

Code :R7310103

R7

III B.Tech I Semester(R07) Supplementary Examinations, May 2011
CONCRETE TECHNOLOGY
(Civil Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

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. (a) Distinguish between Aggregate impact value and Abrasion value.
(b) Describe Los Angeles abrasion test to obtain abrasion value.
3. (a) Define the term workability and explain its importance.
(b) Describe how a K-slump test can be used for measuring workability of fresh concrete.
4. (a) What is the significance of tensile strength of concrete and distinguish between tensile strength in flexure and that in direct tension.
(b) Describe in detail the Three point Bending test for measuring the flexural strength of hardened concrete.
5. Explain the effect of size of aggregate, type of the aggregate and size of the specimen on various hardened strengths of concrete.
6. (a) Explain how different moduli of elasticity of concrete are determined.
(b) Discuss about the Poisson's ratio of concrete.
7. List out various steps involved in the proportioning of concrete mix by Road note-4 method.
8. (a) Discuss the environmental impact of normal weight concrete and light weight aggregate concrete.
(b) Discuss in detail how high density concrete is prepared? What are its applications.
