A **Reg. No. :** | | | | | | | | | | |

Question Paper Code: 54102

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2021

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. The breaking up of cohesion in a mass of concrete is called CO1- R

   (a) Workability (b) Bleeding (c) Segregation (d) Creep

2. For the improvement of workability of concrete, the shape of aggregate recommended is CO1- R

   (a) Irregular (b) Angular (c) Round (d) Flaky

3. The minimum thickness of a wall in stone masonry should not be less than CO2- R

   (a) 100mm (b) 200mm (c) 350mm (d) 450mm

4. A type of bond in a brick masonry consisting of alternate course of headers and stretchers is called CO2- R

   (a) English bond (b) Flemish bond (c)Stretching bond (d) Header bond

5. The most commonly used material for damp proofing is CO3- R

   (a) Bitumen (b) Paraffin wax (c) Cement solution (d) Cement concrete

6. The temperature difference between inside and outside should not be more than CO3- R

   (a) 3^0c (b) 5^0c (c) 6^0c (d) 8^0c

7. For concreting, the water having pH value _____is good. CO4- R

(a) 5 (b) 7 (c) 10 (d) 13

8. The major problems in R.C.C is CO4- R

(a) Corrosion (b) Dampness (c) Batching (d) Alkali aggregate reaction

9. Soil should be compacted to relative density of CO5- R

(a) 80% (b) 85% (c) 90% (d) 100%

10. The removable of silt in a sea is known as CO5- R

(a) Batching (b) Dredging (c) Grading (d) Cutting

PART – B (5 x 2= 10 Marks)

11. Mention the concepts of Mix design. CO1- R

12. Define "Bond". CO2- R

13. What is dampness? CO3- R

14. What do you mean by grouting? CO4- R

15. Name the equipment used for compaction. CO5- R

PART – C (5 x 16= 80 Marks)

16. (a) Write step by step procedure the Mix design of concrete by I.S. method. CO1- U (16)

Or

(b) Discuss the factors affecting quality of concrete. CO1- U (16)

17. (a) Draw the elevation and plan of one brick thick English bond and Flemish bond brick wall and explain. CO2- U (16)

Or

(b) What are the requirements of good floor? Brief construction of cement concrete floor. CO2- U (16)

18. (a) Discuss about ventilation and air conditioning. CO3- U (16)

Or

(b) Mention the importance of acoustics in buildings. Explain the methods of achieving this. CO3- U (16)

19. (a) Brief the causes for deterioration of structures. CO4- U (16)

Or

(b) Explain rehabilitation work on multi storey building affected by earthquake. CO4- U (16)

20. (a) Discuss the factors affecting the selection of equipments. CO5- U (16)

Or

(b) Explain different equipment used for dredging. CO5- U (16)