

Q.P. Code : 19275

[Time: 2½ Hours]

[Marks: 75]

Please check whether you have got the right question paper.

- 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** of the following : 15
- a) Describe the anatomy of *Lepidodendron* stem and give its systematic position.
 - b) Give an account of the reproductive structures of *Pentoxylon*.
 - c) Describe the internal structure of *Lyginopteris* stem and give its classification.
 - d) Discuss the contributions of Birbal Sahni in the field of Paleobotany.
- Q.2.** Attempt **any two** of the following : 15
- a) Give the classification, distinguishing characters and floral formula of the family Cucurbitaceae.
 - b) Give the morphological peculiarities and systematic position of the family Solanaceae.
 - c) Discuss the merits and demerits of Bentham & Hooker's system of classification.
 - d) Discuss the importance of morphology in relation to taxonomy.
- Q.3.** Attempt **any two** of the following: 15
- a) Define anomalous secondary growth. Describe anomalous secondary growth in *Achyranthes* stem.
 - b) Describe anomalous secondary growth in the root of *Beta vulgaris*.
 - c) Define stomata. Describe Paracytic and Anisocytic types of stomata.
 - d) Describe any two types of root - stem transitions studied by you.
- Q.4.** Attempt **any two** of the following : 15
- a) Give a brief account of NPC system of classification of Pollen grains.
 - b) What is Pollen viability? Give the causes for loss of Pollen viability.
 - c) Explain the role of air borne pollen grains in causing allergy.
 - d) Explain the role of Palynology in Honey industry.
- Q.5.** Write short notes on **any three** of the following : 15
- a) *Crossotheca*
 - b) Economic Importance of Graminae
 - c) Flower of Capparidaceae
 - d) Secondary growth in the root of *Raphanus sativus*
 - e) Diacytic stomata
 - f) Factors affecting Pollen germination.
