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DATE: **24-04-2017**

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

**B.Sc BOTANY – VI SEMESTER**

**SEMESTER EXAMINATION - APRIL 2017**

**BO 6212: Cytology, Genetics and Plant Breeding**

Time: **3 hours** Max. Marks: **100**

**(*For supplementary candidates only)***

***Attach this question paper with the answer script***

**Draw diagrams wherever necessary**

**This paper contains one printed side and three parts**

**A**. **Define or answer any ten of the following 2x10=20**

1. Raphano-brassica
2. Karyotype
3. Endomitosis
4. Leptotene
5. Test cross
6. Allele
7. Incomplete dominance
8. Genetic mapping
9. Runner and stolon
10. Leaf cutting
11. Hybrid vigour
12. Emasculation

**B. Write brief notes on any five** **of the following 5x7=35**

1. Salivary gland chromosome
2. Ultra structure of a typical chromosome
3. Quantitative inheritance
4. Linkage
5. Objectives of plant breeding
6. Air and soil layering
7. Mendel’s law of segregation

**C. Write comprehensively on any three of the following 15X3=45**

1. Mitosis in plant cells and add a note on its significance**.**
2. “Inheritance does not always depend on nuclear genes”. Substantiate this statement

with examples.

1. Give an account of the methods and techniques of hybridization.
2. Give a comprehensive account of any five types of grafting.
3. Explain inversions and duplications as chromosomal aberrations and state their evolutionary significance.

BO-6212-A-17