

2022

**BOTANY — HONOURS**

**Paper : CC-7**

**(Plant Systematics)**

**Full Marks : 50**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

1. Answer **any five** of the following questions :
  - (a) What is meant by tautonym? Give one example. 1+1
  - (b) State the importance of encyclopaedic phase. 2
  - (c) What do you mean by acronym 'P' and 'CAL'? 1+1
  - (d) Distinguish between Polyphyletic and Paraphyletic group. 2
  - (e) What is cladogram? 2
  - (f) What is ochreate stipule and where is it found? 1+1
  - (g) What is meant by resupination? 2
2. Write brief notes on **any two** of the following : 5×2
  - (a) Valid publication of a species
  - (b) Principles of ICN
  - (c) Role of herbaria in plant systematics
  - (d) Numerical Taxonomy.
3. Answer **any three** of the following :
  - (a) Give a broad outline of Takhtajan System of Classification (1991). Mention one merit and one demerit of this classification. Distinguish between natural and phylogenetic system of classification. 6+2+2
  - (b) Mention the diagnostic characters of the family Poaceae. State its systematic position as treated by Bentham and Hooker's system of classification. Name three species of economic importance. 5+2+3
  - (c) Compare flower characters of the family Solanaceae and Scrophulariaceae. Draw floral diagram and mention floral formula of both families. 5+3+2

**Please Turn Over**

- (d) Name the family where the following character is found and mention four diagnostic characters of the respective family : (1+4)×2
- (i) Vittae
  - (ii) Synandrous stamen.
- (e) Write notes on *any two* of the following : 5×2
- (i) Author citation of scientific name
  - (ii) Supportive evidences from cytology in Taxonomy
  - (iii) Plesiomorphic characters of Nymphaeaceae
  - (iv) APG III Classification.
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