2022

BOTANY

[HONOURS]

(CBCS)

(B.Sc. FifthSemesterEndExaminations-2022)

PAPER-DSE2T

[Biostatistics]

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 fiveof the following:** **5x2=10**

   a) What do you mean by polygenic inhritance?

   b) Expand the term GMO & NBPGR.

   c) What is pure line selection?

   d) What is acclimatization?

   e) What is gamma garden?

   f) What is distant hybridization?

   g) What is ideotype?

   h) What do you mean by clonal propogation.

Group – B

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

a) What is the phenotype of wheat kernel colour for the genotype? Briefly describe the role of polygenic control in kernel colour of wheat. 1+4

b) Write short notes on :

i) Genetic basis of in breeding depression.

ii) Centre of origin of crop plants. 2.5+2.5

c) Distinguish between Monogenic & polygenic inheritance. Define mutation breading. 3+2

d) Mention the cytological features of autopolyploid. Differentiate between autopolyploid & allopolyploid. 2+3

e) Briefly describe the selection methods for self and cross pollinated crop plants. 5

f) Write down four applications of plant breeding. What are the considerable consequences of plant breeding?

Group – C

3. Answer any one of the followings: 1x10=10

a) What do you mean by hybrid vigour? What are the correlation of the concepts of inbreedings depression & heterosis? Describe the role of biotechnology in crop improvement. 2+3+5=10

b) Difference between the followings :

i) Introduction & Domestication.

ii) Man selection & Pure line selection.

iii) Primary and secondary introduction.

iv) Chemical mutagen and Physical mutation. 2.5+2.5+2.5+2.5