PAR - 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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