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53 (CE 504) CRTC

2014

CONCRETE TECHNOLOGY

Paper : CE 504

Full Marks : 100

Pass Marks : 30

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer any five questions.

1. (a) Write the percentage composition and function of ingredient of cement. 6
- (b) Explain the Abram's Water-Cement ratio law. 6
- (c) What are the various sources of Sand? Explain them briefly. 4
- (d) Define Mortar. List the functions of Mortar. 4

Contd.

2. Briefly discuss the various physical tests done on cement. 20
3. (a) Explain the effect of entrained air on the properties of fresh concrete. 5
- (b) Define workability. Explain the different factors affecting the workability of concrete. 10
- (c) Describe the differences between RCC and PCC. 5
4. (a) Explain briefly the important properties of fresh concrete. 10
- (b) What is admixture? What is the role of admixture in concrete? 5
- (c) What do you mean by curing? Explain the different methods of curing of concrete. 5
5. (a) What do you mean by sulphate attack? Explain the different methods to prevent sulphate attack. 10

(b) Discuss briefly the test carried out on hardened concrete to ensure and verify the quality of concrete. 10

6. (a) Write short notes on the following : $2 \times 5 = 10$

(i) Pozzolana cement

(ii) Grade of concrete

(iii) Prestressed concrete

(iv) Plasticizer

(v) Honeycomb.

(b) Classify aggregate. Explain briefly important characteristic of aggregate. 5

(c) Describe the slump test along with neat diagram. 5