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Reg. No. :

Question Paper Code : 20259

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2018.

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 causes for deterioration of stones?
2. Reason out for efflorescence in brick?
3. Why hydration of cement takes place?
4. List any four industrial by-products.
5. Infer the factors affecting workability.
6. Define RMC.
7. Identify the various grade's of Bitumen.
8. List out the properties of mild steel.
9. What are the major constituents of glass?
10. Where geotextiles are used?

PART B — (5 × 13 = 65 marks)

11. (a) Discuss in details the properties of good brick.

Or

- (b) Discuss in detail about various characteristics of good building stones.

12. (a) Briefly discuss test procedures to determine any three physical properties on cement with suitable sketch.

Or

- (b) Explain in detail about wet process of manufacturing of cement.

13. (a) Briefly discuss about the manufacturing process of concrete.

Or

- (b) Explain the various test on hardened concrete with neat sketch.

14. (a) Categorize and explain the various defects in timber in detail with neat sketches.

Or

- (b) Summarize the uses and properties of distemper and aluminium.

15. (a) Explain about geomembranes for earth reinforcement.

Or

- (b) Outline the role of laminar composites in building construction.

PART C — (1 × 15 = 15 marks)

16. (a) Explain in detail about the applications of various types of industrial timbers in building construction.

Or

- (b) Relate the application of light weight concrete blocks with first class bricks.