R09

Code: 9A01502

B.Tech III Year I Semester (R09) Supplementary Examinations June 2016

CONCRETE TECHNOLOGY

(Civil Engineering)

Time: 3 hours Max Marks: 70

Answer any FIVE questions

All questions carry equal marks

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1 (a) Discuss in detail how the chemical composition of cement affects its strength and setting properties.
(b) Explain the difference between Natural and Artificial cements.

2 Bring out a detailed discussion on Alkali-Aggregate reactions. Discuss the factors promoting and methods to control.

3 (a) What is Vee-Bee time? How do you measure Vee-Bee time of fresh concrete?
(b) What is the significance of percentage flow of concrete? How do you measure the flow percent of fresh concrete?

4 (a) State Abram's W/C ratio law and explain the same.
(b) Define the term Gel/Space ratio and explain its relation with strength of concrete.

5 (a) Explain in detail any one method of non-destructive testing of concrete.
(b) Explain in detail about any one method of destructive testing of concrete to find out any one of its hardened strengths.

6 Explain in detail about the following:
(a) Drying shrinkage.
(b) Measures to reduce shrinkage.
(c) Moisture movement.

7 (a) Explain in detail the statistical approach in Quality control of concrete.
(b) Explain the steps to be taken by site engineer in maintaining Quality of concrete.

8 (a) Bring out a detailed classification of Light weight aggregates.
(b) What is No-fines concrete? How is it produced?

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