

2022

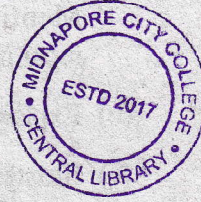
3rd Semester Examination

BOTANY (Honours)

Paper : C 7-T

(Genetics)

[CBCS]



Full Marks : 40

Time : Two Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

1. Answer any *five* questions of the following : $2 \times 5 = 10$
 - (a) Explain co-dominance with example.
 - (b) How does transposon cause mutation?
 - (c) Explain epistasis by citing an example.
 - (d) State about two diseases of human caused due to autosomal defects.
 - (e) What is genetic drift?
 - (f) Mention the characteristic features of polygenic inheritance.
 - (g) What is position effect?
 - (h) What is auto-allopolyploidy?

P.T.O.



Group - B

2. Answer any *four* questions of the following : $5 \times 4 = 20$
- (a) What do you mean by DNA repair mechanisms? Mention the enzymes responsible for DNA repairing.
 - (b) Explain the Chromosome theory of inheritance.
 - (c) Illustrate Hardy-Weinberg Law explaining the equation and the factors influencing it.
 - (d) Describe cytoplasmic inheritance with suitable example.
 - (e) What is crossing over? Explain the molecular basis of crossing over.
 - (f) Illustrate multiple allelic inheritance with example.

Group - C

3. Answer any *one* question of the following : $10 \times 1 = 10$
- (a) What is point mutation? How does it differ from frame shift mutation? Briefly describe the mechanism of action of two chemical mutagens.
 $1+2+7$
 - (b) Write short notes on below : $2\frac{1}{2} \times 4 = 10$
 - (i) Transversion
 - (ii) Cis-Trans complementation test
 - (iii) CIB method
 - (iv) Euploidy.
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