



**MJ-516**

**M.Sc. (Botany)**

**2nd Semester Examination, Jan.-June, 2022**

**Paper - II**

**Molecular Biology**

**Time : Three Hours]**

**[Maximum Marks : 80**

---

**Note : Answer all questions. All questions carry equal marks.**

---

**1. Write short notes on the following :**

- (a) C Value Paradox**
- (b) Repressor**
- (c) Z form DNA**
- (b) Cistron, Recon and Muton**

**Unit-I**

**2. What is Central Dogma? Describe transposition mechanism in Prokaryotes.**

**OR**

(2)

Write notes on the following :

- (a) RNA polymerase enzymes
- (b) Various steps of DNA replication

**Unit-II**

3. Describe the DNA restriction mapping concept and techniques.

**OR**

Write short notes on the following :

- (a) Flow cytometry
- (b) Restriction enzymes

**Unit-III**

4. What is Protein Sorting? Explain protein targeting to organelles.

**OR**

Write short notes on the following :

- (a) RNA splicing
- (b) Cis-trans test

**Unit-IV**

5. Describe transposable element in Prokaryotes.

**OR**

(3)

Write short notes on the following :

- (a) Induced mutation
- (b) Inherited Human diseases