

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.

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

Group-A

Answer any three questions.

1. (a) What do you mean by 'good quality seed'? 5
- (b) Describe the seed production technology of rice. 20
- (c) Write down the normal seed certification procedure. 15
2. (a) State Mendel's laws of heredity. 10
- (b) What do you mean by polyploidy? 5
- (c) Discuss in details about polyploids in agriculture. 25
3. (a) Distinguish between plant growth and development. 5
- (b) Discuss on plant growth factors and their roles. 10
- (c) Define plant growth regulator (PGR). Give the classification of PGR. Mention the uses of Auxin, Gibberellins and Ethylene in agriculture. 25
4. Write in brief on *any two*: 20×2=40
 - (a) Cultivation of betelvine crop under closed system (within *boroj*)
 - (b) IPM for vegetable crops
 - (c) Cultivation of tea in West Bengal
 - (d) Recommended cultivation practices of *marigold*
5. Write in details about the cultivation practices of *Mango* and *Guava* with special reference to: soil, land preparation, sowing parameters, varieties, intercultural operations, nutrient management, plant protection measures, harvesting and yield. 20+20=40

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Please Turn Over

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Group-B

Answer any two questions.

6. Write short notes on *any five*: 8×5=40
- (a) Mutation breeding in plants
 - (b) Plant cell structure and functions
 - (c) GM crops
 - (d) Role of light as a biological agent
 - (e) Export of agricultural commodities
 - (f) Role of osmosis in plant life
 - (g) Important medicinal plants of West Bengal and their uses
 - (h) Uses of spices and condiments
7. (a) Compare C₃, C₄ and CAM plants. 12
- (b) Classify environmental stresses to which plants may be subjected during their growth periods. 8
- (c) Describe the effects of water deficit on growth and metabolism of plants. 20
8. (a) What is landscaping? Describe the process and steps of landscaping. 20
- (b) Discuss on protected cultivation of horticultural crops. 20
9. Write in brief on *any four*: 10×4=40
- (a) Critical day length
 - (b) Antitranspirants
 - (c) Hill reaction
 - (d) Storage of crop seeds
 - (e) Plant respiration
 - (f) Nutritional security
 - (g) Plant propagation

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