2022/TDC/ODD/SEM/
BOTHCC-303T/140

TDC (CBCS) Odd Semester Exam., 2022

BOTANY

(Honours)

(3rd Semester)

Course No. : BOTHCC-303T

(Genetics)

Full Marks : 50
Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks for the questions

UNIT—I

1. Answer any *two* of the following questions : 2×2=4

(a) What do you mean by multiple alleles? Give examples.

(b) Give two examples of codominance.

(c) Define autosomes and sex chromosomes.

2. Answer any *one* of the following questions : 6

(a) Define epistasis. Explain dominant epistasis with a suitable cross. 1+5=6

(b) Explain the principles of inheritance.

UNIT—II

3. Answer any *two* of the following questions : 2×2=4

(a) Define extrachromosomal inheritance.

(b) What are plasmagenes?

(c) Define Kappa particles.

4. Answer any *one* of the following questions : 6

(a) Write a note on shell coiling in snail with necessary diagrams.

(b) Write a note on variegation in four-o'clock plant.

UNIT—III

5. Answer any *two* of the following questions : 2×2=4

(a) Define sex-linkage.

(b) What do you mean by crossing-over?

(c) Define three-factor cross.

6. Answer any *one* of the following questions : 6

(a) Give an account on the cytological basis of crossing-over.

(b) Write short notes on the following : 3+3=6

(i) Interference

(ii) Coincidence

UNIT—IV

7. Answer any *two* of the following questions : 2×2=4

(a) Define monosomics with examples.

(b) Define mutations. Write its types.

(c) Give two examples of trisomics.

8. Answer any *one* of the following questions : 6

(a) Define mutagens. Write a note on chemical mutagens. 1+5=6

(b) Explain CLB method of detection of mutations.

UNIT—V

9. Answer any *two* of the following questions : 2×2=4

(a) Define genotype frequencies.

(b) Write briefly about speciation.

(c) What do you mean by genetic drift?

10. Answer any *one* of the following questions : 6

(a) Explain Hardy-Weinberg law with suitable examples.

(b) Write short notes on the following : 3+3=6

(i) Allele frequencies

(ii) Genetic variation

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