

**Third Semester M. Sc. Part - II (CBCS)
Examination**

MICROBIOLOGY

**Paper - IX
Molecular Biology**

P. Pages : 2

Time : Three Hours]

[Max. Marks : 80

Note : All questions are compulsory and carry equal marks.

1. Explain in detail various functions assigned to RNA with respect to their types.

OR

Differentiate eukaryotic and prokaryotic chromosomes at structural levels. Add notes on forms of DNA. 16

2. Explain effects of DNA damage and various DNA repair mechanisms.

OR

Elaborate in detail steps of DNA replication in eukaryotes. 16

3. Explain following in brief :—

(i) Characteristics of genetic code. 8

(ii) Sex mediated bacterial DNA transfer. 8

OR

(a) Split genes. 8

(b) Frame shift mutation. 8

4. Write notes on :—

(a) Protein targetting. 8

(b) Spliceosome. 8

OR

(i) Elongation steps in translation. 8

(ii) Components in eukaryotic transcription. 8

5. Elaborate in detail prokaryotic gene regulation.

OR

Explain regulation of gene in eukaryotes at translational level. 16

