

Time: 2:30 Hours

Marks: 70

Instructions:

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Q-1 Answer the following questions as per instruction.**(A) Answer in very short:****04**

1. Name the nonvascular areas present in between the vascular bundles.
2. Differentiate metaxylem and protoxylem on the basis of thickening.
3. Define the term: Ring porous
4. What is included phloem?

(B) Answer in brief (any one):**03**

1. Draw only the labelled diagram of v.s. of isobilateral leaf.
2. Distinguish between: Phellem and Phelloderm

(C) Answer in detail (any one):**07**

1. What is anomalous secondary growth? Describe it in stem belonging to Liliaceae family.
2. Describe annual rings and formation of tyloses.

Q-2 Answer the following questions as per instruction.**(A) Answer in very short:****04**

1. Which cell is the last cell of sporophytic generation?
2. What is the function of Obturator?
3. Define the term: Syngamy
4. In which plant monosporic 4- nucleate type embryo sac is found?

(B) Answer in brief (any one):**03**

1. Explain: Formation of generative cell and vegetative cell.
2. Distinguish between: Male gametophyte and Female gametophyte.

(C) Answer in detail (any one):**07**

1. Enumerate with the help of labelled illustrations the variation in Chrysanthemum type of embryo sac.
2. Discuss with diagram: Steps of megasporogenesis.

Q-3 Answer the following questions as per instruction.**(A) Answer in very short:****04**

1. By which region lateral translocation is performed?
2. Who brings about distribution of water and solutes inside the plants?
3. Define the term: Active absorption
4. In which substance maximum imbibition capacity is found?

(B)Answer in brief (any one): 03

1. Write advantages of seed dormancy.
2. Distinguish between: Diffusion and Osmosis

(C)Answer in detail (any one): 07

1. Discuss factors affecting salt absorption.
2. Describe mechanism of vernalization in plants.

Q-4 Answer the following questions as per instruction.

(A)Answer in very short: 04

1. From where organic matter of soil is derived?
2. How gully is formed?
3. Define the term: Hydration in chemical weathering
4. What does mean by fallow?

(B)Answer in brief (any one): 03

1. Write applications of remote sensing in botany
2. Distinguish between: Water erosion and wind erosion

(C)Answer in detail (any one): 07

1. Discuss with diagram: horizontal layers found in the soil.
2. Describe mechanical methods to control soil erosion.

Q-5. Answer the following questions as per instruction.

(A)Answer in very short: 04

1. Name the total self-duplicating hereditary material of cytoplasm?
2. Give other two names of pure-line selection.
3. State contribution of Karpechenko In the field of genetics.
4. Give the full form of: PDB and LPCP

(B)Answer in brief (any one): 03

1. Write notes on: Encapsulation in preparation of synthetic seed
2. Distinguish between: Natural seed and Synthetic seed

(C)Answer in detail (any one): 07

1. Discuss auto polyploidy and characters of autopolyploid
2. What is mass selection? Discuss its steps, advantages and disadvantages.
