



WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 4th Semester Examination, 2021

BOTACOR10T-BOTANY (CC10)

PLANT SYSTEMATICS

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

1. Answer the following questions: 1×6 = 6
 - (a) What is monotypic family?
 - (b) Who are the authors of 'Genera Plantarum' (1862-1883)?
 - (c) Who introduced Binomial system of Nomenclature?
 - (d) What is Morphocline?
 - (e) Expand CNH.
 - (f) What do you mean by *nomen nudum*?

2. Answer any **eight** questions from the following: 3×8 = 24
 - (a) Write a note on effective and valid publication. 3
 - (b) What is Priority of Publication? Write the acronym of Central National Herbarium. 2+1
 - (c) State the cytological features that are used for taxonomic delimitation with suitable examples. 3
 - (d) Discuss the concept of OTU and OEU in taxonomy and Systematics. 3
 - (e) What is taxonomic hierarchy? Arrange the following according to hierarchy: 2+1
Tribe, Order, Genus, Class, Family
 - (f) What is typification in taxonomy? Differentiate between Holotype and Isotype. 1+2
 - (g) Discuss briefly the function of Botanical Garden in taxonomic study. 3
 - (h) Give a brief idea of taxonomic and evolutionary species concept. 1 $\frac{1}{2}$ + 1 $\frac{1}{2}$
 - (i) What is the importance of herbaria in taxonomic studies? Arrange the following steps in correct sequence: 2+1
labelling, pressing, collection, drying, mounting, poisoning
 - (j) What is a Clade? Differentiate between Cladogram and Phenogram. 1+2

- (k) Distinguish between monographs and journals and write their significance in taxonomy. 2+1
- (l) Discuss briefly the advantages of e-flora and virtual herbarium. 3
3. Answer any *two* questions from the following: 5×2 = 10
- (a) What is author citation? Mention different types of multiple author citation. 1+4
- (b) Mention the basic differences between natural and phylogenetic system of classification. Give an outline of Engler and Prantl's system of classification of seed plants up to subclass with characters. 2+3
- (c) What is Numerical Taxonomy? Mention the major advantages and disadvantages of Numerical Taxonomy. 1+4
- (d) Differentiate between Monophyly and Polyphyly. What do you understand by 'primitive' and 'advanced' character? 3+2

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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