

Code: 19CE3404

II B.Tech - II Semester – Regular Examinations – AUGUST 2021

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

Duration: 3 hours

Max. Marks: 70

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- Note: 1. This question paper contains two Parts A and B.
2. Part-A contains 5 short answer questions. Each Question carries 2 Marks.
3. Part-B contains 5 essay questions with an internal choice from each unit. Each question carries 12 marks.
4. All parts of Question paper must be answered in one place
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PART – A

1. a) Briefly explain about dressing of stones for building construction.
- b) How will you curtail the dampness in the building?
- c) What is fineness modulus? What do you infer its results in the test.
- d) What are supplementary cementitious materials? What are their significance in concrete.
- e) Mention factors affecting the strength of concrete.

PART – B

UNIT – I

2. a) Which characteristics make a building stone good for construction? 6 M
- b) How do you classify the defects in timber? Summarize. 6 M

OR

3. a) Elucidate the various methods of artificial seasoning of timber. 6 M
- b) Illustrate the various products of timber used for building construction. 6 M

UNIT – II

4. a) Differentiate between English and Flemish bonds. 6 M
- b) Explain types of shallow foundation in detail and sketch. 6 M

OR

5. a) What do you think are the desirable properties of paints? 6 M
- b) How do you apply the distemper? What preparations would you recommend? 6 M

UNIT-III

6. a) How does the workability and strength of concrete affect with varying size, shape and texture of aggregates? 6 M
- b) Elucidate any four tests on aggregates. 6 M

OR

7. a) What do you think about setting time of cement? Correlate with concrete. 6 M
- b) How does the bulking of sand affect the concrete performance? What corrections would you recommend? 6 M

UNIT – IV

8. a) Differentiate between accelerators and retarders used in Concrete. 6 M
- b) Elucidate the influence of GGBS over the workability of concrete. 6 M

OR

9. a) How admixtures function in enhancing workability of concrete? 6 M
- b) How would you understand the segregation and bleeding of concrete? 6 M

UNIT – V

10. a) How do you test the concrete? Specify the recommendation of IS 516-2019 6 M
- b) What precautions would you recommend to prevent the alkali aggregate reaction in concrete? 6 M

OR

11. a) How would you recommend the balance between workability and strength considering Water/Cement ratio. 6 M
- b) What are the facts of sulfate attack? Mention the evidence you find in confirming the sulfate attack on concrete. 6 M