

**TDC Odd Semester Exam., 2020
held in July, 2021**

**BOTANY
(Honours)**

(5th Semester)

Course No. : BOTH-503

(Genetics)

Full Marks : 35
Pass Marks : 12

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

Answer **five** questions, selecting **one** from each Unit

UNIT—I

1. (a) Give an account of dihybrid cross of Mendel. 5
(b) Why did Mendel select pea plants for his experiment? 2
2. Write notes on the following : $3\frac{1}{2}+3\frac{1}{2}=7$
(a) Epistatic factor
(b) Supplementary factor

UNIT—II

3. Describe multiple alleles in man with reference to blood groups. Add a note on self-incompatibility in plants. $3\frac{1}{2}+3\frac{1}{2}=7$
4. (a) Write a note on multiple factor hypothesis. 3
(b) Give a detailed account of descriptive statistics. 4

UNIT—III

5. (a) Describe in brief interference and coefficient of coincidence. 4
(b) Write about coupling and repulsion phases. 3
6. Give an account of sex-linked inheritance in man with suitable examples. Write a note on sex-limited characters. $5+2=7$

UNIT—IV

7. (a) Write a note on cytoplasmic inheritance. $3\frac{1}{2}$
(b) Give a brief account of mitochondrial inheritance in yeast. $3\frac{1}{2}$
8. (a) Define chromosomal aberrations. 2
(b) Describe various types of chromosomal aberrations with necessary diagrams. 5

(3)

UNIT—V

9. Write notes on the following : $3\frac{1}{2}+3\frac{1}{2}=7$
(a) Autopolyploids
(b) Monosomics and trisomics
10. Write notes on the following : $3\frac{1}{2}+3\frac{1}{2}=7$
(a) Gene mutation
(b) Genetic code

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