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**DD-334**

**M. Sc. EXAMINATION, May 2018**

(Fourth Semester)

(Main & Re-appear)

BIOTECHNOLOGY

BT608MS

Bioethics, Biosafety and IPR

*Time : 3 Hours]*

*[Maximum Marks : 100*

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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.

(2-24/8) M-DD-334

P.T.O.

### **Unit I**

1. What are biotechnology and biomedical research parameters that are covered under-bioethical issues. Cite specific examples to support your answer. **20**
2. Discuss with examples the modification of plant, animal and micro-organisms with improved parameters be produced through biotechnology. **20**

### **Unit II**

3. What are transgenic crops ? Discuss their development and environmental impacts in detail. **20**
4. What are Bioremediation ? Discuss their environmental impact and degradation methods of pesticides, herbicide and man-made chemicals from the environment. **20**

### **Unit III**

5. Discuss in detail about the legal implications of patents and trademarks. Cite case studies to support your answer. **20**
6. What do you understand by plant variety development by plant breeder and farmers ? Describe with their ethical rights on new variety and limitations, if any. **20**

### **Unit IV**

7. Discuss in detail the roles, development and limitations of institutional biosafety committee for new product or process development. **20**
8. Describe the following :
  - (a) Containment wrt infectious agents
  - (b) Cartagena protocol of biosafety issues
  - (c) Issues related to trade-between two-countries. **5+10+5=20**