



বিদ্যাসাগর বিশ্ববিদ্যালয়
VIDYASAGAR UNIVERSITY
Question Paper

B.Sc. Honours Examinations 2022

(Under CBCS Pattern)

Semester - IV

Subject : MICROBIOLOGY

Paper : C 8-T

Microbial Genetics

Full Marks : 40

Time : 2 Hours

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Group-A

Answer any **four** of the following questions :

5×4=20

1. Write the basic difference between the genome organization of *E. coli* and *Saccharomyces*. 5
2. What is mutagen? Give example of one physical and one chemical mutagen and their mode of action. 1+(2+2)
3. 'During conjugation between Hfr and F⁻ cell, the recipient F⁻ cell rarely get complete F-plasmid'.—Justify. 5
4. Write note on : Ti plasmid and their role. 5

P.T.O.

5. Differentiate Replicative and Non replicative transposition. 5

6. Write short note on Mutator genes. 5

Group-B

Answer any *two* of the following questions : 10×2=20

1. Write note on structure and functions of different Bacterial transposons. 10

2. Describe the process of generalized transduction with suitable diagram. What is pseudovirion? 8+2

3. What is competence factor? Briefly describe natural competence and its importance in genetic exchange. 2+8

4. Describe Ames test with suitable diagram. Why this test is performed? 8+2
