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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

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.

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PART - B

(5×13=65 Marks)

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

(OR)

- 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.

(OR)

- 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.