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Question Paper Code	14096
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B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2025

Third Semester

Civil Engineering

20CEPC304 - CONSTRUCTION MATERIALS, EQUIPMENT AND PRACTICES

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

	Marks	K- Level	CO
1. The process of taking out of stones from natural rock is known as (a) Quarrying (b) Dressing (c) Weathering (d) Cladding	1	K1	CO1
2. Lime is obtained from the calcination of _____ (a) Lime –Silica (b) Sandstone (c) Limestone (d) Lime-Concrete	1	K1	CO1
3. Initial setting time of cement for asbestos cement products should be not less than (a) 30 minutes (b) 50 minutes (c) 75 minutes (d) 90 minutes	1	K1	CO2
4. Aggregate impact value indicates the following property of aggregates (a) Durability (b) Toughness (c) Hardness (d) Strength	1	K1	CO2
5. Curing is the process which (a) reduces the shrinkage of concrete (b) preserves the properties of concrete (c) prevents the loss of water by evaporation (d) all of the above	1	K1	CO3
6. What percentage of aggregates are required in concrete in terms of volume? (a) 75-85% (b) 60-75% (c) 70% (d) 50%	1	K1	CO3
7. Using _____ the tensile strength is found out. (a) Split tensile test (b) Gradual tensile test (c) Compression test (d) Radial tensile test	1	K1	CO4
8. Water cement ratio is (a) volume of water to that of cement (b) weight of water to that of cement (c) weight of concrete to that of water (d) both (a) and (b) of the above	1	K1	CO4
9. Steel is mainly an alloy of (a) Iron and Carbon (b) Sulphur and Zinc (c) Zinc and tin (d) Phosphorous and Tin	1	K1	CO5
10. In which bond brick is laid with its length in the direction of a wall? (a) Header (b) Flemish (c) Stretcher (d) English	1	K1	CO6

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

11. What are the uses of bricks?	2	K1	CO1
12. Classify the types of tests on stones.	2	K2	CO1
13. List the ingredients of cement.	2	K1	CO2
14. Define Elongation index.	2	K1	CO2
15. What are the methods for transportation of concrete?	2	K1	CO3
16. What is meant by curing of concrete? What is the minimum duration of days of concrete to be cured?	2	K1	CO3
17. Classify the factors influencing the choice of mix design.	2	K2	CO4
18. List the various types of special concrete.	2	K1	CO4
19. Outline the seasoning in timber.	2	K2	CO5
20. List the advantages of Thermocole.	2	K1	CO5
21. Define Scaffolding.	2	K1	CO6
22. Compare shoring and underpinning.	2	K2	CO6

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23. a) Explain the simple field tests that you can carry out to determine the suitability of stone to determine quality of stones. 11 K2 CO1
- OR**
- b) Summarize briefly about any four types of special bricks. 11 K2 CO1
24. a) Explain the manufacturing process of cement in detail with a flow chart. 11 K2 CO2
- OR**
- b) Explain the following: 11 K2 CO2
(i) Abrasion test on coarse aggregate
(ii) Bulking test on fine aggregate
25. a) Explain the benefits of RMC and also write a short note on Ready Mix Concrete. 11 K2 CO3
- OR**
- b) Illustrate the tests on hardened concrete. 11 K2 CO3
26. a) Solve the step by step procedure to arrive the mix proportion of concrete as per BIS method. 11 K3 CO4
- OR**
- b) Identify the factors influencing the choice of mix design and explain. 11 K3 CO4
27. a) Summarize the process of manufacturing of Glass. What are the Uses of glass in construction industry? 11 K2 CO5
- OR**
- b) Explain in detail about Composite materials and its Uses. 11 K2 CO5
28. a) Summarize about any three Building Foundations in detail. 11 K2 CO6
- OR**
- b) Explain the various types of shoring in construction. 11 K2 CO6