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

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

UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2024.

(For those admitted in June 2021 and later)

PROGRAMME AND BRANCH: B.Sc., BOTANY

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
VI	PART-III	CORE	U21BO611	PLANT PHYSIOLOGY

Date & Session: 05.11.2024 / 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.	When a cell is placed in a solution and becomes plasmolysed, the solution is: (a) Hypotonic (b) Hypertonic (c) Isotonic (d) Both b and c
CO1	K1	2.	Cohesion tension theory is related to (a) Respiration (b) transpiration (c) Photosynthesis (d) Ascent of Sap.
CO2	K2	3.	The metal ion involved in opening and closing of stomata. (a) Manganese (b) Mangnesium c) Zinc (d) Potassium
CO2	K2	4.	Identify the micronutrient for plants amongst the following. a) Potassium b) Phosphorus c) Iron d) Sulphur
CO3	K3	5.	In C3 cycle CO2 acceptor is (a)Phosphoglyceric acid (b) Phospho ethylene glycol (c) RuBP (d) Pyruvic acid
CO3	K3	6.	Which one of the following would not be a limiting factor for photosynthesis? a) Chlorophyll b)O_2 c) CO_2 d)Light
CO4	K4	7.	Richest source of gibberellins in higher plants is _____ (a)root (b) stem (c) Leaf (d) Seed
CO4	K4	8.	_____ is responsible for root initiation. a) cytokinins b) gibberellins c) auxin d) kinetin
CO5	K5	9.	The site of photophosphorylation is _____. a) chloroplast b) mitochondria c) endoplasmic reticulum d) nucleus
CO5	K5	10.	_____ plant senescence hormone is responsible for fruit ripening. a) Salicylic acid b) Ethylene c) Auxin d) Cytokinin

Course Outcome	Bloom's K-level	Q. No.	**SECTION – B (5 X 5 = 25 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	**K1**	**11a.**	List out the significance of Osmosis in Plants **(OR)**
CO1	**K1**	**11b.**	Outline the process of imbibition and its importance.
CO2	**K2**	**12a.**	Write short notes on Munch's mass flow hypothesis. **(OR)**
CO2	**K2**	**12b.**	Elaborate the mechanism of passive absorption.
CO3	**K3**	**13a.**	Write the difference between C3 and C4 cycle. **(OR)**
CO3	**K3**	**13b.**	Identify the factors affecting photosynthesis.
CO4	**K4**	**14a.**	Discuss the different phases of growth. **(OR)**
CO4	**K4**	**14b.**	Write the difference between Gibberellin and Cytokinin
CO5	**K5**	**15a.**	Comment on photoperiodism. **(OR)**
CO5	**K5**	**15b.**	Comment on Senescence.
Course Outcome	**Bloom's K-level**	**Q. No**	**SECTION – C (5 X 8 = 40 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	**K1**	**16a.**	Write in detail about the water relations in plants. **(OR)**
CO1	**K1**	**16b.**	Describe micro nutrient and its role..
CO2	**K2**	**17a.**	Explain the importance of water absorption in plants. **(OR)**
CO2	**K2**	**17b.**	Describe the mechanism involved in the ascent of sap.
CO3	**K3**	**18a.**	How would you describe the steps involved in the Glycolysis pathway? **(OR)**
CO3	**K3**	**18b.**	Interpret the process and mechanism of nitrogen fixation.
CO4	**K4**	**19a.**	Explain the different phases of plant growth and development. **(OR)**
CO4	**K4**	**19b.**	Discuss the role and functions of the phytohormone Auxin.
CO5	**K5**	**20a.**	Interpret Photoperiodism and discuss the role of hormones in flowering. **(OR)**
CO5	**K5**	**20b.**	Criticize breaking of Seed Dormancy.