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## **MSCBOT-604**

**Molecular Biology and Biotechnology**

M.Sc. Botany (MSCBOT)

3rd Semester Examination, 2023 (June)

**Time : 2 Hours]**

**Max. Marks : 70**

**Note :** This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answer to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

### **SECTION–A**

**(Long Answer Type Questions)**

**Note :** Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

1. Citing suitable examples explain applications of biotechnology in agriculture, horticulture and forestry?

2. Mention about different methods of gene transfer.
3. With help of suitable diagram explain DNA structure of Watson and crick model.
4. Describe about different features of Genetic code.
5. Discuss about different types of RNA.

### **SECTION-B**

#### **(Short Answer Type Questions)**

**Note :** Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)

1. What do you understand by food safety issues of GM crops?
2. Write short notes on bacterial DNA.
3. Briefly describe about the technique of cryopreservation.
4. Define the following terms: PATENT, COPYRIGHT, TRADEMARK, TRIPPS.
5. What are post transcriptional modification?

6. In your own words explain meaning of "regulation of gene expression".
  7. Enlist different applications of plant tissue culture technology.
  8. Describe about protein sorting.
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