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

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

UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2025.

(For those admitted in June 2023 and later)

PROGRAMME AND BRANCH: B.Sc., BOTANY

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
V	PART - III	CORE - 10	U23BO506	PLANT ANATOMY AND EMBRYOLOGY

Date & Session: 06.11.2025/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.	Promeristem is also called as _____ meristem. a) primordial b) lateral c) embryonic d) intercalary
CO1	K2	2.	The type of sclerenchyma with elongated and tapering ends is. a) sclereids b) fibres c) stone cells d) sieve tubes
CO2	K1	3.	Casparian strips are found in. a) epidermis b) cortex c) endodermis d) pericycle
CO2	K2	4.	The vascular bundle in dicot root is. a) conjoint and collateral b) radial and exarch c) bicollateral d) endarch
CO3	K1	5.	Annual rings in trees are formed due to. a) activity of apical meristem b) seasonal activity of vascular cambium c) formation of cork d) root pressure
CO3	K2	6.	Heart wood is also known as. a) alburnum b) duramen c) phellem d) phellogen
CO4	K1	7.	The common type of pollen tetrad arrangement is. a) polyhedral b) tetrahedral c) linear d) isobilateral
CO4	K2	8.	The basal part of the ovule where integuments originate is. a) micropyle b) chalaza c) nucellus d) funicle
CO5	K1	9.	Free nuclear and cellular endosperm are seen in. a) Mango b) Maize c) Coconut d) Grass
CO5	K2	10.	Pollination by birds is known as. a) malacophily b) ornithophily c) entomophily d) anemophily

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.	Brief the different types of simple tissues and their functions.
			(OR)
CO1	K3	11b.	Recall the ultrastructure of xylem and its components.
CO2	K3	12a.	Explain the primary structure of dicot stem with a clear diagram.
			(OR)
CO2	K3	12b.	Give an account on epidermal tissue system.
CO3	K4	13a.	Illustrate the anomalous secondary thickening in *Dracaena*.
			(OR)
CO3	K4	13b.	Describe the structure and types of stomata with suitable illustrations.
CO4	K4	14a.	Narrate the steps in development of male gametophyte.
			(OR)
CO4	K4	14b.	Analyze the various types of embryo sacs and their cellular organization.
CO5	K5	15a.	Comment on double fertilization and triple fusion.
			(OR)
CO5	K5	15b.	Write short notes on apomixis.

Course Outcome	Bloom's K-level	Q. No.	**SECTION – C (5 X 8 = 40 Marks)** **Answer ALL Questions choosing eithyver (a) or (b)**
CO1	K3	16a.	Discuss the different types of meristems in plants.
			(OR)
CO1	K3	16b.	Relate the theories of shoot and root apices.
CO2	K4	17a.	Compare the anatomy of dicot and monocot leaf.
			(OR)
CO2	K4	17b.	Explain the major nodal types with suitable illustrations.
CO3	K4	18a.	Illustrate the normal secondary thickening in dicot stem.
			(OR)
CO3	K4	18b.	Describe the anomalous secondary growth in *Boerhavia.*
CO4	K5	19a.	Examine the structure and development of anther.
			(OR)
CO4	K5	19b.	Categorize the different types of ovules with clear diagrams.
CO5	K5	20a.	Interpret the structure of endosperm and add a note on its types.
			(OR)
CO5	K5	20b.	Expound the development of dicot embryo studied by you.