

Code: 20ES1301

**II B.Tech - I Semester – Regular/Supplementary Examinations  
DECEMBER 2022**

**CONSTRUCTION MATERIALS & CONCRETE TECHNOLOGY  
(CIVIL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.  
2. All parts of Question must be answered in one place.

BL – Blooms Level

CO – Course Outcome

			BL	CO	Max. Marks
<b>UNIT-I</b>					
1	a)	What are the qualities of a good building stone?	L2	CO1	7 M
	b)	How do you classify bricks? Summarize.	L2	CO1	7 M
<b>OR</b>					
2	a)	Express the properties you prefer for selecting stones in construction.	L2	CO1	7 M
	b)	Illustrate the operations involved in manufacturing of bricks.	L3	CO1	7 M
<b>UNIT-II</b>					
3	a)	Elucidate the load transfer mechanism in load bearing wall structure.	L3	CO2	7 M
	b)	Compare English Bond with Flemish Bond.	L3	CO2	7 M
<b>OR</b>					

4	a)	What is the meaning of the term pile foundation? Enumerate the situations demanding the use of pile as foundation.	L2	CO2	7 M
	b)	What are the causes of failure in foundation? What remedial measures would you adopt?	L2	CO2	7 M
<b>UNIT-III</b>					
5	a)	Explain the manufacturing of cement by wet process with flow chart.	L2	CO3	7 M
	b)	Elucidate any four tests on cement.	L2	CO3	7 M
<b>OR</b>					
6	a)	How would you classify the aggregates?	L2	CO1	7 M
	b)	What mechanical properties would you prefer to perform on aggregates?	L2	CO3	7 M
<b>UNIT-IV</b>					
7	a)	How do you classify the admixtures? Explain any two admixtures in detail.	L2	CO1	7 M
	b)	Elucidate the influence of flyash over the workability of concrete.	L3	CO4	7 M
<b>OR</b>					
8	a)	How admixtures function in accelerating the initial setting of concrete?	L3	CO4	7 M
	b)	How would you understand the segregation and bleeding of concrete?	L2	CO4	7 M

### **UNIT-V**

9	a)	Which factors are affecting the durability of concrete?	L2	CO3	7 M
	b)	What are the facts of sulfate attack? Mention the evidence you find in confirming the sulfate attack on concrete.	L2	CO3	7 M
<b>OR</b>					
10	a)	How does Water/Cement ratio influence concrete strength?	L3	CO3	7 M
	b)	Write the steps followed for Designing proportioning of concrete mixes by IS:10262:2019.	L3	CO5	7 M