

Time – 2 1/2 hrs.

Marks - 75

N.B.

1. All questions are compulsory.
2. Draw neat labelled diagrams wherever necessary.
3. All questions carry equal marks.

Q.1 Attempt any two:

15

- a. Describe the stem of *Lyginopteris oldhamia* and add a note on its systematic position.
- b. Give an account of *Pentoxylon*.
- c. Describe the structure of *Lepidostrobus* and *Lepidocarpon* with the help of neat labelled diagrams.
- d. Discuss the role of BSIP in developing Palaeobotany in India.

Q.2 Attempt any two:

15

- a. Give the classification, distinguishing characters, floral formula and any two plants of economic importance of family Solanaceae.
- b. Give the morphological peculiarities and systematic position of family Cucurbitaceae.
- c. Discuss Bentham and Hooker's system of classification.
- d. Discuss the importance of Palynology in relation to taxonomy.

Q.3 Attempt any two:

15

- a. What is anomalous secondary growth? Describe it in the stem of *Dracaena*.
- b. Discuss anomalous secondary growth in the stem of *Salvadora*.
- c. What are stomata? Explain anisocytic & graminaceous type of stomata.
- d. Explain any two types of root-stem transitions studied by you.

Q.4 Attempt any two:

15

- a. Explain the role of Palynology in relation to Forensic science.
- b. Describe various tests carried out to determine Pollen viability.
- c. What are the various factors affecting growth of pollen tube?
- d. Discuss NPC system of classification for pollen grains.

Q.5 Attempt any three short notes:

15

- a. Seed and cupule of *Lyginopteris*.
- b. Androecium of Umbelliferae.
- c. Economic importance of Rubiaceae.
- d. Diacytic stomata.
- e. Secondary growth in Beet root.
- f. Methods of short term pollen storage.

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