

Reg. No. :

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**Question Paper Code : 80198**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

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. What is meant by dressing of stones?
2. Write down the uses of bricks.
3. Define the term slaked lime.
4. What are the grades of cement?
5. Define RMC.
6. What are the factors to be considered in mix proportioning?
7. State any four characteristic of good sealant.
8. Write down the functions of solvent.
9. What are the necessity of bituminous paint?
10. Define geomembranes.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Briefly discuss about the various tests conducted on stone. (12)  
(ii) Why stone is called as a building material? (4)

Or

- (b) (i) Write a short note on refractory bricks. (12)  
(ii) List down the application of lightweight concrete blocks. (4)

12. (a) (i) Explain the procedure for consistency as per IS specification. (8)  
(ii) What is meant by hydration of cement? (8)

Or

- (b) (i) Write down the importance of industrial by products. (8)  
(ii) Explain the shape test for aggregate with the neat sketches. (8)

13. (a) With neat sketches explain the manufacturing process of concrete. (16)

Or

- (b) Write in detail : (4 + 8 + 4)  
(i) Modulus of rupture  
(ii) Self compacting concrete  
(iii) High performance concrete.

14. (a) Explain in detail about the principal process involved in heat treatment of steel. (16)

Or

- (b) Write a short note on : (4 + 4 + 4 + 4)  
(i) Forms of aluminium  
(ii) Varnish  
(iii) Thermocole  
(iv) Classification of timber.

15. (a) (i) Explain in detail about fibre glass reinforced plastic. (8)  
(ii) Explain in detail about ceramics. (8)

Or

- (b) Discuss the various applications of  
(i) fibre textiles  
(ii) geotextiles.