Reg. No. : [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

D 4081

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2008.

Second Semester

Civil Engineering

CE 1152 — CONSTRUCTION MATERIALS

(Regulation 2004)

Time : Three hours   Maximum : 100 marks

Use of IS mix design table is permitted.

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.   How is light weight concrete prepared?

2.   What are the important qualities of a good building stone?

3.   Distinguish the natural hydraulic lime and artificial hydraulic lime.

4.   What are the raw materials used in the manufacture of ordinary cement?

5.   Define water cement ratio.

6.   What are admixtures and its uses?

7.   How is Aluminium obtained?

8.   What are the ingradients of an oil-borne paint?

9.   Distinguish earthenware and stoneware.

10. What are Geosynthetics and how are it classified?

PART B — (5 × 16 = 80 marks)

11. (a) (i) What are the causes of decay of stones? (10)

(ii) What are the preservatives commonly adopted to preserve the stones? (6)

Or

(b) Describe briefly :

(i) Bull's trench kiln (7)

(ii) Cement and concrete hollow blocks (9)

12. (a) Enumerate the various varieties of cement in addition to ordinary cement. (16)

Or

(b) Describe the processes involved in the manufacture of Fat lime with the calcination process by continuous flame kiln. Add a note on properties and uses of Fat lime. (12 + 4 = 16)

13. (a) Describe briefly the various stages in the manufacture of concrete. (16)

Or

(b) Write an essay on any four types of special concretes. (4 × 4 = 16)

14. (a) Describe briefly with neat sketches the various defects in Timber. (16)

Or

(b) Describe briefly :

(i) Industrial timbers (8)

(ii) Characteristics of Aluminium as an important building material. (8)

15. (a) What are the properties of fibre glass reinforced plastic and the applications of it in building industry. (16)

Or

(b) Describe the application equipments, application accessories and the working criteria required for poly sulphide based sealants. (16)

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