

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E. (CIVIL) – (Branch-49)-Construction Management Year – I (Semester – II) (W.E.F. January 2013)

1724906: - Major Elective – III Advances in Concrete Technology

Sr. No.	Course Content
1	Introduction to Recent Advances in Concrete & Review of Conventional/Normal Concrete: Introduction, Merits and Demerits of concrete, Features of Recent Advances in Concrete, Types of Concrete ,Terminologies, Properties of Fresh & Hardened concrete, related tests, Production and use of concrete.
2	Special Concretes: Definition & Brief with properties, Advantages, Disadvantages, Applications, Concreting practices, Shrinkage compensating concrete, Mass concrete, Roller compacted concrete, Heavy weight concrete
3	High Performance Concretes: Definition & Introduction, Classification, general properties, Advantages, Disadvantages, Applications, Guidelines for Mix design , Light weight concrete, High strength concrete, Ultra-high strength concrete, High workability concrete/Self compacting concrete, Fiber reinforced concrete, Polymer-concrete composites.
4	Testing and Quality Control of Concrete: Classification of test methods, In-situ, Non-Destructive & Partially-Destructive tests for fresh concrete, hardened concrete and durability of concrete.

Practical/Assignment Work:

1. Practical /Assignment Work is based on above contents.
2. Visit of RMC Plant

References:

1. Neville A. M. And Brooks J. J, (2000), “Concrete Technology”, Addison Wesley Longman Ltd.
2. M. L. Gambhir, (2008/ Latest Edition), “Concrete Technology” Tata Mc-Graw Hill Pub.
3. M. S. Shetty, (2009 / Latest Edition), “Concrete Technology” , S.Chand & Pub