

1233

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- (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* Spellb. & A.M. Powell, sp. nov.

(1000)

[This question paper contains 4 printed pages.]

21 JUL 2023

Your Roll No. ....

Sr. No. of Question Paper : 1233

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**

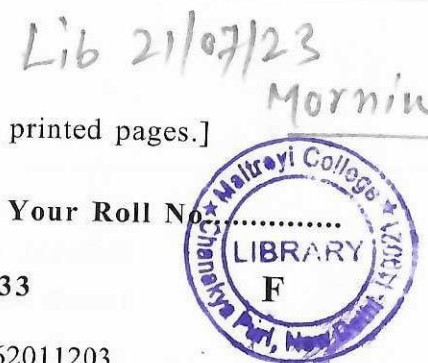
- Write your Roll No. on the top immediately on receipt of this question paper.
- Attempt **four** questions in all including question no. 1 which is compulsory.
- Attempt all parts of the questions together.


- (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.



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- (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<sub>afp</sub>
- (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