

*Sumit*  
*Chand*  
*4-10*

Total Pages - 3

B.Sc. RNLKWC-/C8T/22

2022

**MICROBIOLOGY**

[Honours]

**B.Sc. Fourth Semester End Examination - 2022**

**PAPER - C8T**

**Full Marks : 40**

**Time : 2 hours**

*The figures in the right-hand margin indicate marks.  
Candidates are required to give their answers in their own  
words as far as practicable.*

*Illustrate the answers wherever necessary.*

**Group - A**

**Answer any five question from the following : 5×2=10**

1. What is P-element? 2
2. Define pseudoallele. 2
3. What are LFT and HFT lysates? 1+1
4. Write down the differences between generalized and specialized transduction. 2

*(Turn Over)*

( 2 )

5. Write down the differences between missense and nonsense mutation. 1+1
6. Define 2u plasmid? 2
7. Define Penetrance and Expressivity. 1+1
8. What is retrotransposon? 2

**Group - B**

Answer any four questions :- 4×5=20

1. Write a short note on nonsense mutation. 5
2. Schematically classify different types of plasmids with one characteristic each. What is multiple allele? 4+1
3. Describe the mechanism of specialized transduction process. 5
4. Write the replica plating method for the isolation of nutritional auxotrophs. 5
5. a) Write the role of 5'-Bu as mutagen.  
b) What is chromosomal theory of inheritance? 2+3

( 3 )

6. a) What is the role of Ti plasmid during crown-gall disease formation in plants.  
b) What is Mu transposon? 4+1

**Group -C**

Answer any one question :

1. (a) Define transformation? How does it differ from ~~transfection?~~ transduction? *data*  
b) Write the mating process between F<sup>+</sup> × F<sup>-</sup>  
c) What do you mean by frameshift mutation? 5+3+2
2. What is gene interaction? Show a cross how typical Mendelian dihybrid ratio can be modified by gene interaction? What is non disjunction? Give example. 2+5+2+1