

**CSM : 18**

**AGRICULTURE**

**PAPER - II**

Time Allowed : 3 hours

Full Marks : 100

*Marks for each question is indicated against it.*

*Attempt any 5 (five) questions taking not more than 3 (three) questions from each Part.*

**PART - A**

1. What do you mean by cell cycle? What properties of DNA molecule distinguish it as the 'genetic material'? How DNA is exactly copied during chromosome replication? **(10+5+5=20)**
2. What is heterosis? Discuss the important features of heterosis and elaborate the steps involve in the development of hybrids for exploitation of heterosis in maize. **(2+8+10=20)**
3. Describe the following: **(5×4=20)**
  - (a) What is dormancy of seed? How it can be managed?
  - (b) Describe the specific features of C4 plants. How they differ from C3 type?
  - (c) What is isolation distance? Describe its need in seed production of different crops.
  - (d) Truthfully labelled seed.
4. Write short note on **any four** of the following: **(5×4=20)**
  - (a) Sex linked inheritance.
  - (b) Classes of improved seed.
  - (c) Genetic Markers.
  - (d) Community Seed Bank.
  - (e) Amphidiploid

**PART - B**

5. (a) Describe in detail the occurrence, symptoms, causal organism and management of Rhizome rots in ginger. **(10)**  
(b) What is landscape gardening? State the principles of landscaping. Discuss the factors affecting landscape design. **(10)**
6. Differentiate Public Distribution System (PDS) from Targeted Public Distribution System (TPDS). How does TPDS helps the population living below poverty line? **(20)**
7. Write short note on **any four** of the followings: **(4×5=20)**
  - (a) High Density Planting
  - (b) TPS technology
  - (c) Management of Diseases of Nursery
  - (d) Management of Root Knot Nematode in Tomato
  - (e) Food based dietary approaches to eliminate hunger
8. What are the broad principles of disease and pest control? Describe integrated pest and disease management. **(8+12=20)**

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