

3 (Sem-4) BOT M 2

2017

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) What is meant by 'Ordines anomali'?
- (b) Who coined the term 'New systematics'?
- (c) Define the term resupination.
- (d) Why is the scientific name *Malus malus* treated as illegitimate?
- (e) Define microspecies.
- (f) Why is the classification system of Bentham and Hooker termed as natural?
- (g) What do you understand by epiphyllous stamen?

2. Answer the following : 2×4=8
- (a) Differentiate between Nomenclatural synonyms and Taxonomic synonyms.
  - (b) Describe the calyx of Asteraceae.
  - (c) Write the differences between homology and analogy.
  - (d) Describe briefly the characteristics of earliest angiosperms according to Takhtajan (1980).
3. Answer the following (any three) : 5×3=15
- (a) Write a note on corolla of Fabaceae with suitable diagram.
  - (b) Describe the scope of BioCode.
  - (c) What is the concept of family in plant classification?
  - (d) Give a brief account on evolutionary status of androecium in flowering plants.
  - (e) Describe the importance of floras and monographs in taxonomic studies.
4. Answer the following (any three) : .10×3=30
- (a) What is rational classification? Give detailed outline of Bentham and Hooker system of classification. "It is one of the most popular systems of classification followed in many herbaria of the world even today." Justify the statement.
- 2+6+2=10

- (b) Describe the principles of ICBN. Explain briefly the rules of priority and its limitation. Why are certain names of the rank of family and below conserved?  
4+5+1=10
- (c) Define rostellum and pollinium. Why is the family Orchidaceae regarded as most highly evolved in the floral specialization among the petaloid monocotyledons?  
2+8=10
- (d) Write explanatory notes on : 5+5=10  
(i) Type concept  
(ii) Taxometrics—its meaning, merits and demerits
- (e) Discuss the role of palynology in solving taxonomic problems. Mention suitable examples. 10
- (f) Compare Fabaceae with Caesalpiniaceae taking the following points in consideration :  
(i) Systematic position according to Bentham and Hooker  
(ii) Salient features  
(iii) Floral formula  
Write scientific names of pea and tamarind species. 1+6+1+2=10

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