



K20P 0066

Reg. No. : .....

Name : .....

**IV Semester M.Sc. Degree (CBSS-Reg./Suppl./Imp.) Examination, April 2020**  
**(2014 Admission Onwards)**  
**BOTANY**  
**BOT4E08 : 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) Cashew
- 2) Write a brief account of plant genetic resources and explain the involvement of agencies in plant genetic resource activities.
- 3) Give a historical account and role of Biotechnology in Indian and Global context.
- 4) Write an account of introduction, history, designing and breeding of model plant types with reference to Wheat.

II. Answer **any two** of the following :

(2×6=12)

- 5) a) Haploids. 1
- b) Genetics of stress resistance. 2
- c) Mutation breeding. 3
- 6) a) Give an account on organizational setup of UPOV. 3
- b) Research activities of CSIR. 2
- c) Achievements of ICAR. 1
- 7) a) Role of domestication. 2
- b) Plant introduction and acclimatization improvement. 2
- c) Selection of segregating populations. 2

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(6×3=18)

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III. Answer **any six** of the following :

- 8) Gene banks.
- 9) Plant breeding institutes.
- 10) Somatic variation.
- 11) Clonal selection.
- 12) Principles of crop improvement.
- 13) Application of euploidy.
- 14) Genetics of nitrogen fixation.
- 15) Genetically engineered crops.

IV. Answer **any seven** of the following :

(7×2=14)

- 16) Floral biology.
- 17) Genetic variability.
- 18) Role of domestication.
- 19) Transgenic plants.
- 20) Patent laws.
- 21) Terminator seed technology.
- 22) Resistance breeding for pest.
- 23) Inbreeding depression.
- 24) Heterosis.
- 25) System of incompatibility.