This question paper contains **2** printed pages]

NY—102—2023

FACULTY OF SCIENCE

M.Sc. (Second Year) (Third Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(CBCS/New Pattern)

BOTANY

Paper XII

(Molecular Biology and Biostatistics)

(Thursday, 7-12-2023) **Time : 2.00 p.m. to 5.00 p.m.**

Time—Three Hours *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) *All* questions carry equal marks.

(*iii*) Draw well labelled diagrams wherever necessary.

1. Describe in detail structure and physico-chemical properties of Nucleic acids. 15

Or

Explain prokaryotic transcription.

2. Give a detailed account of enzymes of DNA replication and their role. 15

Or

Explain eukaryotic gene regulation.

P.T.O.

3. Elucidate post-transcriptional modifications. 15

Or

Give a detailed account of genetic transformation, conjugation and transduction in Bacteria.

4. Elucidate difference between parametric and non-parametric statistics. 15

Or

Explain in detail probability distribution and its types.

5. Write short notes on any *three* out of four : 15

(*a*) RNA polymerase

(*b*) Enhancers

(*c*) Transposons

(*d*) Hypothesis tests.