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

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

UG DEGREE END SEMESTER EXAMINATIONS - APRIL 2025.

(For those admitted in June 2021 and later)

PROGRAMME AND BRANCH: B.Sc., BOTANY

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
II	PART-III	CORE	U21BO203	PTERIDOPHYTES, GYMNOSPERM & PALEOBOTANY

Date & Session:23.04.2025/FN **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 characteristic of Pteridophytes? a) They produce seeds. b) They are vascular plants that reproduce via spores. c) They lack vascular tissue. d) They have flowers for reproduction.
CO1	K2	2.	Which part of *Psilotum* is primarily responsible for reproduction? a) Flowers b) Cones c) Spores d) Seed
CO2	K1	3.	Which of the following Pteridophytes produces spores for reproduction? a) Lycopodium b) Pinus c) Moss d) Gnetum
CO2	K2	4.	Which stelar structure is found in *Lycopodium*? a) Siphonostele b) Protostele c) Amphiphloic d) None of the above
CO3	K1	5.	Which of the following is a characteristic of Gymnosperms? a) They have flowers. b) They produce seeds not enclosed in an ovary. c) They reproduce by spores. d) They do not have vascular tissue.
CO3	K2	6.	Which of the following Gymnosperms produces male and female cones? a) Pinus b) Lycopodium c) Marselia d) Psilotum
CO4	K1	7.	Gymnosperms are most closely related to: a) Angiosperms b) Pteridophytes c) Bryophytes d) Algae
CO4	K2	8.	The geological time scale helps scientists to: a) Identify the exact age of fossils b) Understand the evolutionary timeline of life on Earth c) Categorize environmental factors for each period d) All of the above
CO5	K1	9.	Which of the following is a fossil Gymnosperm? a) Rhynia b) Lyginopteris c) Pinus d) Lycopodium
CO5	K2	10.	The fossil *Rhynia* is important because it: a) Represents one of the earliest vascular plants. b) Is the first Gymnosperm fossil discovered. c) Shows the origin of flowering plants. d) Represents a fern species.

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.	Describe the general characteristics of Pteridophytes. **(OR)**
CO1	K3	11b.	Explain the classification of Pteridophytes according to Smith.
CO2	K3	12a.	Explain the structure and reproduction of Lycopodium and its significance. **(OR)**
CO2	K3	12b.	Discuss the Stelar Evolution in Pteridophytes.
CO3	K4	13a.	Compare and contrast the general characteristics of Gymnosperms and Angiosperms. **(OR)**
CO3	K4	13b.	Explain the morphology of *Pinus*.
CO4	K4	14a.	Compare the affinities between Gymnosperms and Pteridophytes. **(OR)**
CO4	K4	14b.	Evaluate the significance of Paleobotany in understanding the evolution of plants.
CO5	K5	15a.	Discuss the significance of Rhynia as a fossil Pteridophyte and its role in understanding plant evolution. **(OR)**
CO5	K5	15b.	Explain the role of Lyginopteris in the study of fossil Gymnosperms.

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.	Discuss the structure, reproduction, and life history of Psilotum. **(OR)**
CO1	K3	16b.	Analyse the economic importance of Pteridophytes.
CO2	K4	17a.	Describe the structure, life cycle, and reproduction of Marselia. **(OR)**
CO2	K4	17b.	Analyze the economic importance of Lycopodium and Marselia.
CO3	K4	18a.	Criticize the male and female cone of Gnetum. **(OR)**
CO3	K4	18b.	Evaluate the evolutionary significance of Gymnosperms.
CO4	K5	19a.	Analyze the similarities and differences between Gymnosperms and Angiosperms. **(OR)**
CO4	K5	19b.	Discuss the significance of the Geological Time Scale and how it aids in the study of Paleobotany.
CO5	K5	20a.	Analyze the contribution of Indian Paleobotanists, particularly Birbal Sahni, to the field of Paleobotany. **(OR)**
CO5	K5	20b.	Evaluate the importance of fossil deposits in India and their role in reconstructing ancient environments.