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NY—155—2023

FACULTY OF SCIENCE

M.Sc. (Second Year) (Third Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(New/CBCS Pattern)

BIOTECHNOLOGY

BT—XI

(Plant Biotechnology)

(Saturday, 9-12-2023)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) All questions carry equal marks.

(iii) Draw well labelled diagrams wherever necessary.

1. Describe in detail technique of androgenesis for the production of haploid plants. Explain various factors that affect androgenesis. 15

Or

What is somatic hybridization ? Explain in detail technique of somatic hybridization and add a note on hybridity tests.

2. Describe in detail various approaches of virus resistance in transgenic plants. 15

Or

Explain in detail terminator gene technology and discuss ecological risk assessment of G.M. crops.

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(2)

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3. Describe in detail production technology of cyanobacteria as biofertilizers.

15

Or

Explain in detail production technology of plant growth promoting rhizobacteria.

4. Give the classification of plant diseases based on symptoms produced by pathogens with a suitable example.

15

Or

What is Marker Assisted Selection ? Explain in brief various markers used in M.A.S.

5. Write short notes on any *three* of the following :

3×5=15

- (a) Integrated pest management
- (b) Embryo culture
- (c) Phosphate solubilizing microorganisms
- (d) Herbicide resistance
- (e) Conventional pesticides.

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