

2021

AGRICULTURE

PAPER-II

Time Allowed — 3 Hours

Full Marks — 200

*If the questions attempted are in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and the remaining ones ignored.*

*Answers may be given either in **English** or in **Bengali** but all answers must be in one and the same language.*

**Group-A**

Answer any three questions.

1. (a) Write down the role of genetics in crop improvement. 10  
(b) Write in brief cell structures and functions. Illustrate chromosome structure. 20  
(c) Describe the law of heredity and application in crop improvement research. 10
2. (a) Write in brief the history of plant breeding and its contribution in Indian agriculture. 10  
(b) Elaborate on the concept of crop genetics resources and conservation. 20  
(c) Describe different breeding methods. 10
3. (a) What are molecular markers and DNA Finger Print? Elaborate with suitable examples. 10  
(b) What do you mean by GM Crops? Critically examine the role of GM Crops in agricultural development. 10  
(c) What do you mean by Photoperiodism and stress physiology? Explain in brief. 20
4. (a) What is a quality seed and what is seed testing? 10  
(b) Write in brief the different stages of the seed certification process. 10  
(c) What factors should a farmer consider while he is going to produce seeds on his own farm? 20
5. (a) What is Landscaping and what way it is related to Good Agricultural Practices? 20  
(b) Write down the principles and features of Landscaping. 10  
(c) What do you mean by protected cultivation and what are its advantages? 10

BMW(O)-AG-II/21

(2)

**Group-B**

Answer *any two* questions.

6. Write short notes on *any five*: 8×5=40
- (a) Export of agricultural products
  - (b) Post-harvest technology
  - (c) Medicinal and aromatic crops
  - (d) Heterosis vigour
  - (e) Somatic hybridization
  - (f) Plantation and spices
  - (g) Plant growth substances
7. (a) Elaborate the issues of food and nutrition security in India. 20
- (b) Explain the Selfing and Crossing techniques with examples. 10
- (c) What do you mean by IPM? Elaborate with examples. 10
8. (a) What is an ideal orchard? What are the horticultural crops suitable for orchards with commercial purposes at the farm level? 20
- (b) Describe cultivation practices of any two horticultural crops that are commercially successful and popular amongst farmers. 20

---

**For Classroom / Online guidance / coaching of WBCS Prelims , Main Exam by experts and officers and Interview by IAS /WBCS Gr A Officers/ Toppers, WBCS Prelims and Main Mock Test (Classroom & Online), Optional Subjects, Studymaterials, Correspondence Course etc. Call WBCSMadeEasy™ at Toll Free no 1800 572 9282 or 8274048710 Or 9674493673 or mail us at [mailus@wbcsmadeeasy.in](mailto:mailus@wbcsmadeeasy.in) (Our centers as of now - College Street 8585843673, Garia/ HO 8274048710, Siliguri - 9051265991. Medinipur 8274972589)**