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Question Paper Code: 54102

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2024

Fourth Semester

Civil Engineering

15UCE402 - CONSTRUCTION TECHNIQUES, EQUIPMENTS AND PRACTICES

(Regulation 2015)

(IS 10262:2009 permitted)

Duration: Three hours

Maximum: 100 Marks

PART A - (10 x 1 = 10 Marks)

1. The initial Setting time of cement is CO1- U
(a) 10 minutes (b) 30 seconds (c) 30 minutes (d) 60 minutes
2. Following is not the method of mix design CO1- U
(a) I.S. method (b) ACI method (c) Normal mix method (d) All the above
3. Following one is not the types of stone masonry CO2- U
(a) Ashlar masonry (b) Rubble masonry
(c) Rough masonry (d) Dry rubble masonry
4. A course is a _____ layer of bricks CO2- U
(a) vertical (b) horizontal (c) inclined (d) oblique
5. _____ is used as a binding material CO3- U
(a) Soil (b) Sand (c) Brick (d) Cement
6. Driers in varnish are used as CO3- U
(a) Reducers (b) Retarders (c) accelerators (d) Oxidisers
7. Shrinkage in concrete increases with _____ in humidity CO4-U
(a) Increases (b)decreases (c) equal (d) Unequal
8. Freezing and thaw means CO4- U
(a) Wetting (b) Wetting& drying (c) Drying (d) Cooling
9. Following one is not the type of scrapper CO5- U
(a) Single engine scraper (b) Twin engine scraper
(c)Angle scraper (d) Auger scraper

10. A tractor is a machinery is used for different types of woks related to CO5- U
(a) Cement work (b) Mortar work (c) Earthwork (d) water work

PART – B (5 x 2= 10Marks)

11. What is meant by batching? CO1- U
12. Illustrate bond in masonry. CO2- U
13. Write the constituents of a paint CO3- U
14. What is the use of grouting. CO4- U
15. Recall the process of dredging. CO5- U

PART – C (5 x 16= 80Marks)

16. (a) Give the step by step procedure for the concrete mix design using CO1- U (16)
IS method.

Or

- (b) Write short notes on CO1- U (16)
(i) Batching and mixing of concrete
(ii) Segregation of concrete.

17. (a) Elaborate with neat sketches the different types of brick masonry. CO2- App (16)

Or

- (b) Discuss about construction joints and expansion joints with neat CO2- App (16)
sketches.

18. (a) Enlist the various causes for dampness and the remedial CO3- Eva (16)
measures taken.

Or

- (b) Write short notes on CO3- Eva (16)
(i) Distempering
(ii) Fire protection and thermal insulation

19. (a) Explain with flow chart the assessment for a damaged structure. CO4- Ana (16)

Or

- (b) What are the various causes of damage in a buildings, explain in CO4- Ana (16)
detail.

20. (a) List the various earth equipments and list the factors for selection of an equipment for an earthwork. CO5- U (16)

Or

(b) Discuss the equipment for compaction and concreteing. CO5- U (16)

