2026
(Regular)
Botany (Core)
Paper Code : BT-CE-4224
Paper Name : Advances in Plant Systematics

Time : 2 hours ***Full Marks : 45***

The figures in the margin indicate full marks for the questions.

1. Answer the following questions as directed : 1×4=4

   a) Define Lactotype.

   b) Syngenesious anthers are characteristic feature of which family?

   c) By which property phylogenetic system is different from natural system :
   i) Anatomical details
   ii) Physiological traits
   iii) Morphological details
   iv) Origin and evolutionary trends
   (Choose the correct option)

   d) Who has written "*Genera Plantarum*" :
   i) Hutchinson
   ii) Bessey
   iii) Engler and Prantl
   iv) Bentham and Hooker
   (Choose the correct option)

2. Answer the following questions : 2×3=6

   a) Write the differences of Alpha and Omega taxonomy.

   b) Write the differences of Monophyletic and Polyphyletic groups.

Contd...

c) Mention four functions of Herbarium.

3. Answer ***any three*** of the following questions : 5×3=15

a) Write about contributions of Takhtazan in Plant Classification.

b) What is Botanical Key ? Describe the Indented Key.

c) What is the significance of Cytological studies in taxonomy ? Give suitable examples.

d) Write merits and demerits of Bentham and Hooker system of classification.

e) Write diagnostic features and economic importance of Brassicaceae family.

f) Write short note on Effective publication.

4. Answer ***any two*** of the following questions : 10×2=20

a) Describe the floral structure of the family Orchidaceae. Why is Orchidaceae considered as the most advanced family amongest the monocotyledons ? 6+4=10

b) What is ICN ? Describe the principles of ICN. Explain Rejection of Names according to the Rule of ICN, with example. 2+4+4=10

c) Describe the following with diagrams : 5+5=10

i) The Spikelet of Poaceae.

ii) Floral characters of Lamiaceae.

d) What do you mean by Palynology ? Explain the role of Palynology in relation to taxonomy. 2+8=10

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