

Roll No :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

SP-664

M.Sc. (Final) Examination, 2021

BOTANY

Paper - VIII (d)

(Advanced Plant Biotechnology-II)

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।

BI-305

(1)

SP-664 P.T.O.

Section–A

2 each

1. (i) What is Recombinant DNA ?
- (ii) What are Binary vector ?
- (iii) What is Chimeric DNA ?
- (iv) Define Secondary Metabolites.
- (v) Define IPRs.
- (vi) What are Polylinkers ?
- (vii) Full name of YAC.
- (viii) What is PFGE ?
- (ix) Who discover PCR ?
- (x) What is gene tagging ?

Section–B

5 each

2. Brief account of BAC.

Or

How phage vectors differs from plasmid vectors in utility ?

3. Write about ballistic methods used for gene transfer.

Or

Crown gall diseases.

4. Describe techniques of southern blotting.

Or

Different methods for preparing chimeric DNA.

5. What is male sterility and its types ?

Or

Write technique which is used for single cell isolation.

6. Describe uses of cloned genes in agriculture with examples.

Or

Write socio-economic aspects of Biotechnology.

Section–C

10 each

7. An explanatory note on genetic engineering and enzymes which are used in it.
8. Write notes of the following :
 - (a) Ti-plasmids
 - (b) Electroporation
9. Transcription and translation in Eukaryotes.
10. Nitrogen fixing genes and their Manipulation.
11. What is Intellectual Property and what rights are available to protect it ?