

Time: 3 Hours.

Marks: 100

- Instructions:** 1. All questions are compulsory.  
2. Draw neat and labeled diagrams wherever necessary.  
3. Internal choices are indicated.  
4. Figures to the right indicate marks

**Q1.** Attempt any Two of the following questions. (20)

- A.) Describe the structure of *Lepidodendron* stem and give its systematic position.
- B.) Describe the ovule/seed of *Lyginopteris*.
- C.) Explain the stem morphology & anatomy of Pentoxylon.
- D.) Discuss the contribution of Birbal Sahni in developing Palaeobotany in India.

**Q2.** Attempt any two of the following questions: (20)

- A.) Give the morphological peculiarities and systematic position of family-Cucurbitaceae.
- B.) Give the classification, distinguishing characters, floral formula & three plants of economic importance of family Solanaceae.
- C.) Discuss the merits and demerits of Bentham & Hooker's system of classification.
- D.) Describe the different types of polypetalous corolla studied by you.

**Q3.** Attempt any two of the following questions: (20)

- A.) What is anomalous secondary growth? Describe the same in the stem of *Achyranthus*.
- B.) Describe the anomalous secondary growth in the root of *Beta vulgaris*.
- C.) Describe the different types of Dicot stomata studied by you.
- D.) What is root-stem transition? Describe any two types studied by you.

**Q4.** Attempt any two of the following questions: (20)

- A.) With reference to palynology explain polarity and Symmetry in a pollen.
- B.) Explain various Exine stratifications in angiospermic pollen.
- C.) What is Aeropalynology? Explain the role of air borne pollens in causing allergy.
- D.) What are the various factors affecting pollen viability?

**Q5.** Write short notes on any four of the following: (20)

- a) Anomalous Secondary growth in *Salvadora* stem (Diagramatic)
- b) Role of Palynology in relation to Forensic science.
- c) Inflorescence of Graminae
- d) Monocot stomata
- e) Sahnia Organs
- f) Economic importance of Rubiaceae

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