

Reg. No. :

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

**Question Paper Code: 59121**

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

Elective

Civil Engineering

15UCE921 - REPAIR AND REHABILITATION OF STRUCTURES

(Regulation 2015)

Duration: One hour

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

**(Answer any Six of the following Questions)**

- Under what conditions maintenance will be carried out ? CO1- R  
(a) Maintenance                      (b) Repair                      (c) Rehabilitation                      (d) Inspection
- Presence of clayey material in the fine aggregates \_\_\_ the strength of concrete. CO1- R  
(a) Reduce                      (b) Improve                      (c) Stable                      (d) None of the above
- The operation of concreting done at atmospheric temperature above \_\_\_ is called hot weather concreting. CO2- R  
(a) 10°C                      (b) 20°C                      (c) 80°C                      (d) 40°C
- The heating temperature of high quality bricks ranges between \_\_\_\_ CO2- R  
(a) 1400°C to 1500°C                      (b) 900°C to 1000°C  
(c) 500°C to 800°C                      (d) 1500°C to 2000°C
- \_\_\_\_\_ is used to enhance the freezing –thawing resistance of concrete exposed to an external environment. CO2- R  
(a) Air entrainment                      (b) Chemical Admixtures  
(c) Mineral admixtures                      (d) All of the above
- The curing period of geopolymer concrete is \_\_\_\_\_ CO3- R  
(a) 24-48 hours                      (b) 30-40 hours                      (c) 10-20 hours                      (d) None of these
- The slump flow value for SCC ranges between CO3- R  
(a) 600-650mm                      (b) 650-800mm                      (c) 650-1000mm                      (d) 600-750 mm

8. Which among the following is not a type of non-destructive testing? CO4- R  
(a) Compressive test (b) Visual testing (c) Ultrasonic testing (d) Eddy current testing
9. In cathodic protection CO4- R  
(a) Corrosion is completely eliminated (b) Corrosion is partially eliminated  
(c) Corrosion is transferred (d) corrosion is controlled
10. The strengthening of existing foundation is known as CO4- R  
(a) Scaffolding (b) Shoring (c) Underpinning (d) Grouting

PART – B (3 x 8 = 24 Marks)

**(Answer any Three of the following Questions)**

11. Elucidate in detail about the facets of maintenance and its importance. CO1-U (8)
12. Construe the effect of elevated temperature on concrete. CO2-App (8)
13. Explicate in detail about vacuum concrete and its application. CO3-U (8)
14. Explain the types of shoring with neat sketch. CO4-U (8)
15. Explain about the methods of demolition of structures. CO4-U (8)