## **TESTING SERVICES OFFERED**

## 1.CEMENT

- a) Fineness
- b) Setting time of cement
- c) Soundness
- d) Specific Gravity
- e) Compressive Strength of Mortar cubes

#### 2.SAND

- a) Grading and Fineness
- b) Specific Gravity
- c) Bulk Density
- d) Bulking of Sand

#### 3.COARSE AGGREGATE

- a) Grading and Fineness
- b) Water absorption
- c) Moisture content
- d) Crushing value
- e) Bulk density
- **4.CONCRETE CUBE**
- a) Compressive Strength
- b) Rebound Hammer Test

#### 5.HOLLOW BLOCKS, SOLID BLOCKS

- a) Compressive strength
- h) Water absorbtion test

#### 6.STONE

- a) Compressive Strength
- b) Water absorption test

#### 7.W00D

- a) Bending Test
- b) Compression for single direction

#### 8.BRICKS

- a) Compressive Strength
- b) Water absorption
- c) Efflorescence

#### 9.TILES

- a) Transverse Test(dry Condition)
- b) Transverse Test(Wet Condition)

#### 10.STEEL

- a) Tension Test for round bars and RTS
- c) Section weight of bars
- d) Tension Test on flats, angles

#### 11.PAVER BLOCK

- a) Compressive Strength
- 12.DESIGN OF CONCRETE MIX
- a) Design of concrete mix without plasticizer
- b) Design of concrete mix with plasticizer
- c) Cube preparation and Compression Test

## 13.FLEXURE TEST (R.C.C. BEAMS)

#### SOIL LAB

- 1) Bearing Capacity of soil
- 2) Liquid Limit
- 3) Plastic Limit
- 4) Moisture Content
- 5) Shrinkage limit
- 6) Specific Gravity
- 7) Particle Size Distribution
- 8) Proctor Compaction Test (light or Heavy)
- 9) Curve for Compaction Test
- 10) Unconfined Compression Test
- 11) Triaxial Shear without pore pressure measurement
- 12) Direct Shear Test
- 13) California Bearing Ratio Test
- 14) Bulk Density
- 15) Permeability of Soil
- 16) Consolidation Test
- 17) Swell Pressure Test

## **Highway Materials Testing**

- 1) Grading and Fineness Modulus of Coarse Aggregates
- 2) Grading and Fineness Modulus of Fine Aggregates
- 3) Specific Gravity
- 4) Bulk Density
- 5) Water Absorption
- 6) Moisture Content
- 7) Flakiness Index
- 8) Elongation Index
- 9) Aggregate Crushing Value

#### Water and Waste Water analysis

- 1) Water Test for Construction Purposes
- 2) Water Test for Drinking Purposes
- 3) Effluent Test/ Waste water test
- Structural Design, Drawing & Detailing

# **CONTACT DETAILS**

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# **SETHU INSTITUTE OF TECHNOLOGY**

AN AUTONOMOUS INSTITUTION | ACCREDITED WITH 'A' GRADE BY NAAC PULLOOR - 626 115, KARIAPATTI TALUK. VIRUDHUNAGAR DISTRICT.

Consultancy

Services of

**DEPARTMENT OF CIVIL ENGINEERING** 

Approved Research Centre by Anna University Chennai



## **ABOUT THE COLLEGE**

Sethu Institute of Technology was established in the year 1995 at Kariapatti. Virudhunagar Dist, with the motto of "Knowledge, Service and Progress". The Founder and Chairman, Mr.S.Mohamed Jaleel, renders his noble service since 1995 to the sustained growth of the educationally, industrially, economically backward rural area. The college has grown into a multi disciplinary institution offering currently 10 UG courses and 5 PG courses. Our college is an Autonomous Institution and accredited by National Board of Accreditation for 6 UG programmes. Affiliated to Anna University and approved by AICTE, the college offers quality education and technical competencies on the strong foundation of values, ideals and rich culture to the students across the country. The college is equipped with world class infrastructure and highly qualified and experienced faculty members.

## **ABOUT THE DEPARTMENT**

The Civil Engineering Department was established in the year 2007 offering B.E. Civil Engineering and M.E. Structural Engineering Program. The vision of the Department is to become a school of excellence in Civil Engineering education with an emphasis on research for the benefit of the industry and society. The Department of Civil Engineering has well equipped laboratories for Academic, Consultancy and R & D activities. From the inception of the Department students have secured 20 University ranks. The Department is approved as a research centre by Anna University, Chennai. The Department has well qualified faculty with varied experience in areas of structural Engineering, Environmental Engineering, Irrigation Water Management, Soil Mechanics, Coastal Management, Geoinformatics etc.

## **FACILITIES AVAILABLE**

- Structural Engineering Lab
- Strength of Materials Lab
- Fluid Mechanics and Machinery Lab
- Survey Lab
- Soil Mechanics Lab
- Concrete & Highway Lab
- Environmental Engineering Lab
- ✓ CAD Lab



## STRUCTURES LAB

# Major Equipments 100T Loading Frame

- Hydraulic Jack
- Load cells
- Data Logger
- Demec Gauge



# STRENGTH OF MATERIALS LAB

# **Major Equipments**

- UTM 400 kN Capacity
- CTM 1000 kN Capacity
- Torsion Testing Machine
- Spring Testing Machine
- Hardness Testing Machines -Brinell and Rockwell



## SURVEY LAB

# **Major Equipments**

- Total Station
- Electronic Theodolite
- Prismatic and Surveyors Compass
- Dumpy Levels



## SOIL MECHANICS LAB

## **Major Equipments**

- Standard Penetration Test Apparatus
- Triaxial shear test apparatus
- Three gang consolidation test device
- Soil Permeability apparatus
- Hot air oven
- CBR test apparatus



## **CONCRETE & HIGHWAY LAB**

## **Major Equipments**

- Compression testing machine (2000 kN)
- Flexural Testing Machine
- Rebound Hammer
- Aggregate Impact testing Machine
- Aggregate crushing value apparatus



## **ENVIRONMENTAL ENGINEERING LAB**

# **Major Equipments**

- BOD Incubator
- Muffle Furnace
- COD apparatus
- Hot air oven
- Chlorine Comparator