

M.Sc. (Botany) (CBCS Pattern) Sem-I
PSCBOTT04 - Paper-IV : Cytology & Genetics

P. Pages : 1

Time : Three Hours



GUG/W/22/11153

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Illustrate your answers with diagrams & suitable examples.

1. Give a detail account on multiple allele and isoalleles. **16**
OR
a) Immunoglobulin genes. **8**
b) Pleiotropic genes. **8**
2. Write on molecular organization of centromere and telomere. **16**
OR
a) Packaging of DNA. **8**
b) Define and explain karyotype and its importance. **8**
3. Write in detail on structural changes in chromosomes and its significance in evolution. **16**
OR
a) Polyploidy and its commercial importance. **8**
b) Aneuploidy in plants. **8**
4. Explain transposable genetic elements. Add a note on its importance in evolution. **16**
OR
a) Lamarckism. **8**
b) DNA Methylation. **8**
5. Write short notes on:
a) Penetrance and expressivity. **4**
b) C-Value paradox. **4**
c) Translocation tester sets. **4**
d) Site directed mutagenesis. **4**
