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| Register Number:**Date: 13-04-2019** |

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**ST. JOSEPH’S COLLEGE, AUTONOMOUS, BANGALORE-27**

**SEMESTER EXAMINATION–APRIL 2019**

**M.Sc., BOTANY- IV Semester**

**BO 0315 - Biotechnology**

**Time-21/2 hrs. Max. Marks: 70**

This question paper has **ONE** printed page and **three** parts

***Instruction- Draw diagrams and write examples wherever necessary***

1. **Answer any TEN of the following in one or two sentences 10x2=20**
2. pBR 322
3. Amylase
4. SCP
5. Cryopreservation
6. Colony Hybridization
7. Chimeric DNA
8. Bio Safety
9. Totipotency
10. Stepsin PCR
11. Cybrids
12. Streptomycin
13. Transposable Element
14. **Write critical notes on any FIVE of the following 5x6=30**
15. Western Blot and it’s applications
16. Pathways involved in pollen culture
17. Mechanism involved in Binary and Shuttle vectors
18. Construction of c - DNA Library
19. Scope and Importance of Biotechnology
20. *Azospirillum*&*Rhizobium* as biofertilizers and biocontrol agents
21. Importance of micropropagation in horticulture and forestry
22. **Give a comprehensive account on any TWO of the following 2x10=20**
23. Industrial production of Ethanol and add a note on its biochemistry.
24. Production of secondary metabolites and its industrial applications.
25. Life Cycle of CaMV and its use as a Vector.

**BO-0315-A-19**