

(3 Hours)

Total Marks: 100

- N.B.: 1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw neat and labelled diagrams wherever necessary.

Q.1). Attempt ANY TWO of the following. (20)

- Explain Hutchinson's system of classification in brief. State the merits and demerits of Hutchinson's system of classification.
- Classify the family Combretaceae with reasons, and give the distinguishing characters and economic importance of any one plant from the same family.
- Explain with neat labelled diagrams, the morphological features of the family Cannaceae. Give its economic importance and floral formula.
- Write a note on the working of Botanical Survey of India.

Q.2). Attempt ANY TWO of the following. (20)

- What are Sciophytes? With suitable examples describe the modifications seen therein.
- Describe the morphological and anatomical adaptations shown by succulent xerophytes.
- Citing suitable examples, describe the morphological and anatomical adaptations shown by submerged hydrophytes towards the aquatic ecosystem.
- Highlight the various ecological adaptations of epiphytes observed in them.

Q.3). Attempt ANY TWO of the following. (20)

- Describe the structure and development of microsporangium.
- What is double fertilization? Describe the process with the help of a neat labelled diagram.
- Explain with a neat labelled diagram the various types of ovules studied by you.
- Describe the development of a Female Gametophyte in angiosperms.

Q.4). Attempt ANY TWO of the following. (20)

- What is phytogeography? Describe any 3 phytogeographical regions of India.
- Define Biodiversity. With the help of suitable examples, describe any two types of forest found in India.
- Describe the importance and Status of Biodiversity.
- Discuss various approaches by which biodiversity can be conserved.

Q.5). Write short notes on ANY FOUR of the following. (20)

- Inflorescence of family Lamiaceae
- Lalbaugh Botanical Garden, Bengaluru
- Pneumatophores
- Types of Fertilization
- DNA-based marker
- Levels of Biodiversity
