D 51472 (Pages 2) Name.....

Reg. No.....

THIRD SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, DECEMBER 2008

CE 04 304—BUILDING TECHNOLOGY—I

(2004 Admissions.)

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*

Draw neat sketches wherever required.

Part A

1. (a) Describe the components of a residential building.

   (b) Under what circumstances following foundations are used :

   (i) Raft foundation.

   (ii) Pile foundation.

   (iii) Spread foundation.

   (c) Write short note on precast concrete stairs.

   (d) What are the different types of shorings and mention their uses ?

   (e) Mention factors affecting workability and strength of concrete.

   (f) Write short note on Sulphate attack on concrete.

   (g) Discuss on prestressed concrete.

   (h) Define Target mean strength. How is it arrived at ?

(8 × 5 = 40 marks)

Part B

2. (a) (i) What do you understand by bearing capacity of soil ? Describe any *two* methods to improve it. (8 marks)

   (ii) Describe types and construction methods of cavity walls. (7 marks)

Or

   (b) (i) Discuss on different bonds in brickwork. (8 marks)

   (ii) Write short note on corbels, cornice and copings. (7 marks)

3. (a) (i) Discuss on plastering and paintings. (8 marks)

   (ii) Explain different types of roofing materials. (7 marks)

Or

Turn over

(b) (i) Explain method of construction of RCC roof. (7 marks)

(ii) With figures, explain different types of doors. (8 marks)

4. (a) Discuss on :

(i) Plasticizers.

(ii) Accelerators.

(iii) Retarders.

(iv) Stress strain and elastic properties of concrete.

(3 + 4 + 4 + 4 = 15 marks)

Or

(b) What is durability of concrete ? Explain factors affecting durability of concrete. (15 marks)

5. (a) Discuss on :

(i) Factors influencing mix proportions.

(ii) Mix design as per B.I.S method.

(iii) Frequency of concrete sampling. (5 + 5 + 5 = 15 marks)

Or

(b) Describe properties and uses of fibre reinforced concrete. (15 marks)

[4 × 15 = 60 marks]