K22P 3266

Reg. No. : .....

Name : .....

IV Semester M.Sc. Degree (CBSS – Reg./Supple./Imp.) Examination, April 2022
(2018 Admission Onwards)
BOTANY
BOT 4E08 : Crop Improvement

Time : 3 Hours Max. Marks : 60

I. Answer **any two** of the following. **(2×8=16)**

1) Write a general account of origin, genetic variability, breeding technique and achievements in the area of following crops :
   a) Rice
   b) Cotton.
2) Write a brief account of Plant Breeding Institutes in India and their major achievements.
3) Give an account of genetics of disease, pest and stress resistance.
4) Write an account on applications of recombinant DNA technology in crop improvement.

II. Answer **any two** of the following. **(2×6=12)**

5) a) Micropropagation. 1
   b) *In-vitro* exchange of germ plasm. 2
   c) Clonal propagation methods. 3
6) a) Gene banks. 2
   b) Rural gene banks. 1
   c) International network of gene banks. 3
7) a) Major food crops of Kerala. 2
   b) Patent Laws. 2
   c) Terminator seed technology. 2

P.T.O.

III. Answer **any six** of the following. **(6×3=18)**

8) Somatic variation.
9) Nitrogen fixation.
10) Polyploids.
11) Systems of sterility.
12) Resistance breeding.
13) Application of haploids.
14) Genetics of photosynthesis.
15) Heterosis.

IV. Answer **any seven** of the following. **(7×2=14)**

16) Breeding Programmes.
17) Genetic variability.
18) Selection of segregating populations.
19) Plant acclimatization improvement.
20) Back crossing theory.
21) Mutation breeding.
22) Inbreeding depression.
23) Seed storage proteins.
24) Fertilizers in crop improvement.
25) Seed certification.