

Reg. No. :

--	--	--	--	--	--	--	--	--	--

Question Paper Code: 31312

B.E. / B.Tech. DEGREE EXAMINATION, NOVEMBER 2015

Third Semester

Civil Engineering

01UCE302 – CONSTRUCTION TECHNIQUES AND PRACTICES

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Define the grade of cement.
2. List the function of admixtures.
3. Differentiate general and detailed specification.
4. Define bond and list the different types of bond in brick masonry.
5. Give the some sound absorbent materials.
6. Define termite proofing.
7. State rehabilitation of building.
8. Write the common types of damage in concrete structures.
9. Summarize the factors should be considered to find the economic life of equipment.
10. Enumerate the material handling equipment.

PART - B (5 x 16 = 80 Marks)

11. (a) Estimate the material requirement to mix the concrete as per IS method.
Characteristic compressive strength required in the field at 28 days – 20 MPa
Maximum size of aggregate - 20 mm crushed angular
Degree of workability - 0.90 compaction factor
Degree of quality control – Good
Type of exposure – Mild
Tata data for materials
Specific gravity of cement 3.15
Compressive strength of cement at 7 days satisfies the requirement of IS 269-1989
Specific gravity of coarse aggregates 2.60
Specific gravity of fine aggregates 2.60
Sand is conforming to zone III
Water absorption
 Course aggregates 0.50%
 Fine aggregates 1.0%
Free (surface) moisture
 Course aggregates – Nil
 Fine aggregates 2.0%
Assume any other data accordingly. (16)

Or

- (b) Describe the following
(i) Schmidts Rebound Hammer test with neat sketches. (8)
(ii) Pullout test with neat sketches. (8)
12. (a) Identify the suitable types of foundation for hard and soft strata with neat sketches. (16)

Or

- (b) (i) Describe the type of scaffoldings with neat sketches. (8)
(ii) List the general principle followed in the construction of brick masonry. (8)
13. (a) Illustrate the ventilation and air conditioning in a building. (16)

Or

(b) Show the damp proofing of building with neat sketches. (16)

14. (a) Describe the causes of deterioration of concrete structures with neat sketches. (16)

Or

(b) (i) Explain the crack repair techniques. (8)

(ii) Describe grouting with neat sketches. (8)

15. (a) Explain the following equipment

(i) Earth movers (4)

(ii) Power shovel (4)

(iii) Dredgers (4)

(iv) Cranes (4)

Or

(b) Differentiate types of pile driving equipment. (16)
