Botany [Honours]

[CBCS]

B.Sc. Fifth Semester End Examination-2023

(Regular & Supplementary Paper)

PAPER-DSE2T

[PLANT BREEDING]

Full Marks: 40 ***Time: 02 Hrs***

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

Group A

1. Answer any FIVE questions of the following: 5x2= 10

a) What is monogenic inheritance?

b) What is the role of allopolyploidy in plant breeding?

c) What is acclimatization?

d) What is the inbreeding coefficient (F)?

e) Define gene bank.

f) Why is bagging done in the process of artificial hybridization?

g) What is the back-cross method of breeding?

h) What is meant by domestication of crop plants?

Group B

2. Answer any FOUR questions of the following: 4x5 = 20

a) Mention the morphological features of allopolyploids.

b) Discuss the dominance hypothesis to explain hybrid vigour.

c) Describe selection methods for self-pollinated plants.

d) Briefly discuss the different types of inbreeding depression?

e) Write down the role of mutation and polyploidy in crop improvement.

f) Discuss the role of polygenic control in skin colour amongst human beings?

Group C

3. Answer any ONE question of the following: 1x10 = 10

a) What is the distant hybridization procedure? Discuss the different types of distant hybridization? What are the two types of ideotype? Name two applications of autopolyploidy in cultivated crops.

5+5

b) Write short note on

i. "Centres of origin of crop plants"

ii) Role of biotechnology in crop improvement.
