SCHOOL OF ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING

CONCRETE AND HIGHWAY MATERIALS LAB

B.Tech IV Year I Sem (R15)

I. ROAD AGGREGATES:

1. Aggregate Crushing Value
2. Aggregate Impact Value
3. Specific Gravity and Water Absorption
4. Attrition Test
5. Abrasion Test
6. Shape Tests

II. BITUMINOUS MATERIALS:

1. Penetration Test
2. Ductility Test
3. Softening Point Test
4. Flash and Fire Point Tests

III. CEMENT AND CONCRETES:

TESTS OF CEMENTS:

1. Normal Consistency of fineness of cement.
2. Initial Setting time and Final Setting time of Cement.
3. Specific gravity and Soundness of Cement.
4. Compressive Strength of Cement.
5. Workability test on concrete by compaction factor, slump and Vee-bee.
6. Young's Modulus and compressive strength of concrete.
7. Bulking of sand.
8. Non – Destructive testing on concrete (for demonstration)

ADD ON EXPERIMENTS:

1. Physical tests on Cement

SCHOOL OF ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING

CONCRETE TECHNOLOGY LAB

B.Tech III Year I Sem (R16)

LIST OF EXPERIMENTS

I. Test on Cement

1. Normal Consistency and fineness of cement.
2. Initial setting time and final setting time of cement.
3. Specific gravity of cement
4. Soundness of cement.
5. Compressive strength of cement.
6. Workability test on concrete by compaction factor, slump and Vee-bee.

II. Test on Aggregate

1. Sieve Analysis and gradation chairs
2. Bulking of sand.
3. Bulk and compact densities of fine and coarse aggregates

III.Test on Fresh Concrete

1. Slump test
2. CF (compact factor stress)
3. Vee-bee Test
4. Flow Table Test

Self Compacting Concrete

1. Slump cone
2. V funnel
3. L Box

IV. Test on hardened concrete

1. compression test on cubes & Cylinders
2. Flexure test
3. Spl itting Tensile Test
4. Modulus of Elasticity

V. Non Destructive test of concrete

1. Rebound hammer
2. Ultrasound pulse Velocity (UPV)