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**Question Paper Code : 50262**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017

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 are the uses of stone in construction ?
2. List out the types of bricks for special use.
3. Write the grade of cement.
4. What do you understand by bulking of sand ?
5. State the functions of coarse aggregate in a concrete.
6. Write the formula for flow percent.
7. Enumerate the various market forms of timber.
8. List out the various test on bitumen.
9. What is meant by sealant ?
10. Write the properties of refractories.

PART – B (5×13=65 Marks)

11. a) Describe various characteristics of good building stones. (13)
- (OR)
- b) Explain in detail about the manufacture process of conventional bricks with neat sketches. (13)

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12. a) What are tests to be conducted for cement ? Explain any two tests in detail. (13)

(OR)

b) Describe various methods for testing of conventional coarse aggregate. Discuss any two tests in detail. (13)

13. a) Explain in detail about manufacturing process of concrete. (13)

(OR)

b) Explain the procedure of compressive and split tensile strength of hardened concrete with neat sketch. (13)

14. a) Discuss the various types of heat treatment of steel and their purpose. (13)

(OR)

b) i) Discuss the reasons for the causes of defects in painting work. (8)

ii) Write a short note on varnishes. (5)

15. a) i) Explain the classification of glass. (6)

ii) Discuss the various factors you considered for choosing floor tiles. (7)

(OR)

b) Explain the following :

i) Properties of plastics 7

ii) Composite materials. 6

PART - C (1×15=15 Marks)

16. a) Describe the various applications of geotextiles in geotechnical engineering works. And also explain the properties of geotextiles. (15)

(OR)

b) Explain the following :

i) Light weight concrete

ii) Fibre reinforced concrete

iii) Self-compacting concrete. (3×5=15 Marks)