



**M.Sc. III Semester Degree Examination, April/May - 2024**

**BOTANY**

**DSC - 10 Molecular Biology**

**(NEP)**

Time : 3 Hours

Maximum Marks : 70

**Note :** Answer **any five** of the following questions with question **No. 1** is **Compulsory**. Each question carries **equal** marks.

1. Explain in detail about the fine structure of prokaryotic and eukaryotic gene structure. **14**
2. (A) Describe the regulation of lactose metabolism in E.coli. **7**  
(B) Enumerate the Rho-dependent and Rho-independent methods of transcription in prokaryotes. **7**
3. Give a detailed account on Ac-Ds elements in Maize and P-elements in Drosophila. **14**
4. Enumerate the different mechanisms of natural and acquired immunity. **14**
5. Describe the various mechanisms of chemical mutagens. **14**
6. Give a brief account on :  
(A) Mitochondrial genetic system **7**  
(B) Ribozymes **7**
7. Write short notes on :  
(A) Composite and non composite transposons **7**  
(B) Tumour suppressor genes **7**
8. Give a general account on :  
(A) Point mutation **7**  
(B) mRNA structure **7**

