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**Question Paper Code: 99112**

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2024

Professional Elective

Civil Engineering

19UCE912– REPAIR AND REHABILITATION OF STRUCTURES

(Regulations 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- Under what conditions maintenance will be carried out CO1- U  
a) Maintenance      b) Repair      c) Rehabilitation      d) Inspection
- Which of the following is not a classification of maintenance CO1- U  
(a) Corrective maintenance      (b) Timely maintenance  
(c) Scheduled maintenance      (d) Preventive maintenance
- The time elapsed from the point the machine fails to perform its function to the point it is repaired and brought into operating condition is CO1- U  
a) Down time      b) Break Down time      c) Both (A) and (B)      d) Idle time
- Strength of concrete increases with \_\_\_\_\_ CO1- U  
a) Increase with w/c ratio      b) Increase in fineness of cement  
c) Decrease in size of aggregates      d) Decrease in curing time
- The curing period of geopolymer concrete is ..... CO1- U  
a.24-48 hours      b.30-40 hours      c.10-20 hours      d.none of these
- Entrainment of air also improves workability and durability. CO1- U  
a) True      b) False      (c) Both (A) and (B)      (d) Idle time
- The pachometer is used to locate the \_\_\_\_\_ CO1- U



- (b) What is the principal advantage of using fibre reinforced concrete? Explain the factors that affect the properties of fibre reinforced concrete. CO1- U (16)
19. (a) If doing a partial demolition yourself or a deconstruction, you may have to manually remove some drywall. If one side of your drywall has already been removed and the other side is exposed, what tool can you easily use to knock off the drywall from behind? CO4-Ana (16)
- Or
- (b) Recommend the techniques for strengthening of structural elements. CO4-Ana (16)
20. (a) As a engineer, illustrate the various pre-planning activities to be done during demolition and suggest suitable remedy / protection against it with minimum economical support. CO5-Ana (16)
- Or
- (b) Consider a RC structure in a marine environment, discuss the possible types of distress likely to affect the structure and suggest suitable remedy/protection for the structure. CO5-Ana (16)

