

Total No. of Questions : 3]

SEAT No. :

P3115

[5036]-204

[Total No. of Pages : 1

M.Sc.

BIOTECHNOLOGY

BT-204: Plant Biotechnology

(2013 Pattern) (Semester - II) (Credit System)

Time : 3 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*

Q1) Answer any four questions:

[4 × 5 = 20]

- a) Discuss the advantages of micropropagation over conventional propagation methods.
- b) Compare and contrast vertical and horizontal gene transfer.
- c) Explain with diagram the procedure for production of artificial seeds.
- d) Discuss the role of biotechnology in fungal strain improvement.
- e) Write a short note on in vitro androgenesis.
- f) Justify that agrobacterium is a natural genetic engineer.

Q2) Answer any four questions

[4 × 5 = 20]

- a) Define somatic embryogenesis. Enlist various factors affecting it.
- b) Comment on molecular farming.
- c) Write a short note on production of biopesticides.
- d) Discuss biotechnological approaches for yield improvement in economically important algae.
- e) Discuss transgenic approaches for production of plant based neutraceuticals.
- f) Discuss briefly the methods available for production of cybrids.

Q3) Answer any one question

[1 × 10 = 10]

- a) Discuss in detail plant metabolic engineering approaches for conferring abiotic stress tolerance.
- b) Give a detailed account on clonal propagation of forest trees.

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