



K21P 0186

Reg. No. : .....

Name : .....



**IV Semester M.Sc. Degree (CBSS – Reg./Suppl. (Including Mercy Chance)/Imp.)  
Examination, April 2021  
(2014 Admission Onwards)  
BOTANY  
BOT4E08 : Crop Improvement**

Time : 3 Hours

Max. Marks : 60

- I. Write essays on **any two** of the following : (2×8=16)
- 1) Origin, variability, breeding perspectives and major achievements in Coffee.
  - 2) Centres of origin of cultivated plants as proposed by Vavilov.
  - 3) Floral biology, hybridization and major hybrids produced in coconut.
  - 4) Nitrogen fixation-genetics and its importance.
  - 5) Transgenic plants and their role in future agriculture.
  - 6) Patenting of life forms and obtaining GI status for agricultural products.
- II. Answer **any two** of the following : (2×6=12)
- 7) a) Floral biology of rice. 1
  - b) Utilization of male sterility in hybrid rice production. 2
  - c) Kaipad and Pokkai rice farming. 3
  - 8) a) Introduction of tea to South India. 1
  - b) Major species of tea cultivated. 2
  - c) Oolong tea and green tea. 3
  - 9) a) Role of triploidy in crop improvement. 1
  - b) Allopolyploidy and the evolution of cotton. 2
  - c) Hybrid breakdown. 3
  - 10) a) RR11 – location and governance. 1
  - b) IISR – location, governance and major mandatory crops. 2
  - c) CPCRI – location, governance and mandatory crops. 3

P.T.O.



III. Answer any six of the following briefly.

(6×3=18)

- 11) Durum wheat.
- 12) Bt cotton.
- 13) Backcross method of selection.
- 14) Inbreeding depression.
- 15) Somatic hybridization.
- 16) Three chemical mutagens used in plant breeding.
- 17) Breeding for stress resistance.
- 18) *nod* genes.
- 19) Importance of seed storage proteins.
- 20) Terminator seeds.
- 21) Sustainable agriculture.
- 22) Cryopreservation.

IV. Write short answers to any seven of the following questions.

(7×2=14)

- 23) Jeerakasala.
- 24) DxT.
- 25) RR11 105.
- 26) CxR.
- 27) *Camellia assamica*.
- 28) Njallani.
- 29) Sharbati Sonora.
- 30) Back cross.
- 31) Inbreeding.
- 32) Improved seed.
- 33) Heterosis.
- 34) Patent laws.
- 35) Floral biology.
- 36) Wide hybrids.