

FACULTY OF SCIENCE

B.Sc. V-Semester (CBCS) Examination, November / December 2019

Subject: Bio-Technology

Plant Biotechnology

Paper – VI – A (DSE E – 1)

Time: 3 Hours

Max.Marks: 60

PART – A (5x3 = 15 Marks)

[Short Answer Type]

Note: Answer any five of the following questions. Each question carries equal marks.

- 1 Differentiate dedifferentiation and redifferentiation
- 2/ What are the micro nutrients used in plant tissue culture media?
- 3/ What is meristem culture? How can it be useful in production of virus free plants?
- 4 Give a brief note on batch and continuous cell suspension cultures
- 5/ How are glyphosate tolerant plants produced?
- 6/ Explain the use of transgenic plants for production of biodegradable plastics
- 7 Define encapsulation. What are the encapsulating agents used in production of synthetic seeds?
- 8/ How are explants sterilized?

PART – B (3x15 = 45 Marks)

[Essay Answer Type]

Note: Answer all questions from the following.

- 9 a) Describe the processes organogenesis and somatic embryogenesis.
OR
b) Write an account on induction of callus cultures.
- 10 a) What is micropropagation? Explain the stages of micropropagation and its applications.
OR
b) How can protoplasts be useful for production of somatic hybrids and cybrids? Discuss.
- 11 a) Describe the production of transgenic plants for viral resistance.
OR
b) How can transgenic plants be enhanced for vitamin A and E nutritive values? Discuss.
