

2016
BOTANY
PAPER : BOT 201
PLANT TAXONOMY AND ECONOMIC BOTANY

Full Mark : 80

Time : 3 Hrs

Figures in the right hand margin indicate full marks for the question

Q1). Answer the following Multiple Choice Questions
(any Six) 1×6=6

(i) Which one of the following is not permissible according to the rules of botanical nomenclature

- (a) Tautonym (b) Synonym
(c) Autonym (d) Basionym

(ii) Match List-I (Substance) with List-II (Plant parts as source) and select the correct answer using the codes given below the list:

List-I

List-II

- | | |
|---------------|------------------|
| A. Colchicine | 1. Leaves |
| B. Ephedrine | 2. Seeds |
| C. Menthol | 3. Bark |
| D. Quinine | 4. Stem and leaf |

(1)

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Codes:

| | A | B | C | D |
|-----|---|---|---|---|
| (a) | 1 | 3 | 4 | 2 |
| (b) | 1 | 2 | 3 | 4 |
| (c) | 2 | 4 | 1 | 3 |
| (d) | 2 | 4 | 3 | 1 |

(iii) Which of the following statement is Not correct for the family Orchidaceae

- (a) Polyphyletic origin
- (b) Monophyletic origin
- (c) It is a natural group
- (d) In APG III Classification the family placed under order Asparagales

(iv) Consider the following floral characteristics:

1. Petals are five and free
2. Stamens are indefinite and fused in one group
3. Gynoecium is bicarpellary Which of these are the characteristics of the family Malvaceae?

- (a) 1,2 and 3
- (b) 1 and 2
- (c) 1 and 3
- (d) 2 and 3

(v) Jute fibres are part of:

- (a) Xylem
- (b) Phloem
- (c) Epidermis
- (d) Cortex

(vi) When the generic epithet and the specific epithet in a binomial have exactly the same spelling, the

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binomial is known as:

- (a) Autonym
- (b) Basionym
- (c) Synonym
- (d) Tautonym

(vii) Which one of the following clusters of families is identified due to the presence of zygomorphic flowers and bicarpellary gynoecium:

- (a) Acanthaceae, Fumariaceae, Lamiaceae
- (b) Boraginaceae, Convolvulaceae, Solanaceae
- (c) Malvaceae, Tiliaceae, Cucurbitaceae
- (d) Cuscutaceae, Solanaceae, Verbenaceae

Q2). Answer the very short type Questions $1 \times 3 = 3$

- a. What do you mean by OTU?
- b. The numerical taxonomy is also known as _____.
- c. The classical taxonomy is also known as _____.

Q3). Answer the following questions (any Six) $2 \times 6 = 12$

- a. What is Synonym and Tautonym? Give specific examples.
- b. Defined 'Nomina conservanda'? Mention its significance.
- c. What is 'Nomen nudum'? Give an example.
- d. Differentiate between "Monograph" and "Manual".
- e. What is legitimate and illegitimate name? Give specific examples.

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- f. Write the nomenclatural role on Variety and Hybrid.
- g. Differentiate between "Lectotype" and "Neotype".

Q4). Write a short note on any Four of the following

5 × 4 = 20

- a. Role of NTFP's in rural poor
- b. Wonders crop Millets
- c. Centre of origin.
- d. Economically important plants of family Poaceae
- e. ICN history
- f. Post Linneauen system of classification

Q5). Answer the following questions (any Three) 3 × 9 = 27

- a. Write critically on the contribution of Phytochemistry in Biosystematics. 9
- b. Give an account of the methods of preparation of Herbarium specimens. Discuss the role of herbaria in teaching and learning. 5+4=9
- c. Discuss the botany, ecology, cultivation methods and uses of *Aquilaria mallacensis*. 9
- d. Discuss the botany, ecology, cultivation methods and uses of *Oryza sativa* 9

Q6). Answer the following questions (any One) 12

- a. Briefly discuss about the phylogeny and floral evolution of Orchidales.
- b. Briefly discuss about the phylogeny and floral evolution of Magnoliales.