



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

**M.Sc. BOTANY – IV SEMESTER**

**SEMESTER EXAMINATION: APRIL 2023**

**(Examination conducted in May 2023)**

**BO0221 : Biotechnology**

Time- 2 hrs Max Marks-70

This question paper contains one printed page and three parts

**Part A**

**Answer Any Ten of Following Questions 2 x 10 = 20 Marks**

1. Biotechnology advancements in India
2. Shuttle vector
3. YAC
4. Northern Blot
5. Cybrids
6. Germplasm
7. Adapters in AFLP
8. RAPD
9. Covalent coupling
10. Edible vaccine
11. Invertase
12. Intellectual Property Rights

**Part B**

**Answer Any Five of Following Questions 6 x 5 = 30 Marks**

1. pBR322
2. Production of somatic hybrids
3. Principle & Applications of PCR
4. Write a note on Bacteriophage vectors
5. Compare the key features of SCAR and SSR
6. Explain the procedure for Streptomycin production
7. Write a note on Salting-out, Dialysis & Gel Filtration methods

**Part C**

**Answer Any Two of Following Questions 10 x 2 = 20 Marks**

1. Explain the mechanism behind *Agrobacterium* mediated genetic engineering of plants
2. Describe organic compound production by microbial fermentation
3. Write a detailed note on DNA bar coding in plants