K18U 0936

Reg. No. : .....

Name : .....

IV Semester B.Sc. Degree (CBCSS – Reg./Sup./Imp.)
Examination, May 2018
(2014 Admn. Onwards)
General Course in Microbiology
4A14 MCB : MICROBIAL GENETICS AND GENETIC ENGINEERING

Time : 3 Hours

Max. Marks : 40

SECTION – A

Answer **all** questions. **Each** question carries **1** mark.

1. A mutation resulting in conversion of mutant strain to wild type strain is called _____
2. The mode of replication of F plasmid during conjugation is _____
3. The restriction site of EcoR I is _____
4. The first mammal developed by cloning is _____ **(4×1=4)**

SECTION – B

Answer **any seven** of the following. **Each** question carries **2** marks.

5. What is one gene one enzyme hypothesis ?
6. What are competence factors ?
7. What are restriction enzymes ?
8. What is tautomerism ?
9. Write on yeast plasmid.
10. What is homologous recombination ?

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11. What are DNA ligases ?
12. Define genotype.
13. What is lysogenic cycle ?
14. What is 'headful packaging' in phages ? **(7×2=14)**

SECTION – C

Answer **any four** of the following. **Each** question carries **3** marks.

Write short notes on :

15. Transposable elements.
16. Characteristics of bacteriophages.
17. Cloning vectors.
18. Subunit vaccines.
19. Genetically modified foods.
20. Mendelian laws of inheritance. **(4×3=12)**

SECTION – D

Answer **any two** of the following. **Each** question carries **5** marks.

21. Write a note on different types of plasmids. Explain the structure of F plasmid.
22. Discuss the gene transfer mechanisms in prokaryotes. Describe the mechanism of transformation in *Streptococcus pneumoniae.*
23. Describe the steps involved in production of insulin by using rDNA technology.
24. Write a note on classification of mutations. Describe the mechanism of mutagenesis by radiations. **(2×5=10)**
