

**MANMOHAN TECHNICAL UNIVERSITY**  
**OFFICE OF THE CONTROLLER OF EXAMINATIONS**  
**Model Question, 2080 Asar**

**Level: Bachelor**  
**Faculty: School of Engineering**  
**Program: Civil**  
**Subject: CIVIL ENGINEERING MATERIALS (EG456CE)**

**Year/Part: I/II**  
**F.M.: 25**  
**P.M.: 10**  
**Time: 1.5 Hours**

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**Group A [5 × 1 = 5]**

**Instructions:**

- Choose one answer out of four options.
  - Use black ball pen for shading only one circle for correct option of a question in Answer Sheet which you have provided.
  - No mark will be awarded for cutting, erasing, over writing and multiple circles shading
1. Stone used for pier of bridge abutment, foundation and road work is  
a. Granite    b. Marble    c. Slate    d. All the above
  2. The percentage of alumina in good brick earth lies between  
a. 10-20%    b. 20-30%    c. 30-40%    d. 40-50%
  3. Dormant period (2-5 hrs) is concerned with  
a. Hydration of cement    b. Fineness of cement  
c. Soundness of cement    d. Workability of cement
  4. The paint highly resistant to fire is  
a. Enamel paint    b. Asbestos paint  
c. Aluminum paint    d. Cement paint
  5. Which one is correct?  
a. PPC gains strength slowly as compared to OPC  
b. Ultimate strength of PPC is higher than OPC  
c. PPC has higher resistance of chemical attack  
d. PPC has lower shrinking on drying  
e. All the above

**Group B**

**Attempt any FOUR questions [[4 × 2 = 8]**

6. How is civil engineering materials classified? Define the term fatigue and resilience.
7. What is seasoning of stone and how it is done?
8. What is the purpose of using sand in mortar and what properties should sand possess ?
9. Differentiate between varnish and paints.
10. What is meant by polymerization? Explain about PVC with its properties and uses.
11. When we consider about durability which is better Granite or Marble for flooring. Explain briefly.

**Group C**

**Attempt any THREE questions [3 × 4 = 12]**

12. Why the drying of brick is extremely important steps in manufacturing brick? Elaborate briefly the properties of harmful ingredients in bricks.
13. Describe about hydration of cement and water requirement for hydration.
14. What is meant by sulphate attack? Explain briefly about rapid hardening Cement and Super sulphated Portland Cement.
15. Draw the neat sketch of cross-section of tree. Also describe the suitability of timber in the design of civil engineering structure. List the engineering properties of timber.
16. What do you mean by quenching of steel? Distinguish between Cast Iron and Mild Steel.

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