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Question Paper Code: 40780

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2018

Fourth Semester Civil Engineering

CE 6401 - CONSTRUCTION MATERIALS

(Regulations 2013)

(Common to: Environmental Engineering)

Time: Three Hours

Maximum: 100 Marks

16/05/18

Answer ALL questions.

PART - A

(10×2=20 Marks)

- 1. Define efflorescence in bricks. How can it be removed?
- 2. What is the significance of light weight concrete blocks?
- 3. What is meant by hydration of cement? State its importance.
- 4. Write down the chemical and physical characteristics of flyash.
- 5. Mention the properties of fresh concrete.
- 6. Give the relationship between slump value and degree of workability.
- 7. List out the defects in timber.
- 8. State the important consideration to be made in choosing paints.
- 9. Write down the uses Fibre glass reinforced plastic.
- 10. What is Geo Membrane? List out the uses of Geo membrane.

PART - B

 $(5\times13=65 \text{ Marks})$

11. a) Describe the characteristics to be considered for selection of stones for various civil engineering works.

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- b) List out the types of special bricks. Briefly explain any four of them.
- 12. a) What are the various ingredients required for manufacturing cement? State their functions.

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- b) Compare and contrast the advantages and disadvantages of using lime and cement in engineering works.
- 13. a) Explain the test on workability of concrete.

(OR)

- b) Write short notes on:
 - i) High Strength Concrete.

(6)

- ii) Self Compacting Concrete.
- (7)
- 14. a) List out and explain the various methods of seasoning of timber.

(OR)

- b) Investigate the various applications of aluminium.
- 15. a) Describe the process of manufacturing of Glass? What are the uses of glass in construction industry?

(OR)

b) Discuss the uses of Clay Products.

PART - C

(1×15=15 Marks)

16. a) Explain the application of geotextiles for earth reinforcement.

(OR)

b) Explain the application of Bitumen in road construction.