3. Discuss the methods of isolation of protoplasts in detail.
4. What do you understand by transgenic plants ? Write a detailed note on the achievements and advantages of transgenic plants.
5. Write a detailed note on secondary metabolites of plants.

SECTION—B

(Short-Answer-Type Questions)

Note : Section 'B' contains eight (08) short-answer-type questions of Five (05) marks each. Learners are required to answer any four (04) questions only. $4 \times 5 = 20$

1. Write a short note on totipotency.
2. Briefly discuss the production and application of synthetic seeds.
3. Write briefly about the merits and demerits of anther and pollen culture.
4. What is cryopreservation ? Why it is important ?
5. Briefly explain the somatic hybridization.
6. Highlight the applications of proteomics.
7. What do you understand by intellectual property rights (IPR) ? Highlight various branches of IPR.
8. Discuss the various techniques for analysis of secondary metabolites.
