

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)

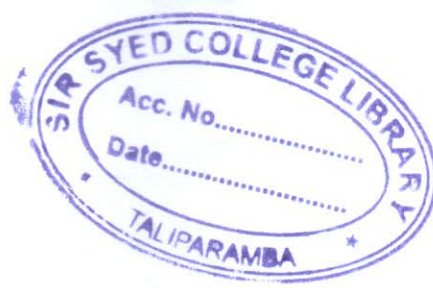
- 1) Write a general account of origin, genetic variability, breeding technique and achievements in the area of following crops :
 - a) Rice
 - b) Cotton.
- 2) Write a brief account of Plant Breeding Institutes in India and their major achievements.
- 3) Give an account of genetics of disease, pest and 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.



K22P 3266

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.
-