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RNLKWC/B.Sc.-CBCS/VS/BOT/H/DSE2T/21

2021

BOTANY

[HONOURS]

(CBCS)

(B.Sc. Third End Semester Examinations-2021)

PAPER-DSE2T

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*

PLANT BREEDING

Group - A

1. Answer any five of the following:

5x2=10

- a) What is distant hybridization?
- b) What is meant by gamma garden?
- c) What is acclimatization?
- d) What is polygenic inheritance?
- e) Define Heterobeltiosis.
- 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?

(2)

Group – B

2. Answer any four of the following: 4x5=20
- a) Write short notes on : 2.5x2
- i. Physical mutagen.
 - ii. Limitations of Hybridization.
- b) What do you mean by Hybrid vigour? Discuss the over-dominance hypothesis to explain hybrid vigour. 2+3
- c) Enumerate the merits and demerits of pure-line selection. Distinguish between mass selection and pure line selection. 2+3
- d) Mention different genetic causes of heterosis?
- e) Describe different types of asexual reproduction found in crop plants. 5
- f) What is the role of hybridization in plant breeding? Mention different hybridization techniques applied in cross pollinated crops 2+3

Group – C

3. Answer any one of the followings: 1x10=10
- a) Differentiate between autopolyploid and allopolyploid. What are the limitations of autopolyploid in plant breeding? Name two applications of allopolyploid in cultivated crops. Mention the cytological features of autopolyploid. 3+3+2+2

(3)

- b) Define quantitative inheritance. Briefly describe the role of polygenic control in kernel colour of Wheat. What are the undesirable consequences of plant breeding? 3+(4+3)
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