Q.P. Code: 19CE0131 **R19**

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

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech IV Year I Semester Regular Examinations November/December-2022

CONCRETE TECHNOLOGY

(Civil Engineering)

Time: 3 hours Max. Marks: 60

(Answer all Five Units **5 x 12** = **60** Marks)

		UNIT-I		
1	a	Explain heat of hydration and hydration process of cement in detail.	L2	6M
	b	What do you mean by soundness of aggregate? Explain.	L1	6M
		OR		
2	a	Discuss about the chemical composition of Ordinary Portland cement.	L2	6M
	b	Explain the advantages of using plasticizers and super plasticizers in concrete making.	L1	6M
		UNIT-II		
3	a	Explain the Maturity concept for strength development of concrete.	L2	6M
	b	Explain different methods of curing procedure.	L2	6M
		OR		
4	a	Explain the various factors affecting strength of hardened concrete.	L2	6M
	b	Explain the relation between compression strength and tensile strength of concrete	L2	6M
		UNIT-III		
5	a	How the shrinkage of concrete is classified? And explain each one of them briefly.	L1	6M
	b	Explain the various factors affecting shrinkage of concrete.	L2	6M
		OR		
6	a	Explain the various pulse velocity methods and the techniques measuring the pulse velocity through concrete.	L2	6M
	b	Explain Creep of concrete and relation between creep and time.	L2	6M
		UNIT-IV		
7	a	Explain about factors affecting permeability of concrete.	L2	6M
	b	Write and explain the effects of materials on durability.	L2	6M
		OR		
8	a	Explain briefly about chloride attack on concrete	L2	6M
	b	What are the methods of controlling sulphate attack, Explain Briefly.	L2	6M
		UNIT-V		
9	a	Define the term "Mix Design of Concrete" and explain its significance.	L1	6M
	b	Briefly discuss various methods of the mix design available in literature.	L2	6M
		OR		
10	a	Brief explain about factors affecting choice of mix design.	L2	6M
	b	Explain quality control of concrete and durability of concrete.	L2	6M

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