

CONCRETE TECHNOLOGY LAB

Pre-requisites:

Building Materials and Concrete Technology

Course Outcomes: At the end of the course the student will be able to:

CO1: Outline the importance of testing of cement and its properties (L2)

CO2: Assess the different properties of aggregate (L3)

CO3: Summarize the concept of workability and testing of concrete (L2)

CO4: Describe the preparation of green concrete (L2)

CO5: Describe the properties of fresh and hardened concrete (L2)

(Any 12 out of 16 experiments)

LIST OF EXPERIMENTS:

1. Determination of Fineness and Specific Gravity of Cement.
2. Determination of Normal Consistency of Cement.
3. Determination of Initial and Final Setting time of Cement.
4. Determination of Compressive Strength of Cement.
5. Determination of Fineness Modulus and Zoning of Sand.
6. Determination of Fineness Modulus of Coarse Aggregate.
7. Determination of Bulk Density of Fine Aggregate and Coarse Aggregate.
8. Determination of Compressive Strength of Brick.
9. Determination of Workability of concrete using slump cone test.
10. Determination of Workability of concrete using Vee Bee Consistometer.
11. Determination of Workability of concrete using Flow Table.
12. Determination of Workability of concrete using Compaction factor test.
13. Determination of Compressive Strength of concrete.
14. Determination of Tensile Strength of concrete.
15. Determination of splitting tensile strength of hardened concrete
16. Determination of drying shrinkage of hardened concrete

References:

1. .A.M.Neville, J.J.Brookes, "Concrete Technology", 5th Edition, Pearson Education, 2009.
2. M.S.Shetty, "Concrete Technology", 6th Edition, Chandn Publication, 2010.