

Time – 3 Hrs.

Marks – 100

- 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:

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- a. Describe the anatomy of a typical *Lepidodendron* stem. Add a note on its systematic position.
- b. Describe the stem of *Lyginopteris oldhamia* & add a note on its systematic position.
- c. Give an account of *Pentoxylon*.
- d. Birbal Sahni is the pioneer of Palaeobotany in India- Comment.

Q.2 Attempt any two:

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- a. Discuss Bentham & Hooker's system of classification.
- b. Give an account of insertion of floral whorls in flower.
- c. Give the classification, distinguishing characters and floral formula of family Capparidaceae.
- d. Give a detailed account of the plants of economic importance of Poaceae (Graminae). Add a note on the type of its inflorescence.

Q.3 Attempt any two:

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- a. Explain any two types of root-stem transition studied by you.
- b. What is anomalous secondary growth? Add a note on anomalous secondary growth in the roots of Beet.
- c. Describe the anomalous secondary growth in the stem of *Bignonia*.
- d. Enlist and explain various types of stomata studied by you.

Q.4 Attempt any two:

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- a. Give a brief account on Exine Stratification in angiospermic pollen.
- b. Describe NPC system of classification for pollen grains.
- c. Discuss in detail role of Palynology in relation to honey industry.
- d. Explain various tests carried out to determine pollen viability.

Q.5 Attempt any four short notes:

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- a. *Lepidocarpon*
- b. Papilionaceous corolla
- c. Anomalous secondary growth in Stem of *Aristolochia*.
- d. Adelphy
- e. *Calamostachys*.
- f. Methods of Short term Pollen storage

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