

2019

BOTANY

(Major)

Paper : 4-2

(**Plant Taxonomy**)

Full Marks : 60

Time : 3 hours

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

1. Answer the following : 1×7=7
- (a) Which system of plant classification is followed in Indian herbaria?
 - (b) In which year was the *Origin of Species* written?
 - (c) What is pseudostem?
 - (d) Who first used the term 'taxon'?
 - (e) Where was 19th IBC (ICBN) held?
 - (f) What is meant by laminar stamen?
 - (g) What is ICNCP?

2. Answer the following : 2×4=8

- (a) What is the significance of pappus?
- (b) Write the principle of APG system.
- (c) What is phenetic relationship?
- (d) Differentiate between holotype and lectotype.

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

- (a) Explain the role of alkaloids and steroids in taxonomy.
- (b) Discuss the economic importance of Poaceae.
- (c) Write a note on *nomina conservanda*.
- (d) Describe the floral peculiarities in the family Apiaceae.
- (e) "A unique type of insect pollination is seen in a member of Liliaceae." Discuss.

4. Answer any *three* of the following : 10×3=30

- (a) What is natural system of classification? Give the detailed outline of Bentham and Hooker system of classification. How many natural orders were present in this classification? 2+7+1=10

- (b) What is taximetrics? Give a brief account on the principles of numerical taxonomy. Why is numerical taxonomy useful in taxonomic classification? $2+6+2=10$
- (c) Mention the salient features of any *two* of the following families with their systematic position : $5 \times 2 = 10$
Lamiaceae, Cucurbitaceae, Musaceae, Euphorbiaceae
- (d) Write explanatory notes on : $5+5=10$
(i) Species concept
(ii) Role of priority and its limitation
- (e) Describe briefly the characteristics of the earliest angiosperms as per your syllabus. Mention its phylogeny and affinities. 10
- (f) Why is the family Orchidaceae regarded as advanced among monocots? Define pollinium and rostellum. $8+2=10$
