**ST JOSEPH’S UNIVERSITY, BENGALURU -27**

Registration Number:

Date & session:

**M.Sc (BOTANY) – III SEMESTER**

**SEMESTER EXAMINATION: OCTOBER 2023**

**(Examination conducted in November /December 2023)**

**BO 7523 – Plant Breeding and Plant Propagation**

**(For current batch students only)**

**Time: 2 Hours Max Marks: 50**

**This paper contains TWO printed page and THREE parts**

**Draw diagrams and write examples wherever necessary**

**A. Answer any FIVE of the following in two-three sentences each**  **5X2=10**

1. Cryopreservation

2. Apomixis

3. DNA polymorphism

4. Interspecific cross with example

5. Keikis

6. Shade house

7. *Rauwolfia serpentina –* any two methods of propagation

**B. Write critical notes on any FIVE of the following 5X6=30**

8. *In-situ* methods of germplasm conservation

9. Back cross: Technique and importance

10. Genetics of host and parasite relationship

11. Natural methods of propagation (any three with example)

12. Outdoor cultivation methods of Chrysanthemum

13. Green house and its significance

14. Barriers in distant hybridization

**C. Give a comprehensive account of any ONE of the following 1X10=10**

15. Read the below excerpt and discuss the concept.

“……..It has become breeder’s choice for introgression of genes into the recurrent parent for genetic improvement of traits including disease resistance, insect resistance, abiotic stress tolerance, taste improvement, aroma, mineral content, water use efficiency, and overall yield. This approach is highly promising as it allows pyramiding of target trait(s) in a single progeny in a very precise, stable, convenient, and fast manner. As a result, various quantitative trait loci (QTLs) and genes tightly linked to DNA markers governing resistance to rice blast disease, bacterial blight of rice, and other diseases have been identified, mapped, and transferred into susceptible lines, varieties, cultivars…..”

Source: <https://doi.org/10.1007/978-3-030-20728-1_5>

2. Cultivation, harvest and marketing of apple