

No. of Printed Pages : 03

Roll No. ....

**CC-222**

**M. Tech. EXAMINATION, Dec. 2017**

(Third Semester)

(Main & Re-appear)

(BT)

BT-603-B

PLANT MOLECULAR BIOLOGY

*Time : 3 Hours]*

*[Maximum Marks : 75*

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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.

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**Note :** Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

(3-38/13)M-CC-222

**P.T.O.**

### **Unit I**

1. Discuss genetic interaction between nuclears, chloroplast and mitochondria along with general organisation. **15**
2. What are secondary metabolites ? How are these produced ? Discuss production of pharmaceutically important compounds. **15**

### **Unit II**

3. (a) Differentiate between ReLP and AFLP.  
(b) Dualitative and Quantitative traits.  
**7½×2=15**
4. Describe the importance of Molecular Mapping and Marker Assisted selection for crop plants. **15**

### **Unit III**

5. Discuss the importance and advantages of Agrobacterium mediated genetic transformation method over all other methods for development of transgenics. **15**

6. Describe selectable and screenable markers. How is characterization of transgenics carried out ? **15**

### **Unit IV**

7. What genetic modifications have been carried out for biotic stress resistance ? Explain in detail. **15**
8. Describe development of Flavr Savr or Golden Rice along with the sources of genes and mechanism of its biosynthetic pathway. **15**