

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-GURUJADA VIZINAGARAM
II B. Tech II Semester Supplementary Examinations NOV-2025
BUILDING MATERIALS AND CONCRETE TECHNOLOGY
(CE)

Time: 3 hours

Max. Marks: 70

The Question paper consists of Part A & Part B.

Part A is compulsory, Answer all questions.

Part B Answers any one question from each unit.

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| 1 | PART-A | (20Marks) |
| | a) How the stones are classified under geological classification? | [2] |
| | b) What is the importance of frog in brick? | [2] |
| | c) What is seasoning of timber? | [2] |
| | d) Describe the field tests for cement? | [2] |
| | e) differentiate between mineral and chemical admixtures? | [2] |
| | f) what is bulk density of aggregate and discuss it? | [2] |
| | g) What is curing of concrete? | [2] |
| | h) what do you mean by creep of concrete? | [2] |
| | i) Define high performance concrete? | [2] |
| | j) What is meant by self healing concrete? | [2] |
| | PART-B | (50Marks) |
| | Question from Unit - I | |
| 2 | a) What properties of stones are more important in structural requirements? | [5] |
| | b) Enumerate the properties of good bricks? | [5] |
| | (OR) | |
| 3 | a) What are the defects caused due to seasoning? | [5] |
| | b) Mention the objects of painting and point out the characteristics of an ideal paint. | [5] |
| | Question from Unit - II | |
| 4 | a) What is the process of hydration of cement? | [5] |
| | b) What is the influence of aggregate size and shape on the compressive strength of concrete? | [5] |
| | (OR) | |
| 5 | a) What is Cleanliness and soundness of aggregate? | [5] |
| | b) Explain different grades of cement in detail? | [5] |
| | Question from Unit - III | |
| 6 | a) Explain the measurement of workability by any two tests? | [5] |
| | b) List out the curing methods and explain any two of them in detail? | [5] |
| | (OR) | |
| 7 | a) How does W/C ratio affect concrete strength? | [5] |
| | b) List out the various non destructive testing methods and explain any two of them in detail? | [5] |
| | Question from Unit - IV | |
| 8 | a) Write short notes on factors affecting shrinkage? | [5] |
| | b) Define Poisson's ratio, what are the methods to calculate Poisson's ratio of concrete and explain one method. | [5] |
| | (OR) | |
| 9 | a) What are the factors influencing creep? | [5] |
| | b) Write short notes on plastic shrinkage? | [5] |
| | Question from Unit - V | |
| 10 | a) Write short notes on fiber reinforced concrete? | [5] |
| | b) Write short notes on Ready mixed concrete? | [5] |

(OR)

- 11 a) Explain the acceptance criteria of concrete as per Indian Standards? [5]
b) Write short notes on method of preparing of self-compacting concrete? [5]
