O.P.Code: 23CE0112	R23	H.T.No.									

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech. II Year II Semester Regular Examinations July/August-2025

CONCRETE TECHNOLOGY

(Civil engineering)

Time: 3 Hours **Max. Marks: 70**

PART-A

(Answer all the Questions **10 x 2 = 20** Marks)

1	a	List Bogue"s compound.	CO1	L1	2M
	b	What are the different tests conducted on aggregates?	CO1	L1	2M
	c	What is meant by batching in concrete production?	CO2	L1	2M
	d	Define workability of concrete.	CO2	L1	2M
	e	Write different mechanical properties of concrete.	CO3	L1	2M
	f	Define water –cement ratio.	CO3	L1	2M
	g	What is Modulus of Elasticity?	CO4	L1	2M
	h	Define Creep.	CO4	L1	2M
	i	What is meant by Special concrete?	CO5	L1	2M
	j	Define high performance concrete.	CO5	L1	2M

PART-B

(Answer all Five Units **5 x 10 = 50** Marks)

UNIT-I

2		Identify suitable admixtures for a concrete mix needed in hot weather conditions and explain your choice.	CO1	L3	10M

OR

3	a	Explain what alkali-aggregate reaction is and how it affects the properties of concrete.	CO1	L2	6M
	b	How does the quality of mixing water affect the properties and durability of concrete?	CO1	L2	4M

UNIT-II

4		Define the term workability. What are the various tests conducted to determine the Workability of concrete and explain them.	CO2	L3	10M

OR

5		Discuss the significance of the mixing and placing stage in concrete manufacturing. How do stages affect the workability and strength of concrete.	CO2	L2	10M

UNIT-III

6		What are the various factors affecting the strength of concrete?	CO3	L1	10M

OR

7		Explain how a compression test is conducted and discuss its importance in material testing.	CO3	L2	10M

UNIT-IV

8		Describe the relationship between time and creep, explaining the three stages of creep and how the creep rate changes over time.	CO4	L2	10M

OR

9		Explain Creep of concrete and relation between creep and time.	CO4	L2	10M

UNIT-V

10		Explain briefly about High performance concrete and also the advantages of high performance concrete over conventional concrete.	CO5	L2	10M

OR

11		Discuss various factors which affect the choice of mix proportions.	CO5	L2	10M

***** END *****