

**Date:**

**Reg. No:**

ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27

M.Sc. Botany : IV Semester

Semester Examination: April 2022

(Examination conducted in July 2022)

BO 0218: Biotechnology

Time- 2 ½ hrs Max Marks-70

**Part A : Answer any TEN of the following: 10 x 2 = 20 marks**

1. Cellulase enzyme
2. Chimeric DNA
3. Cosmid
4. Cryopreservation
5. DNA Ligase
6. EcoRI
7. Flavr Savr
8. Irreversible Enzyme Immobilization
9. Microinjection
10. Scope of Biotechnology
11. Somatic hybrids
12. Transposons

**Part B : Answer any FIVE of the following; 5 x 6 = 30 marks**

1. Biosafety & Social concerns involved in Biotechnology
2. Briefly discuss the principle and procedure of miRNA Technology
3. Define CaMV and explain its properties
4. Detailed note on significance of *Bacillus thuringiensis* and its industrial production
5. Explain the chemical methods involved in Genetic transformation
6. Industrial Production of Organic Solvents
7. Molecular mechanism of *Agrobacterium* mediated transformation

**Part C : Answer any TWO of the following; 10 x 2 = 20 marks**

1. Discuss the Upstream and Downstream processes involved in Penicillin Production
2. Differentiate the principle, procedure and significance between AFLP & RAPD
3. Write a detailed account on Binary and Shuttle vectors with suitable diagrams