RollNo. | | | | | | | | | | |

ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

B.E. (Full Time) - END SEMESTER EXAMINATIONS, APR / MAY 2025

CIVIL ENGINEERING

Third Semester

CE5302 - CONSTRUCTION MATERIALS, TECHNIQUES AND PRACTICES

(Regulation2019)

Time: 3hrs Max.Marks: 100

CO1	Identify the good quality of brick for construction.
CO2	Design the concrete mixes for different exposure conditions.
CO3	Understand material properties of cement and aggregates.
CO4	Study the market forms of timber and steel.
CO5	Recognize the good practices of thermal insulations and air conditioning of buildings.

BL – Bloom's Taxonomy Levels

(L1-Remembering, L2-Understanding, L3-Applying, L4-Analysing, L5-Evaluating, L6-Creating)

PART- A(10x2=20Marks)

(Answer all Questions)

Q.No.	Questions	Marks	CO	BL
1	What are the uses of stone?	2	CO1	L1
2	What are the classification of bricks?	2	CO1	L1
3	What is the function of gypsum in the manufacture of cement?	2	CO2	L1
4	What is meant by grading of aggregates?	2	CO2	L1
5	Define workability.	2	CO3	L1
6	Define curing of concrete.	2	CO3	L1
7	Define seasoning of timber?	2	CO4	L1
8	What are the constituents of the varnish?	2	CO4	L1
9	Define underpinning.	2	CO5	L1
10	Why damp proofing is important?	2	CO5	L1

PART- B (5x 13=65Marks)

Q.No.	Questions	Marks	CO	BL
11 (a)	With neat sketches explain any one method of burning process of bricks.	6	CO1	L1
	Explain the various tests on bricks to find its suitability in construction	7		
	OR			
11 (b)	Explain in detail about the characterization of good building stones	7	CO1	L1
	Write the different methods of preservation of stones.	6		
12 (a)	Discuss in detail the types of cement and its application.	13	CO2	L1
	OR			
12 (b)	Explain time following details- (a) Crusting Strength (b) Impact Strength (c) Flakiness Index (d) Elongation Index	7	CO2	L1

	Explain detail about grading and sand bulking.	6		
13 (a)	Prioritize and make a comparative study on the various tests on hardened concrete.	13	CO3	L1
	OR			
13 (b)	(i) a) Explain the batching process of concrete. b) What are the methods of transportation of concrete? Explain them.	7	CO3	L1
	(ii) a) Explain finishing method in concrete surfaces. b) Explain the methods of pumping of concrete.	6		
14 (a)	Explain in detail about Reinforced Plastics? What are the properties and uses?	7	CO4	L1
	Write a short note on Ceramic products? What are the various applications of ceramic products?	6		
	OR			
14 (b)	Compose the commonly used industrial timber products.	13	CO4	L1
15 (a)	Explain the various damp proofing techniques adopted in a buildings.	13	CO5	L1
	OR			
15 (b)	Explain the various types of fire protection systems in a building.	13	CO5	L1

PART- C(1x 15=15Marks)

(Q.No.16 is compulsory)

Q.No.	Questions	Marks	CO	BL
16.	Explain the following:		CO3	L1
	(1) Compressive and flexural strength test of concrete.	8		
	(2) Self-compacting concrete and its advantages	7		

CONTROLLER OF EXAMINATIONS ★ ADDITIONAL
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