Roll No. | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 09

B.Sc. (BT) (Sem.–4)

GENETIC ENGINEERING

Subject Code : BSBT-401-18

M.Code : 77690

Date of Examination : 05-07-22

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

a) Define Episomes.

b) What is the principle and role of Electroporation?

c) What is Random Mutagenesis?

d) Define Chimeric Proteins.

e) What is Ultrasonication?

f) How is transformation different from Transduction?

g) What are Ti Plasmids?

h) What are Transgenic animals?

i) Give some names of Therapeutic proteins produced by genetic engineering.

j) Define Gene Shuffling.

SECTION-B

2. Discuss methods of introduction of DNA in cells.

3. Explain principle and application of Gene shuffling.

4. Write a note on Phage Display technology.

5. Briefly explain use of yeast to study gene function.

6. Delineate use of plant viruses as episomal expression vectors.

SECTION-C

7. Discuss different methods of Site Directed Mutagenesis.

8. Deliberate on production of Biopharmaceuticals in genetically engineered animals.

9. Discuss strategies of gene transfer to plant cells. Also, explain role of Agrobacterium and T_i Plasmid.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.