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

**Question Paper Code: 59713**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2020

Elective

Civil Engineering

15UCE902 – CONCRETE TECHNOLOGY

(Regulation 2015)

Duration: One hour Maximum: 30Marks

PART A - (6 x 1 = 6 Marks)

**(Answer any six of the following questions)**

1. The mixture of different ingredients of cement, is burnt at CO1- R

   (a) $1200^0$ C (b) $1400^0$ C (c) $1600^0$ C (d) $1800^0$C

2. The commonly used ingredient in the manufacturing of cement is CO1- R

   (a) Sand stone (b) Slate (c) Lime stone (d) Graphite

3. Air entrainment in the concrete increases CO2-R

   (a) Workability (b) Strength (c) Durability (d) Density

4. Which one of the following is not a chemical admixture? CO2- R

   (a) Plasticizer (b) Pozzolana (c) Super Plasticizer (d) Accelerators

5. The target mean strength for M25 concrete is _____ CO3- R

   (a) 25 $N/mm^2$ (b) 25.5 $N/mm^2$ (c) 24.5 $N/mm^2$ (d) 31.6 $N/mm^2$

6. The assumed standard deviation for M50 concrete is CO3- R

   (a) 3 (b) 4 (c) 5 (d) 5.5

7. In slump test, each layer of concrete is compacted by a steel rod for CO4- U

   (a) 20 times (b) 25 times (c) 30 times (d) 50 times

8. If the slum of a concrete mix is 60mm, its workability is CO4- R

   (a) Very low (b) Low (c) Medium (d) High

9. The cement concrete, from which entrained air and excess water are removed after placing it in position, is called CO5- U

   (a) Vacuum concrete (b) Ferrocement

   (c) Shotcrete (d) Polymer Concrete

10. Density of Light Weight concrete varies from CO5- U

(a) 300 kg/$m^3$ to 1850 kg/$m^3$ (b) 300 kg/$m^3$ to 1550 kg/$m^3$

(c) 300 kg/$m^3$ to 1300 kg/$m^3$ (d) 300 kg/$m^3$ to 2000 kg/$m^3$

PART – B (3 x 8= 24 Marks)

**(Answer any three of the following questions)**

11. Explain the manufacturing process of cement. CO1- U (8)

12. Infer the effects of plasticizers and super plasticizers on hardened concrete. CO2- U (8)

13. Explain the Design Procedure for DOE method of Concrete Mix Design. CO3- U (8)

14. Write the detailed procedure for conducting compressive strength test on hardened concrete. CO4- U (8)

15. Discuss in detail about fibre reinforced concrete. CO5- U (8)