Reg. No. | | | | | | | | |

G. VENKATASWAMY NAIDU COLLEGE (AUTONOMOUS), KOVILPATTI – 628 502.

UG DEGREE END SEMESTER EXAMINATIONS - APRIL 2025.

(For those admitted in June 2023 and later)

PROGRAMME AND BRANCH: B.Sc., BOTANY

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
III	PART - III	CORE - 5	U23BO303	PLANT DIVERSITY III-BRYOPHYTES AND PTERIDOPHYTES

Date & Session:24.04.2025/AN **Time: 3 hours** **Maximum: 75 Marks**

Course Outcome	Bloom's K-level	Q. No.	SECTION – A (10 X 1 = 10 Marks) Answer ALL Questions.
CO1	K1	1.	Which of the following is NOT a characteristic of Bryophytes? (a) Non-vascular plants (b) Presence of true roots (c) Dependence on water for reproduction (d) Presence of a thallus or leafy structure
CO1	K2	2.	Which of the following is an ecological importance of Bryophytes? (a) Food production (b) Pollution indicators and monitoring (c) Soil erosion prevention (d) Biofertilizer production
CO2	K1	3.	Which genus is an example of the class Hepaticopsida in Bryophytes? (a) Funaria (b) Marchantia (c) Anthoceros (d) Sphagnum
CO2	K2	4.	In which class of Bryophytes does the plant body consist of a flattened thallus? (a) Bryopsida (b) Anthocerotopsida (c) Hepaticopsida (d) Mosses
CO3	K1	5.	Which of the following terms refers to the production of spores of two different sizes in Pteridophytes? (a) Apogamy (b) Apospory (c) Homospory (d) Heterospory
CO3	K2	6.	Which of the following Pteridophytes shows the phenomenon of apogamy, where the embryo develops without fertilization? (a) Lycopodium (b) Psilotum (c) Equisetum (d) Adiantum
CO4	K1	7.	Which of the following plants is an example of the class Psilotopsida in Pteridophytes? (a) Lycopodium (b) Psilotum (c) Adiantum (d) Equisetum
CO4	K2	8.	Which of the following Pteridophytes has a unique feature of jointed stems? (a) Psilotum (b) Lycopodium (c) Equisetum (d) Adiantum
CO5	K1	9.	Which of the following is an economic importance of Pteridophytes? (a) Food (b) Biofertilizer (c) Fiber (d) All of the above
CO5	K2	10.	Stelar evolution in Pteridophytes refers to the evolution of which part of the plant? (a) Root system (b) Stem structure (c) Vascular tissue (d) Leaf arrangement

Course Outcome	Bloom's K-level	Q. No.	**SECTION – B (5 X 5 = 25 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K3	11a.	Explain the general characters of Bryophytes. **(OR)**
CO1	K3	11b.	Discuss the economic importance of Bryophytes.
CO2	K3	12a.	Describe the asexual reproduction of Marchantia. **(OR)**
CO2	K3	12b.	Explain the sexual reproduction of *Anthoceros.*
CO3	K4	13a.	Discuss the general characteristics of Pteridophytes. **(OR)**
CO3	K4	13b.	Describe the processes of Apogamy and Apospory in Pteridophytes.
CO4	K4	14a.	Discuss the morphological features of Equisetum. **(OR)**
CO4	K4	14b.	Explain the asexual reproduction of Pteropsida.
CO5	K5	15a.	Discuss the stelar evolution in Pteridophytes and explain its types. **(OR)**
CO5	K5	15b.	Describe the ecological and economic importance of Pteridophytes.

Course Outcome	Bloom's K-level	Q. No.	**SECTION – C (5 X 8 = 40 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K3	16a.	Explain in detail the classification up to the order level according to Rothmaler (1951). **(OR)**
CO1	K3	16b.	Discuss the ecological importance of Bryophytes in detail, focusing on their role as pollution indicators and their use in ecological monitoring.
CO2	K4	17a.	Describe the detailed structure and sexual reproduction of Anthocerotopsida, **(OR)**
CO2	K4	17b.	Compare the life cycle patterns of Hepaticopsida and Bryopsida,
CO3	K4	18a.	Explain the classification system of Pteridophytes as proposed by Sporne (1966). **(OR)**
CO3	K4	18b.	Describe the concepts of Homospory and Heterospory in Pteridophytes.
CO4	K5	19a.	Explain in detail the morphology and anatomy of the class Lycopsida. **(OR)**
CO4	K5	19b.	Discuss the morphology and anatomy of Adiantum.
CO5	K5	20a.	Discuss the evolution of stelar types in Pteridophytes and their significance. **(OR)**
CO5	K5	20b.	Explain the various economic uses of Pteridophytes in food, fibre, and horticulture.