Reg. No ..... Name **23P2034**

M. Sc. DEGREE END SEMESTER EXAMINATION : MARCH 2023

SEMESTER 2 : BOTANY

COURSE : **21P2BOTT07: PLANT ANATOMY, ANGIOSPERM SYSTEMATICS AND MORPHOLOGY**

(For Regular - 2022 Admission and Supplementary - 2021 Admission)

Duration : Three Hours Max. Weights: 30

PART A

Answer any 8 questions **Weight: 1**

1.	Explain the scope and significance of plant anatomy.	(U, CO 3, CO 4, CO 5)
2.	How do you differentiate a salt gland from other secretory glands?	(U)
3.	Differentiate between vascular and cork cambium.	(U, CO 4, CO 5, CO 6)
4.	Explain the floral vasculature of Aquilegia.	(An)
5.	What are the different types of roots in epiphytes?	(U, CO 3)
6.	Explain the applications of anatomy in pharmacognosy.	(U)
7.	What is an ideal species?	(U)
8.	What is the use of 'ex' in the author citation?	(R)
9.	What is Molecular taxonomy?	(U)
10.	What is Haplostemonous condition?	(U)

(1 x 8 = 8)

PART B

Answer any 6 questions **Weights: 2**

11.	Briefly explain the theories of root apex meristem.	(U, CO 5)
12.	Explain anomalous secondary growth in dicot citing suitable example.	(U, CO 5)
13.	With suitable illustrations, describe the classification of stomata.	(U, CO 4, CO 5, CO 6)
14.	Explain the nodal anatomy in plants.	(U, CO 6)
15.	Write a note on dehiscence of fruits.	(U)
16.	Explain the biosystematic and evolutionary species concept.	(U)
17.	What is the correct name of the plant when treated under the genus Hydnocarpus? Hydnocarpus wightiana Blume, Rumph. 4: 22. 1848. Munnicksaia laurifolia Dennst., Schlues. Hort. Ind. M&b. 27. 1828. Chilmoria pentandra Buch.-Ham., Trans. Linn. Soc. London 13. 501. 1822. Hydnocarpus laurifolia (Dennst.) Sleum. in Engl., Bot. Jahrb. Syst. 69: 33. 1938. Hydnocarpus pentandra (Buch.-Ham.) Oken, Allg. Naturf. 3: 1381. 1841.	(A)
18.	What is Aestivation? Explain different types of perianth aestivation.	(U)

(2 x 6 = 12)

PART C

Answer any 2 questions **Weights: 5**

19.	Explain the different plant fibers and their structure and the commercial importance of coir and cotton.	(An)
20.	Explain the morphological and structural adaptations in hydrophytes and xerophytes.	(A, CO 3)
21.	What is the importance of chemotaxonomy in plant systematics? Explain with suitable examples.	(U)
22.	Explain the following: (a) Typification, and (b) Retention and rejection of names.	(R)

(5 x 2 = 10)

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 3	Understand morphological features, inflorescence, and fruit types of angiosperms	U	1, 5, 20	7
CO 4	Know and carry out the plant anatomical specimen preparations	U	1, 3, 13	4
CO 5	Understand and compare wood anatomy, wood types, plant fibers, and secretory tissues	U	1, 3, 11, 12, 13	8
CO 6	Analyze floral, nodal, and reproductive anatomy of plants	An	3, 13, 14	5

Cognitive Level (CL): Cr - CREATE; E - EVALUATE; An - ANALYZE; A - APPLY; U - UNDERSTAND; R - REMEMBER;