



**K20U 0889**

Reg. No. : .....

Name : .....

**IV Semester B.Sc. Degree (CBCSS – Reg./Sup./Imp.)**  
**Examination, April 2020**  
**(2014 Admn. Onwards)**  
**GENERAL COURSE IN MICROBIOLOGY**  
**4A14 MCB : Microbial Genetics and Genetic Engineering**

Time : 3 Hours

Max. Marks : 40

**Instruction :** Draw diagrams *wherever* necessary.

**SECTION – A**

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

1. The Plant species used by Gregor Mendel for his studies was
2. The 'jumping genes' were discovered by
3. The target sites for the restriction endonuclease EcoR I is
4. The mutation in which no change in purine : pyrimidine orientation occurs is called \_\_\_\_\_ mutation. (4×1=4)

**SECTION – B**

Answer **any seven** questions. **Each** question carries 2 marks.

5. Hfr strain.
6. One gene-one enzyme hypothesis.
7. Mode of action of UV on genetic material.
8. Competence factors.
9. Silent mutations.



10. Insertion sequences.
11. 'Gene gun'.
12. Interferon.
13. Mendelian monohybrid genotypic ratio.
14. Subunit vaccine. (7×2=14)

### SECTION – C

Write short notes on **any four** of the following. **Each** question carries **3** marks.

15. Different types of mutations.
16. Generalized transduction.
17. DNA recombination.
18. Yeast mating types.
19. Restriction endonucleases.
20. GM foods. (4×3=12)

### SECTION – D

Write essays on **any two** of the following. **Each** question carries **5** marks.

21. Explain the Mendelian laws of inheritance. Describe the experiments conducted by Gregor Mendel that led him to postulate the laws.
  22. Describe the mechanisms of genetic exchange occurring in prokaryotic cells.
  23. What are the common cloning vectors used in rDNA technology ? Write note on the methods used for the detection of recombinant clones.
  24. Describe the steps involved in the production of Bt-cotton. (2×5=10)
-