

(2 Hours)

[Total Marks: 40

- Q.1
- a Explain plasmid incompatibility. 2
 - b Define composite transposons 2
 - c Explain Artificial transformation 2
 - d Explain generalized transduction using neat labeled diagram 2
 - e What is polycistronic mRNA? What advantage it confers to the cell? 2
- Q.2
- Answer any one of the following
- a Enlist different types of plasmids and Explain briefly about the plasmids with its significance 6
- OR**
- b Write a note on molecular mechanism of Homologous and site specific recombination 6
- Q.3
- Answer any 4 of the following
- a Explain the mechanism of lac operon when both glucose and lactose both are present in the medium 6
 - b Explain the role of mobile genetic elements present in bacteria 6
 - c Distinguish between Transformation and conjugation 6
 - d Write a short note on transposons mutagenesis 6
 - e Explain auxotrophs and prototrophs with its applications 6
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