

M.Sc. (Botany)(with Credits)-Regular-Semester 2012 (Old) / (CBCS Pattern) Sem I
BOT-04 / PSCBOTT04-Paper-IV : Cytology, Genetics and Cytogenetics

P. Pages : 1

Time : Three Hours



GUG/S/18/3415

Max. Marks : 80

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- Notes : 1. All question are compulsory and carry equal marks.
2. Draw well labelled diagram wherever necessary.

1. Explain the sex determination and dosage compensation in Drosophila. **16**

OR

Write notes on:

- a) Allelic and Nonallelic interaction of gene. **8**
b) Multiple alleles. **8**

2. How you will prepared a good karyotype of unknown material? Add a note on ideogram. **16**

OR

Write notes on.

- a) Molecular organization of centromere. **8**
b) Cot curve and its significance. **8**

3. Give an account of different types of structural and numerical changes occurs in chromosomes. **16**

OR

Write notes on:

- a) Effects of aneuploidy on plants. **8**
b) Robertsonian translocation. **8**

4. What is Mutation. Explain the role of different mutagenic agent and role of mutation in improvement of crop. **16**

OR

Write Notes on.

- a) Role of histones. **8**
b) DNA methylation. **8**

5. Write short notes on:- **4x4**

- a) Pleiotropic genes.
b) Polytene chromosome.
c) Trisomics and monosomics.
d) Callipyge sheep.
