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**Question Paper Code : 57152**

**B.E/B.Tech. DEGREE EXAMINATION, MAY/JUNE 2016**

**Fourth Semester**

**Civil Engineering**

**CE 6401T – CONSTRUCTION MATERIALS**

**(Common to Environmental Engineering)**

**(Regulations 2013)**

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer ALL questions.**

**PART – A (10 × 2 = 20 Marks)**

1. Write down the characteristics of good stone.
2. List the different types of refractory bricks.
3. What do you understand by Transition Zone ?
4. What is bulking of sand ? Why is it important ?
5. Distinguish between HSC and HPC.
6. Why do we need compaction of concrete ?
7. Give the application of Aluminium composites.
8. Enumerate the various market forms of steel.
9. What is a sealant ? State its applications.
10. Differentiate between geo membranes and geo textile.

**PART - B (5 × 16 = 80 Marks)**

11. (a) Explain the various types of stones which are used for building works and give in brief the specifications for a good building stone. (16)

**OR**

- (b) With sketches explain in detail about the manufacturing process of conventional bricks. (8)
12. (a) (i) Add a note on the process of hydration of cement. (8)  
(ii) How do you perform the soundness test of cement? Why it is important? (8)

**OR**

- (b) What are tests to be conducted for conventional coarse aggregates? Explain any four tests in detail. (16)

13. (a) With a flow chart explain the step by step process of manufacturing of concrete. (16)

**OR**

- (b) Write down the complete procedure of concrete mix design as per BIS. Assume necessary data. (8)

14. (a) (i) Discuss the possible sources of defects in timber. (8)  
(ii) Briefly explain the following terms : (4)  
(1) Veneer (4)  
(2) Thermacole (4)

**OR**

- (b) Explain in detail about : (8)  
(i) Preparation of paint (4)  
(ii) Distemper (4)  
(iii) Bitumen (4)

15. (a) (i) Add a note on types of Glass and its properties. (8)  
(ii) Discuss about the manufacture and properties of various clay products. (8)

**OR**

- (b) Explain various applications of (8)  
(i) Geomembranes (8)  
(ii) Geo textiles (8)