

(iv) Homology and Analogy

(v) Phenogram and Cladogram

(vi) Taxonomic category and taxonomic group

4. (a) Discuss the role of Palynology in plant systematics with 2 suitable examples. (5)

(b) Discuss Biological species concept. (5)

(c) Discuss coevolution of angiosperm and animals with 2 suitable examples. (5)

5. (a) Outline the system of classification proposed by Bentham and Hooker (Up to series). (5)

(b) Define a Clade. What are the major clades in APG IV classification? (5)

(c) Interpret the following (any five): (5×1)

(i) *X Triticosecale*

(ii) *Delphinium viscosum* Hook. et. Thomson

(iii) *Acacia nilotica* (L.) Delile ssp. *nilotica*

(iv) *Gossypium tomentosum* Nutt. ex Seem.

(v) *Rosa floribunda* 'Blessings'

(vi) *Perityle vigilans* Spellenb. & A.M. Powell, sp. nov.

(1000)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1233

F

Unique Paper Code : 2162011203

Name of the Paper : Plant Systematics

Name of the Course : B.Sc. (Hons.) Botany – DSC-5

Semester : II

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **four** questions in all including question no. 1 which is compulsory.
3. Attempt all parts of the questions together.

1. (a) Fill in the blanks (any five) (5×1=5)

(i) _____ is known as the Father of Genus Concept.

(ii) _____ is the author of *Theorie elementaire de la botanique*.

P.T.O.

- (iii) The occurrence of similar features in different species with common ancestry is known as _____.
- (iv) The standard size of a herbarium sheet is _____.
- (v) The starting date of Botanical Nomenclature is _____.
- (vi) The binomial with identical generic name and specific epithet is known as _____.
- (vii) Takhtajan represented his system of classification in the form of a _____ diagram.

(b) Expand the following (**any five**) (5×1=5)

- (i) nom. nud.
- (ii) APG
- (iii) OTU
- (iv) ICNCP
- (v) IAPT
- (vi) sp. nov.

(c) Answer the following (**any five**) : (5×1=5)

- (i) Example of generic name derived from name of a planet.

- (ii) Place where first International Botanical Congress was held in 1867.
- (iii) Genera plantarum was authored by?
- (iv) Type genus of the family Arecaceae
- (v) The alternate name of the family Graminae
- (vi) Sexual system of classification was proposed by?

2. Write short notes on **any three** of the following :
(3×5=15)

- (i) Herbaceous origin theory of angiosperms
- (ii) Principles of ICN_{afp}
- (iii) Valid publication of names
- (iv) Importance of Flora in the field of plant systematics
- (v) Contributors of phylogenetic systems of classification

3. Differentiate between the following (**any five**)
(5×3=15)

- (i) Sibling species and Compilospecies
- (ii) Holotype and Lectotype
- (iii) Apomorphy and Plesiomorphy