

U. G. 4th Semester Examination 2022

BOTANY (Honours)

Paper Code : DC-9

[CBCS]

Full Marks : 25

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.

1. Answer any *five* of the following: 1×5=5
 - (a) Define epistasis.
 - (b) What is regression?
 - (c) What is the null hypothesis?
 - (d) What is the 'degree of freedom'?
 - (e) Name two chemicals that are mutagens.
 - (f) Define pleiotropy.
 - (g) What is aneuploidy?
 - (h) What is "standard error"?

2. Answer any *four* of the following: 3×4=12
 - (a) Distinguish between linkage and crossing over. 3
 - (b) Write a short note on the gene mutations caused by transposons. 3
 - (c) Define genetic drift. What is the characteristic feature of a population bottleneck? 1+2
 - (d) Describe the structure of the T₄ phage. 3
 - (e) What is a central tendency? Mention the interrelationship of mean, mode and median. 1+2
 - (f) Write the addition and multiplication rules of probability. 3

3. Answer any *one* of the following: 8×1=8
 - (a) What is meant by inversion? Differentiate between paracentric inversions with pericentric inversions with suitable diagrams. 2+3+3=8

(2)

(b) Calculate the standard deviation & standard error value from the following table: 8

No. of Pods	31	32	33	34	35	36	37	38	39	40	41
No. of Plants	5	6	6	5	4	3	3	3	2	2	1

[P.T.O.]