

**2017**

**M.Sc. 2nd Semester Examination**

**BOTANY**

**PAPER—BOT-201**

*Full Marks : 40*

*Time : 2 Hours*

*The figures in the margin indicate full marks.*

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

*Illustrate the answers wherever necessary.*

*Answer all questions.*

1. Answer any *ten* of the following : 10×1

- (a) What is meant by acronym 'CAL' ?
- (b) Define convergent and divergent evolution.
- (c) What is Cladogram ?

*(Turn Over)*

- (d) What is phylocode ?
- (e) What are *sensu lato* and *sensu stricto* ?
- (f) What is plesiomorphy ? Give an example.
- (g) What is typification ? Who first proposed it ?
- (h) Define eudicots. Give two example of eudicots.
- (i) What is monogeneric taxa ? Give an example.
- (j) What is magnolian and paleoherb hypothesis ? Who first proposed it ?
- (k) Define narrowly endemic species (NES). Give an example.
- (l) Define eco- and coenospeics. Give an example from each.
- (m) Define neo-type. Give an example.
- (n) Mention the importance of *Amborella trichopoda*.
- (o) What is the laminar stamen ? Where it is found ?

2. Write short notes on any *two* of the following : 2×5
- (a) Justification of renaming ICBN from ICN.
- (b) Biological significance of *Archeofructus*.
- (c) Role of ultrastructural study in solving taxonomic problems.
- (d) Evolutionary status of Liliidae.
3. Answer any *two* question of the following : 10×2
- (a) Define numerical taxonomy. Why this classification is called neo-Adansonian classification? Mention its principles. What is binary and multistate attributes? Draw a multistate phonetic table which is helpful for numerical analysis. 1+2+2+2+3
- (b) Characterise subclass caryophyllidae. Mention the affinities among the orders of this taxon. Comment on the role of pigments in the rearrangement of order Caryophyllales. Why this subclass is called 'Centrospermae'? 3+3+2+2

(c) What is bio-systematics ? Write down the principles of bio-systematics. What are the categories of bio-systematics ? Mention in detail of these categories with the help of suitable examples. What are the basic differences between classical taxonomy and biosystematics ?

2+3+3+2

(d) Define herbaria. What are the basic difference between traditional and digital herbaria ? Name two traditional and two digital herbaria of the world and those of India. What are the importance of digital herbaria ?

2+3+2+3

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