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**Question Paper Code : X 20292**

B.E./B.Tech. DEGREE EXAMINATIONS, NOV./DEC. 2020  
Fourth Semester  
Civil Engineering  
CE 6401 – 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 any four tests on stones.
2. Define light weight clay Bricks.
3. What do you understand by Transition Zone ?
4. What is bulking of sand ?
5. What is meant by modulus of rupture ?
6. Define HPC as per ACI.
7. State any four characteristic of good sealant.
8. Write down the functions of solvent.
9. Define sealant.
10. What is fibre textile ?

PART – B

**(5×13=65 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.

(OR)

- b) With sketches explain in detail about the manufacturing process of conventional bricks.



12. a) How do you perform the compression strength of cement mortar cube ? Also explain the procedure for fineness of cement.

(OR)

b) Explain with codal provision for testing of conventional coarse aggregates.

13. a) Explain any two tests for testing of conventional fresh concrete.

(OR)

b) With sketches explain any two tests for testing of workability for self-compacting concrete.

14. a) Explain in detail about the principal process involved in heat treatment of steel.

(OR)

b) Write a short note on :

i) Forms of aluminium **(3)**

ii) Varnish **(3)**

iii) Thermocole **(3)**

iv) Classification of timber. **(4)**

15. a) Write short note on :

i) Glass **(6)**

ii) Fibre glass reinforced plastic. **(7)**

(OR)

b) Explain in detail about refractories.

**PART – C**

**(1×15=15 Marks)**

16. a) Discuss the various steps in triangulation Survey. **(15)**

(OR)

b) Briefly explain the application of remote sensing. **(15)**

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