



R22 Regulation

Subject code:4E3AE

**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY**  
(Autonomous, Accredited by NAAC with 'A+' Grade)

**B. Tech III Semester Regular/Supplementary Examinations, December 2025**

**BUILDING MATERIALS, CONSTRUCTION & PLANNING**  
(CE)

Maximum Marks: 60

Date:24.12.2025

Duration: 3 hours

- Note: 1.This question paper contains two parts A and B.  
2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.  
3. Part B consists of 5 Units. Answer any one full question from each unit.  
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10x1M=10 Marks)		Marks	CO	BTL
1a)	Why you choose stone as a building material?	1M	1	L1
b)	List out the characteristics of a good tile.	1M	1	L1
c)	List the ingredients of cement.	1M	2	L1
d)	Mention two uses of retarding admixtures.	1M	2	L1
e)	Mention any two functional requirements of a good ventilation system.	1M	3	L1
f)	Mention any two acoustic materials.	1M	3	L1
g)	What is meant by M20 grade concrete?	1M	4	L1
h)	What are the objectives of using paint?	1M	4	L1
i)	What is meant by "aspect" in building planning?	1M	5	L1
j)	Mention types of form work.	1M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
2	a) What are the characteristics to be considered for selection of stones for various civil engineering works?	5M	1	L2
	b) State the characteristics of Roof tiles.	5M	1	L2
OR				
3	a) Describe with neat sketches, the manufacturing process of conventional bricks.	5M	1	L2
	b) What are the types of glasses and their general properties?	5M	1	L2
4	Construct a flow diagram for dry process of manufacture of cement with brief explanation.	10M	2	L2
OR				
5	a) Describe the chemical tests to determine heat of hydration of cement.	5M	2	L2
	b) Explain about various lab tests conducted on cement.	5M	2	L2

6	a) Explain the following items in case of staircases (i) Balustrade (ii) Handrail (iii) Soffit and (iv) Pitch b) What are the functions of arches and lintels? Give relative merits and demerits of lintels over arches.	5M 5M	3 3	L2 L3
OR				
7	Write down the advantageous and disadvantageous of flat roof compared to pitched roof.	10M	3	L3
8	a) Explain with neat sketches the features of English bond and Flemish bond in brick masonry with their merits and demerits. b) What is painting? Explain its objectives and characteristics of an ideal paint.	5M 5M	4 4	L2 L2
OR				
9	a) Differentiate brick masonry and stone masonry. b) What is the object of pointing? Describe the operation of pointing regarding the preparation of surface and its application completely.	5M 5M	4 4	L2 L2
10	a) What are the objectives of building by-laws? b) Explain the classifications of buildings with material specifications.	5M 5M	5 5	L3 L3
OR				
11	a) Demonstrate the factors influencing the selection and planning of a building site. b) Discuss the by-laws related to site planning and built-up area controls.	5M 5M	5 5	L3 L2