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3 (Sem-4/CBCS) BOT HC 3

2021

BOTANY

(Honours)

Paper : BOT-HC-4036

(Plant Systematics)

Full Marks : 60

Time : Three hours

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

Group-A

1. Fill in the blanks / Answer the following :
1×5=5
 - (a) _____ is a device for easily identifying an unknown plant by a sequence of choices between two or more statements.
 - (b) The inflorescence of the family Lamiaceae is known as _____.

Contd.

(c) A change in the genetic composition of one species or group in response to a genetic change in another is called _____.

(d) What is Taxon ?

(e) Define Cladogram.

2. Answer the following questions : $2 \times 5 = 10$

(a) Inflorescence characters of Euphorbiaceae.

(b) Write a note on Taxonomic categories.

(c) Nomenclature of hybrid cultivars.

(d) Importance of E-flora.

(e) Differences between monophyly and polyphyly.

3. Answer the following questions : $5 \times 3 = 15$

(a) Write an explanatory note on International Code of Botanical Nomenclature.

(b) Discuss the objective and importance of Plant taxonomy.

(c) Discuss the floral characters of the family Orchidaceae with floral diagram.

Group – B

4. Answer **any three** of the following questions : 10×3=30
- (a) What is Herbarium ? Discuss the role of herbaria in teaching and learning process of plant taxonomy.
 - (b) Describe the systematic position, floral characters and economic importance of *any one* of the following families :
 - i. Asteraceae.
 - ii. Poaceae.
 - iii. Apiaceae.
 - (c) What is Biosystematics ? Give examples and point out, in what essential ways numerical taxonomy has proved useful in the study of systematics.
 - (d) Discuss the outline of Bentham and Hooker system of plant classification. Why is this classification usually used for classifying herbarium specimens ?
 - (e) Discuss the method of illustrating the evolutionary relationship amongst the angiospermic taxa.
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