

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

M.E DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

First Semester

Construction Engineering and Management

PCNT2401/CN4101 – Modern Construction Materials

Regulations – 2021 & 2024

Duration : 3 Hrs

Maximum : 100 Marks

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

<i>Q. No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	What do you mean by seasoning of timber?	UN	1	2
2.	Write the advantages of alloy steel.	UN	1	2
3.	Discuss the criteria for selection of non-structural materials.	UN	2	2
4.	List the types of non-weathering materials.	RE	2	2
5.	What are the major constituents of glass?	UN	3	2
6.	List the various types of FRP.	RE	3	2
7.	Differentiate High strength and high performance concrete.	UN	4	2
8.	List the test to be carried out for self-compacting concrete.	RE	4	2
9.	What is meant by smart materials in construction sector?	UN	5	2
10.	Define Nano cement.	UN	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)

<i>Q. No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a i Explain the manufacturing process of steel.	UN	1	6
	ii Illustrate in detail about Aluminum composite panel.	UN	1	7
	Or			
	b i Explain the market forms of timber in detail.	UN	1	6
	ii Investigate the different defects identified in timber.	AN	1	7
12.	a i Discuss the properties and application water proofing materials.	UN	2	9
	ii List the functions of acoustic materials used in construction.	RE	2	4
	Or			
	b i Explain the application of any two Nonstructural materials.	UN	2	6
	ii Classify the various constituents of paints and their functions in detail.	RE	2	7
13.	a i Discuss the properties and uses of Bitumen as construction material.	UN	3	6
	ii Explain in detail about Fibre glass reinforced plastics.	UN	3	7

Or

	b i	Justify the various commercial forms of glass available in industry.	UN	3	6
	ii	Explain the engineering application of Fibre Reinforced Polymers.	UN	3	7
14.	a i	Explain the properties and application of Fibre reinforced concrete.	UN	4	7
	ii	Illustrate the application of geo polymer concrete.	UN	4	6
	Or				
	b i	Summarize the properties of different materials used for self-compacting concrete.	UN	4	6
	ii	Explain the advantage and disadvantage of self-compacting concrete.	UN	4	7
15.	a i	Discuss the types, properties and application of smart materials.	UN	5	6
	ii	Explain the systematic approach on Nano technology in construction.	UN	5	7
	Or				
	b	Discuss with case study how the construction industries consume the application of smart and intelligent materials now a days.	UN	5	13

*PART – C (Marks 1*15 = 15)*

<i>Q. No</i>	<i>Questions</i>		<i>BLT</i>	<i>CO</i>	<i>Marks</i>
16.	a i	List the types of non-weathering materials and its uses.	UN	2	7
	ii	Explain the process involved in manufacturing of polymers.	UN	3	8
	Or				
	b i	Illustrate the various requirements of high performance concrete.	UN	4	7
	ii	Discuss the functions of intelligent materials.	UN	5	8