

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Semester: 1

Civil Engineering (Computer Aided Structural Analysis & Design)

Subject Name Cement and Concrete Lab

Sr. No	Course content
Students are required to carry out following in laboratory hours,	
1.	Concrete Mix design: Study of the effect of water/cement ratio on workability and strength of concrete, Effect of aggregate/cement ratio on strength of concrete, Effect of fine aggregate/coarse aggregate ratio on strength and permeability of concrete
2.	Study of stress-strain curve of concrete - correlation between cube strength, cylinder strength, split tensile strength and modulus of rupture
3.	Non-Destructive testing of concrete
4.	Study of behavior of Beams under flexure – Under Reinforced, Balanced and Over-reinforced beams
5.	Study of Shear- Effect of Shear Span to Depth ratio

Reference Books :

1. Concrete technology
2. Concrete Technology
3. Concrete Technology

- Nevelli
- M.S. Shetty
- Orchard