

No. of Printed Pages : 03

Roll No.

661

B. Tech. EXAMINATION, May 2018

(Sixth Semester)

(Old Scheme) (Re-appear Only)

(BT)

BT304

PLANT BIOTECHNOLOGY

Time : 3 Hours]

[Maximum Marks : 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt any *Five* questions. All questions carry equal marks.

1. (a) Which are the various types of culture techniques in plant biotechnology ? **10**

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- (b) Discuss major developments in plant tissue culture which has led to its popularization over traditional methods. **10**
2. (a) Define Micropropagation. Describe its stages and major advantages. **15**
- (b) Differentiate between direct and indirect organogenesis. **5**
3. (a) Discuss and diagrammatically illustrate another and microspore culture. What are the factors that affect androgenesis ? **15**
- (b) Explain chromosome elimination Technique. **5**
4. (a) Describe various approaches for protoplast fusion and their culture techniques. **15**
- (b) How do somaclonal variations differ from gametoclonal variations ? **5**

5. Write short notes on the following :

- (a) Cybrids

- (b) Enzymes for isolation of protoplasts
- (c) Bio-control of Pathogens
- (d) Nitrogen fixation. **5×4=20**

6. (a) Discuss *Agrobacterium* mediated gene transformation in detail. **15**
- (b) Why plant nuclear gene has been called as a discontinuous gene ? **5**
7. (a) What are the differences between selectable and scorable markers ? **10**
- (b) Write about transgenics for improved quality and edible vaccines. **10**
8. (a) Describe the strategies employed for development of transgenic plants conferring resistance against insects. **15**
- (b) Describe the technique of Terminator Seed Technology. **5**