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**NA—92—2023**

**FACULTY OF SCIENCE**

**B.Sc. (Third Year) (Fifth Semester) EXAMINATION**

**NOVEMBER/DECEMBER, 2023**

**(CBCS/New Pattern)**

**MICROBIOLOGY**

**Paper XII**

**(Microbial Genetics)**

**(Tuesday, 19-12-2023)**

**Time : 10.00 a.m. to 12.00 noon**

*Time—Two Hours*

*Maximum Marks—40*

*N.B. :— (i) Answer All questions.*

*(ii) Represent your answers with suitable diagrams if necessary.*

*(iii) Answer to the point.*

1. Take a detailed account of Griffith experiment to prove DNA as genetic material. 15

*Or*

Write on :

(a) Replicon (Cairn's) model 8

(b) Termination of replication. 7

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2. Discuss in detail discovery and mechanism of conjugation. 15

Or

Write on :

- (a) Holiday model 8
- (b) Tn elements. 7
3. Write short notes on (any two) : 10
- (a) *E.coli* as model genetic organism
- (b) Polynucleotide ligase
- (c) Illegitimate recombination
- (d) Abortive transduction.

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