PRN:		Course Code:	USS 404

Second year B. Sc. Semester End Examination Summer 2024

Botany IV

Day and Date: 27/05/2024 , Monday | Max Marks: 100

Time: 02:00PM To 05:00PM | Duration: 3 hrs.

Instructions: 1) All the questions are compulsory.
2) Draw well labelled diagram wherever necessary.

Q.1		**Attempt the following:**	**25**		
A		Discuss the significance of transpiration on the life of plant	**8**	**L1**	**CLO1**
B	**1**	Give the physiological importance of water.	**4**	**L2**	**CLO1**
	2	What are the functions of essential elements	**4**	**L2**	**CLO1**
C		Give an account of passive uptake of minerals.	**9**	**L2**	**CLO1**
		OR			
C		What are the essential elements? Describe the symptoms caused due to deficiency of macro-elements.	**9**	**L2**	**CLO2**
Q.2		**Attempt the following:**	**25**		
A		Give the significance of C_4 cycle	**4**	**L1**	**CLO1**
		Give the significance of CAM pathway	**4**	**L1**	**CLO1**
B		Give the difference between cyclic and noncyclic photophosphorylation.	**8**	**L4**	**CLO2**
C		Define photosynthesis and give the difference between C_3 and C_4 plants.	**9**	**L4**	**CLO2**
		OR			
C		Give an account of photosynthetic pigments and accessory pigments.	**9**	**L2**	**CLO2**

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Q.3	**Attempt the following:**	**25**		
A	What are the enzymes? Comment on 'Enzyme as biocatalyst'	**8**	**L2**	CLO3
B	Explain competitive inhibitors of enzymes.	**8**	**L2**	CLO4
C	Explain in brief biological nitrogen fixation.	**9**	**L3**	CLO4
	OR			
C	Describe the *nif* genes.	**9**	**L2**	CLO4
Q.4	**Attempt the following:**	**25**		
A	Give definitions for anaerobic and aerobic respiration as well as an explanation of the mechanism.	**8**	**L4**	CLO4
B	How does dormancy affect seeds? Give reasons for the dormancy of seeds.	**8**	**L2**	CLO4
C	Give a definition of respiration and explain its importance.	**9**	**L2**	CLO3
	OR			
C	Describe the Kreb's cycle.	**9**	**L3**	CLO2

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