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**Reg. No. :**

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**Question Paper Code: 54102**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019

Fourth Semester

Civil Engineering

15UCE402 - CONSTRUCTION TECHNIQUES, EQUIPMENTS AND PRACTICES

(Regulation 2015)

(IS 10262:2009 permitted)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. What is the approximate mix used for M25 CO1-R  
(a) 1:3:6                      (b) 1:2:4                      (c) 1:1.5:3                      (d) 1:1:2
2. ISI has specified the full strength of concrete after CO1-R  
(a) 7 days                      (b) 14 days                      (c) 21 days                      (d) 28 days
3. The bond containing alternate course of stretchers and headers is CO2-R  
(a) Stretcher bond                      (b) Header bond  
(c) English bond                      (d) Double Flemish bond
4. The first step in flooring work is CO2-R  
(a) Topping                      (b) Base coat                      (c) Sand filling                      (d) R.C.C floor
5. Distemper is used on CO3-R  
(a) Brick walls  
(b) Concrete surfaces  
(c) Plastered surfaces exposed to weather  
(d) Plastered surfaces not exposed to weather
6. The term used to indicate the treatment which is given to a building CO3-R  
so as to prevent or control the growth of termite in a building  
(a) Damp proofing                      (b) Water proofing                      (c) Leakage proofing                      (d) termite proofing

7. Rehabilitation of structures may be required due to several reasons; any One reason is from followings CO4-R
- (a) Environmental effects (b) Tensile effects  
(c) Compressive effects (d) Range effects
8. In the packer method of grouting, the grouting is started from CO4-R
- (a) Top of the hole (b) Bottom of the hole  
(c) Middle of the hole (d) Any portion of the hole
9. Which of the following is not a handling equipment? CO5-R
- (a) Conveyors (b) Overhead cranes (c) Mobile cranes (d) Rollers
10. Trenching machines cannot be used for CO5-R
- (a) Rocks (b) Hard clay (c) Muddy clay (d) Loose material

PART – B (5 x 2= 10Marks)

11. Define curing. CO1-R
12. State the advantages of slip forms. CO2-R
13. Name some materials used for sound insulation. CO3-R
14. Define grouting CO4-R
15. Write short notes on material handling equipment. CO5-R

PART – C (5 x 16= 80Marks)

16. (a) Explain with neat sketches the various tests on fresh concrete. CO1-U (16)  
Or  
(b) Explain the mix design as per IS method. CO1-App (16)
17. (a) Explain in detail the sequence of activities involved in construction of a building. CO2-U (16)  
Or  
(b) Explain with neat sketches different types of scaffoldings. CO2-U (16)
18. (a) (i) Explain various methods used for damp proofing course. CO3-U (8)  
(ii) Explain how preconstruction anti-termite treatment is carried out. CO3-U (8)

Or

- (b) (i) Explain about fire resistance construction for the elements of walls and columns. CO3-U (8)
- (ii) Which type of paint is preferred for external surfaces and explain how it is applied. CO3-U (8)
19. (a) Explain the various causes for deterioration of concrete structures. CO4-U (16)
- Or
- (b) Explain the various causes for deterioration of masonry structures. CO4-U (16)
20. (a) Explain in detail about various types of earthwork equipments with special purpose usage for each equipment. CO5-U (16)
- Or
- (b) Explain in detail the equipments used for dredging, trenching and tunneling. CO5-U (16)

