

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV/DEC 2025***Third Semester**Civil Engineering***UCETL24302- Construction Materials and Technology***Regulations - 2024**Duration : 3 Hrs**Maximum : 100 Marks***PART - A (ANSWER ALL QUESTIONS) (Marks 10*2=20)**

<i>Q.No</i>	<i>Questions</i>	<i>BTL</i>	<i>CO</i>	<i>Marks</i>
1.	Write any two of the characteristics of good stone.	L1	1	2
2.	State any two applications of fibre glass reinforced plastic.	L1	1	2
3.	List the main ingredients of cement.	L1	2	2
4.	Mention any two tests conducted on coarse aggregates.	L1	2	2
5.	Define water-cement (W/C) ratio.	L1	3	2
6.	What is the difference between design mix and nominal mix?	L2	3	2
7.	What is mean by workability of concrete.	L1	4	2
8.	What is modulus of elasticity of concrete?	L1	4	2
9.	Write short note on lightweight concrete.	L1	5	2
10.	What is geopolymer concrete?	L1	5	2

PART - B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a i Explain the different types of stone masonry with neat sketches.	L2	1	8
	ii Write brief notes on fibre textiles and their applications in civil engineering.	L2	1	8
	Or			
	b i What are refractories? Explain their properties and uses in construction.	L2	1	8
	ii Discuss the classification of bricks and their suitability for different construction purposes.	L2	1	8
12.	a i Explain the manufacturing process of cement with a neat flow diagram.	L2	2	8
	ii Explain the important properties of steel that make it suitable for construction.	L2	2	8
	Or			
	b i Discuss the different types of chemical and mineral admixtures used in concrete.	L2	2	8
	ii Describe the properties of cement mortar and its applications.	L2	2	8

13.	a	i	List out various ingredients of concrete and explain their functions.	L2	3	8
		ii	Discuss the principles of mix proportioning with suitable examples.	L2	3	8
Or						
	b	i	Explain the BIS method of concrete mix design in detail.	L2	3	8
		ii	Discuss briefly on PCC and RCC with suitable examples.	L2	3	8
14.	a	i	Explain the procedure of the Slump test and Compacting factor test for workability of concrete.	L2	4	8
		ii	Explain the determination of compressive and flexural strength of hardened concrete as per BIS.	L2	4	8
	Or					
	b	i	Describe the stress–strain curve of concrete and its significance.	L2	4	8
		ii	Write brief notes on segregation and bleeding of concrete.	L2	4	8
15.	a	i	Explain the properties and applications of high-strength concrete.	L2	5	8
		ii	Explain the characteristics and uses of high-performance concrete.	L2	5	8
	Or					
	b	i	Discuss the advantages, production, and applications of self-compacting concrete.	L2	5	8
		ii	Briefly explain on fibre reinforced concrete and ferrocement.	L2	5	8