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GS-341

VI Semester B.Sc. Examination, May/June - 2019

BOTANY - VII

**Cytology, Genetics, Evolution and Plant Breeding
(CBCS) (F+R) (2016-17 & Onwards)**

Time : 3 Hours

Max. Marks : 70

- Instructions :** 1. Answer **all** Parts.
2. Draw diagrams wherever necessary.

PART - A

- I. Explain/Define **any ten** of the following in **two to three** sentences : **10x2=20**
1. What is Telomere ? Mention its significance.
 2. Differentiate between Euchromatin and Heterochromatin.
 3. Mention the significance of Centromere.
 4. What is Genome ?
 5. Define Dyad and Tetrad.
 6. What is SAT - chromosome ?
 7. What is Test Cross ?
 8. What is Monohybrid cross ?
 9. Give the phenotypic ratio of dominant Epistasis.
 10. What is intergeneric hybridization ? Give an example.
 11. What is chromosomal aberration ? Give an example.
 12. Define Mutation.

P.T.O.

**PART - B**

II. Write critical notes on **any four** of the following :

13. Role of Lysosomes in Apoptosis.

14. Significance of Mitosis.

15. Incomplete dominance.

16. Supplementary factors.

17. Chemical theory of Evolution.

18. Allopolyploidy.

PART - C

III. Give a comprehensive account of **any three** of the following :

3x10=30

19. Prophase-I of Meiosis.

20. Pollen bank and its role.

21. Any two methods of vegetative propagation.

22. Complementary factors.

23. In Garden Pea, Round (R) is dominant over wrinkled (r) and tall plant (T) is dominant over dwarf (t).

If a plant with homozygous tall habit and round seeds is crossed with a plant homozygous for dwarf habit and wrinkled seeds. What will be the phenotype of F_1 and F_2 ? Bring out the F_2 phenotypic ratio.