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

**M.Sc. BOTANY – II SEMESTER**

**SEMESTER EXAMINATION: APRIL 2020**

**BO: 0218: Biotechnology**

**This paper contains ONE printed page**

**Draw diagrams wherever necessary**

**Time: 2 ½ hrs. Max. Marks: 70**

**A. Explain or define any TEN of the following 10 x 2= 20**

1. Expand pBR 322

2. Any two differences between hybrids and cybrids

3. Source bacterium of *Taq* polymerase

4. NPV

5. M13 Phage as a vector

6. Cryopreservation

7. DNA bar coding

8. GMO product of Calgene

9. Any two classes of biopesticides

10. Marker aided selection

11. RT-PCR

12. Sir. Alec John Jeffreys

**B. Write critical notes on any FIVE of the following 5 x 6=30**

13. Artificial chromosomes

14. Protoplast fusion

15. Any six molecular markers with distinct features

16. Construction of a chimeric DNA

17. Single cell proteins

18. Gene silencing

19. Therapeutic edible vaccines

**C. Give a comprehensive account of any TWO of the following 2x 10=10**

20. *Agrobacterium* mediated genetic transformation

21. Biotechnology-advancements and future prospects

23. CaMV as vector with its advantages and disadvantages

**BO: 0218-B**