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**Question Paper Code: 42105**

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

Second Semester

Civil Engineering

14UCE205 – CONSTRUCTION MATERIALS

(Regulation 2014)

Duration: One hour

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

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

1. Marble is a
  - (a) Sedimentary rock
  - (b) Metamorphic rock
  - (c) Igneous rock
  - (d) Artificial rock
2. Excess of alumina in the clay
  - (a) makes the brick brittle and weak
  - (b) makes the brick crack and warp on drying
  - (c) changes colour of the brick from red to yellow
  - (d) improves impermeability and durability of the brick
3. Gypsum is added in the manufacture of Portland cement in order to
  - (a) shorten the setting time of cement
  - (b) lengthen the setting time of cement
  - (c) decrease the burning temperature
  - (d) decrease the grinding time

4. Vicat's apparatus is used to determine the
  - (a) initial setting time of cement
  - (b) final setting time of cement
  - (c) normal consistency of cement
  - (d) all of these
5. The minimum water cement ratio to obtain workable concrete is
  - (a) 0.6
  - (b) 0.5
  - (c) 0.55
  - (d) 0.4
6. The slump test of concrete is used to measure its
  - (a) workability
  - (b) tensile and compressive strength
  - (c) impact value
  - (d) homogeneity
7. Seasoning of timber is the process of
  - (a) Cutting timber
  - (b) Drying timber
  - (c) Wetting timber
  - (d) Painting timber
8. Purpose of seasoning is
  - (a) Fire resistance
  - (b) Removing Moisture
  - (c) Water proof
  - (d) Noise absorbent
9. The property which a steel can withstand blows of hammer is
  - (a) Toughness
  - (b) Hardness
  - (c) Plasticity
  - (d) Elasticity
10. The carbon content in mild steel is in the range of
  - (a) 0.1 - 0.2%
  - (b) 0.15 - 0.30%
  - (c) 1 - 1.5%
  - (d) 2 - 4.5%

PART – B (3 x 8= 24 Marks)

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

11. Explain the various test conducted on bricks. (8)
12. Explain the step by step methods involved in manufacture of cement by wet process. (8)
13. Discuss about the workability tests for fresh concrete. (8)
14. What are the characteristics of good timber? What is the object of seasoning it? Explain briefly the different methods of seasoning timber. (8)
15. Explain about the anticorrosive measures for steel. (8)