Roll No : .....

Total No. of Questions : **11**] [Total No. of Printed Pages : **3**

SP–660

M.Sc. (Final) Examination, 2021

BOTANY

Paper - VII (d)

(Advanced Plant Biotechnology-I)

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

Section–A **(Marks : 2 × 10 = 20)**

Note :– Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

(खण्ड–अ) **(अंक : 2 × 10 = 20)**

नोट :– सभी **दस** प्रश्नों के उत्तर दीजिए (उत्तर-सीमा **50** शब्द)। प्रत्येक प्रश्न **2** अंक का है।

Section–B **(Marks : 5 × 5 = 25)**

Note :– Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **5** marks.

(खण्ड–ब) **(अंक : 5 × 5 = 25)**

नोट :– सभी **पाँच** प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न में विकल्प का चयन कीजिए (उत्तर-सीमा **200** शब्द)। प्रत्येक प्रश्न **5** अंक का है।

Section–C **(Marks : 10 × 3 = 30)**

Note :– Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

(खण्ड–स) **(अंक : 10 × 3 = 30)**

नोट :– पाँच में से किन्हीं **तीन** प्रश्नों के उत्तर दीजिए (उत्तर-सीमा **500** शब्द)। प्रत्येक प्रश्न **10** अंक का है।

Section–A

2 each

1. (i) Define Redifferentiation.

   (ii) What is Caulogenesis ?

   (iii) What is Auxotrophic Mutants ?

   (iv) Define Cybrid.

   (v) Define Somaclonal variation.

   (vi) What is B5 and N6 medium ?

   (vii) What is torpedo stage ?

   (viii) What is Barstar ?

   (ix) Which factor affect the somatic embryogenesis ?

   (x) Give the role of enzyme in protoplast isolation.

Section–B

5 each

2. Explain briefly organogenesis.

Or

Explain briefly the historical improvement of plant tissue culture medium.

3. Describe Haploid Culture.

Or

Describe commercial feasibility of micropropagation.

4. What is Hybrid Embryo Rescue Technique.

Or

Explain production of Rare Plants.

5. Explain somatic hybridization technique.

Or

Describe auxotrophic mutants.

6. Describe somaclonal variation.

Or

Explain role of plant biotechnology in Horticulture.

Section–C

10 each

7. Give a detailed account on historical improvement in plant tissue culture.
8. Describe anther pollen culture and their uses.
9. Describe Somatic embryogenesis.
10. Explain male sterility with example.
11. Describe Protoplast Production.