

This question paper contains 4 printed pages.

V-2000-03

Your Roll No.

1302

A

B.Sc. (Hons.)/III

BOTANY—Paper VII

(Plant Systematics and Phytogeography)

(Admissions of 2004 and after)

Time : 3 Hours

Maximum Marks : 38

*(Write your Roll No. on the top immediately
on receipt of this question paper.)*

Attempt Five questions in all, including

Question No. 1 which is compulsory.

1. (a) Define the following (any *two*):

(i) Homonym

(ii) Syntype

(iii) Taxonomic species

(iv) Ecotype

2

[P.T.O.]

(b) Match the taxa in Column A with feature in Column B :

Column - A	Column - B	
(i) Winteraceae	(1) Epigynous flowers	
(ii) Chenopodiaceae	(2) Monochlamydeous flowers	
(iii) Asclepiadaceae	(3) Vesselless family	
(iv) Cucurbitaceae	(4) Pollinia	2

(c) What do the following stand for :

(i) Sp. Pl.	
(ii) nom. nud.	
(iii) nom. cons.	
(iv) Wall.	2

2. Write short notes on (any *four*) :

- (i) Principle of typification
- (ii) Theory of continental drift
- (iii) Biocode
- (iv) Concept of primitive flower
- (v) Role of computers in identification of plants. 8

3. Differentiate between (any four) : *(any four)*
- (i) Cluster diagram and bubble diagram : *(any two)*
 - (ii) Phylogeny and evolution *(any two)*
 - (iii) Homology and analogy *(any two)*
 - (iv) Flora and vegetation *(any two)*
 - (v) Sympatric and allopatric speciation *(any two)*
 - (vi) Taxonomic group and taxonomic category *(any two)* 8
4. Interpret the following :
- (i) *Aponogeton natans* (Linn.) Engle & Krause in Pflanzl. 24 : 11, 1906 2
 - (ii) *Feronia limonia* (Linn.) Swingle 1914
Schinus limonia (Linn.) 1753 3
Feronia elephantum Correa 1800
 - (iii) *Acacia leucophloea* (Roxb.) Willd 1806
Mimosa leucophloea Roxb. 1800 3
5. Write briefly the salient features of Takhtajan's system of classification. Why is it considered a natural system ? 6+2=8

6. (a) What are Adansonian principles ? How are they applicable in numerical taxonomy ? 4
- (b) Write a brief account of flora and vegetation of Delhi. 4
7. (a) How does the geography of India affect its vegetation ? Explain giving suitable examples. 4
- (b) Write a short account of use of cytological or anatomical characters in taxonomy. 4