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**Question Paper Code : 91293**

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2019

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. State any four characteristics of good building stone.
2. What do you mean by lightweight concrete blocks ?
3. What are the normal ingredients of cement ?
4. Define Elongation index.
5. Define RMC.
6. What are the factors to be considered in mix proportioning ?
7. Give the application of Aluminium composites.
8. Enumerate the various market forms of steel.
9. What are the forms of sealants ?
10. How glass is manufactured ?



## PART - B

(5×13=65 Marks)

11. a) i) Briefly discuss about the various tests conducted on stone.

ii) Why stone is called as a building material ?

(OR)

b) i) Write a short note on refractory bricks.

ii) List down the application of lightweight concrete blocks.

12. a) How do you assess the tensile strength of cement ? Also explain the effect of fineness of cement.

(OR)

b) Enumerate the various methods for testing of traditional coarse aggregates. Discuss any two of them in brief.

13. a) With sketches explain in detail about the different flow properties of concrete.

(OR)

b) With sketches explain the various specifications for self compacting concrete.

14. a) i) Enumerate the advantages of aluminium in construction. (5)

ii) Explain the defects in timber. (8)

(OR)

b) Write short notes on :

i) Thermocole. (4)

ii) Steel (3)

iii) Distemper (3)

iv) Varnish (3)



15. a) i) Add a note on types of Glass and its properties.

ii) Discuss about the manufacture and properties of various clay products.

(OR)

b) Explain various applications of :

i) Geomembranes. (7)

ii) Geo textiles. (6)

## PART - C

(1×15=15 Marks)

16. a) List and explain properties of hardened concrete along with tests required.

(OR)

b) Explain the various types of sealants used in construction industry and their suitability.