

PE-646

M.Sc. BIOTECHNOLOGY (SECOND SEMESTER)

Examination, June 2022

Paper-III

PLANT BIOTECHNOLOGY

Time: Three Hours]

[Maximum Marks: 80

[Minimum Pass Marks: 29

नोट: दोनों खण्डों से निर्देशानुसार उत्तर दीजिए। प्रश्नों के अंक उनके दाहिनी ओर अंकित हैं।

Note: Answer from both the sections as directed. The figures in the right-hand margin indicate marks.

Section-A

1. Answer the following questions:-

1x10 = 10

- (a) Which part of the plant is used as explant for production of virus free plants?
- (b) A high auxin/cytokinin ration induces whether shoot or root regeneration?
- (c) Which chemical is most widely used for protoplast fusion?
- (d) Define embryo rescue.
- (e) Define electroporation.
- (f) In the context of Bt crops, what is the full form of Bt?
- (g) Which bacterium carries Ri plasmid?
- (h) Write full form of RFLP.
- (i) Write full form of AFLP.
- (j) Write full form of STS.

2. Answer the following questions:-

2x5 = 10

- (a) What is organogenesis?
- (b) Write short notes on cryopreservation.
- (c) Give brief description of 35S promoter.
- (d) Write short notes on microinjection.
- (e) Write short notes on SSCP analysis.

Section-B

Answer the following questions:-

15x4 = 60

Unit-I

3. Write a detail note on suspension culture.

Or

Give a detailed description of callus culture.

Unit-II

4. Give an account of pollen culture.

Or

Give an account of ovary culture.

Unit-III

5. Describe chloroplast transformation.

Or

Write a detail note on male sterile lines.

Unit-IV

6. Write an essay on edible vaccine.

Or

Write an essay on therapeutic proteins.