

Total No. of printed pages = 15

63/2 (SEM-4) BOT 402 (Opt 1,2,5)

2022

BOTANY

(Theory Paper)

Paper Code : BOT 402 (Opt-1)

(Angiosperm Taxonomy – II)

Full Marks – 80

Time – Three hours

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

1. Choose the correct answer : $1 \times 6 = 6$

(i) Which of the following taxonomic aids can give a comprehensive compiled information of any genus or family at a time ?

- (a) Botanical keys
- (b) Monograph
- (c) Flora
- (d) Herbarium

[Turn over

- (ii) Random Amplified Polymorphic DNA (RAPD) is a
- (a) Restriction digestion based method
 - (b) DNA sequencing based method
 - (c) PCR based method
 - (d) Polymorphism method
- (iii) The full form of 'IPNI' is
- (a) International Plant Name Index
 - (b) Indian Plant Nomenclature Index
 - (c) International Plant Nomenclature Index
 - (d) Indian Plant Name Index
- (iv) Geographic Information System (GIS) deals with
- (a) Numeric data
 - (b) Binary data
 - (c) Spatial data
 - (d) Complex data

- (v) A comparium is composed of one or more _____
- (a) Ecospecies
 - (b) Cenospecies
 - (c) Species
 - (d) Genus
- (vi) 'A hand book of Field and Herbarium Techniques' is authored by
- (a) R. R. Rao
 - (b) S. K. Jain
 - (c) S. K. Jain and R. R. Rao
 - (d) R. R. Rao and Verma
2. Answer the following short questions : $2 \times 5 = 10$
- (i) What is Digital Herbaria ? Give examples.
 - (ii) Distinguish between GIS and GPS.
 - (iii) What is RFLP's ? Mention its specific use.
 - (iv) Mention two phylogenetic software used in :
Plant systematics.
 - (v) What is protologue ? Give an example.

3. Write short notes on any six of the following :
 $5 \times 6 = 30$

- (i) Vegetative morphology in Taxonomy
- (ii) Application of PCR
- (iii) Preparation of Flora
- (iv) Plant introduction
- (v) Construction of cladograms
- (vi) e Flora and its importance
- (vii) Flora of British India (FBI)
- (viii) Application of Remote sensing.

4. Answer any two of the following questions :
 $10 \times 2 = 20$

- (i) Define biosystematics. Mention the steps of biosystematic study. Briefly discuss the categories of biosystematics. $2+3+5=10$
- (ii) Discuss the scientific methods of higher plant collection. Add the importance of herbaria in plant Taxonomy. $5+5=10$
- (iii) Write short notes on : $5 \times 2 = 10$
 - (a) Manuals
 - (b) Revisionary study.

5. Answer any one of the following long questions :
 $14 \times 1 = 14$

- (i) What is Recent trends in plant Taxonomy ? Discuss the systematic evidences of anatomical and Palynological characters in Plant Taxonomy. $2+12=14$
- (ii) Define Botanical keys. State the types of Botanical keys. Briefly discuss dichotomous keys with examples. $2+4+8=14$