Transportation Engineering & Advanced Road Research Laboratory (ARRL)

- Penetration at 25C
- Specific Gravity at 27C
- Flash and Fire Point
- Softening Point
- Bitumen Emulsion Viscosity Test
- Ductility at 27C
- VG Grading - Absolute Viscosity at 60C
- VG Grading - Kinematic Viscosity at 135C
- Aggregate Gradation (Sieve Analysis)
- Specific Gravity & Water Absorption
- Impact Value Test
- Crushing Value Test
- Flakinees & Elongation Test
- Los Angeles (LA) Abrasion Test
- Bitumen Extraction Test
- Marshal Stability Test /Specimen
- Stripping Value Test
- Aggregate Mix Proportioning
- Marshall Mix Design
- Rutting Test using Wheel Rut Test
- Indirect Tensile Test (IDT)
- Leutner Shear Bond Test
- Moisture Induced Sensitivity Test (MIST) / Test
- Pavement Roughness Test using MERLIN
- Benklemann Beam Deflection Test
- Bump Integrator
- Core Drill /Sample
- Pavement Design (IRC37-2018)
- Pavement Condition Survey
- Short and Long-term Pavement Performance Monitoring

Geotechnical Engineering Laboratory Laboratory Soil Testing & Analysis

- Moisture Content
- Organic Content
- Atterberg Limits/Consistency Limits
- Compaction Characteristics (Proctor: light/heavy)
- Shear Box (small/large Scale)
- Shear Box Interface (small/large Scale)
- Unconfined Compressive Strength (UCS)
- California Bearing Ratio (CBR) (soaked/unsoaked)
- Triaxial Testing (UU, CU, CD)
- Hydraulic Conductivity (constant/variable)
- Relative Density
- Consolidation Characteristics
- Mechanical Dry Sieve Analysis
- Hydrometer Analysis
- Specific Gravity (Density bottle/Pycnometer)
- Vane Shear
- Liquid Limit (Cone Penetrometer)
- Compaction Characteristics (Harvard Miniature)
- Differential Free Swell
- Wet Sieve Analysis
- Field Density by Core Cutter
- Field Density by Sand Replacement
- Chemical Analysis of Soil (pH, Chlorides, Sulphates, OC)
- SBC Report

Geomatics Lab

- Drone and DGPS Survey (Aerial and Volumetric Measurements)
- Drone Survey with Control Points (Orthomosaic, Maps and 3D Model)
- Drone based Periodic Monitoring
- Topographical Survey
- Digitization of Terrestrial Maps and Integration with Revenue Records
- Property Boundary Fixation and Survey
- District Environmental Plans (DEMP)
- Environmental Impact Assessment
- High Resolution Crop Health Assessment for Precision Farming
- Renewable Resource Assessments

Environmental Engineering Lab

Water and Wastewater Samples

- BOD
- COD
- Turbidity
- Optimum Coagulant Dosage (Jar test)
- Heavy Metals using ICP-OES
- Bacteriological Analyses (MPN tests)
- pH, EC
- Nutrients using TOC Analyzer

Soil Samples

- Thermogravimetry Tests using TGA
- Heavy Metals using ICP-OES
- Nutrients using TOC Analyzer
- Mineralogical Analyses using EDX, FESEM, FTIR, XRD

Organisational Training Programmes

- Introduction to Drone Technology and Applications
- Advanced Drone Mapping Strategies
- Introduction and Advanced Level Training in QGIS and ArcGIS
- Satellite Imagery Processing using AI & ML Techniques
- Hydrological Modelling
- Basic and Advanced Structural Analysis and Designing
- Waste to Wealth Strategies and Innovative Construction Materials

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About the University

SRM University-*AP*, Andhra Pradesh, is a multi-disciplinary research-intensive institute combining academic rigour, evolving research ecosystem, entrepreneurial heritage, and pioneering faculty. As a leading tertiary education institution, SRM *AP* has been challenging the conventional learning ecosystem since its inception to create a novel avenue where passion for wisdom meets purpose and excellence.

About the Department

The Civil Engineering Department at SRM University-*AP*, is equipped with state-of-the-art laboratories and cutting-edge technology. We have a diverse team of highly qualified faculty members with extensive research experience and a strong industry orientation. Our strengths lie in our comprehensive approach to infrastructure development, environmental sustainability, and advanced construction techniques. Along with conventional consultancy labs, we leverage the latest advancements in drone technology, sensors, geospatial technology and data analytics to provide precise and efficient solutions. Our commitment to excellence and continuous learning ensures that we stay at the forefront of the field, delivering top-notch consultancy services tailored to meet the unique needs of our clients.

Industrial Civil Consultancy Services/Testing Facilities

Concrete Technology/Construction Materials Lab

TESTS ON CEMENT AND POZZOLANIC MATERIALS (As per IS 4031 and IS 1727)

- Normal Consistency
- Initial and Final Setting Time
- Fineness (retained on 45µm wetsieving)
- Specific Gravity
- Fineness (Blaine's)
- Le-Chatelier Expansion
- Autoclave Expansion
- Loss on Ignition
- Compressive Strength of Mortar
- Pozzolanic Reactivity
- Determination of Reactive Silica

TESTS ON AGGREGATES (IS 383 /IS 2386)

- Aggregate Crushing Value
- Aggregate Impact Value
- Flakiness and Elongation Index
- Alkali-Aggregate reactivity - (Chemical Method)- IS: 2386
- Specific Gravity
- Sieve Analysis
- Water Absorption
- Bulk Density
- Bulking of Sand

TESTS ON FRESH AND HARDENED CONCRETE

- Concrete Mix Design- IS 10262
- Slump Measurement- IS 1199
- Design of Self-Compacting Concrete
- Concrete Cube Strength (150*150*150)- IS 516
- Determination of Split and Tensile Test of the Concrete Cylinder- IS 5816
- Water Permeability IS 3085: 1965
- Rapid Chloride Penetration Testing (RCPT)-ASTM C1202

TESTS ON CONCRETE/AAC BLOCK and BRICK (IS 2185/ IS 6441 and IS 3495/ IS 1077)

- Compressive Strength
- Thermal Conductivity
- Dimension
- Water Absorption
- Density

STEEL TESTING (IS: 1608/ IS: 1786/ IS: 1599)

- Tension Test- up to 16 mm
- Tension Test- more than 16 mm

NON-DESTRUCTIVE TESTING OF CONCRETE / ASSESSMENT (IS: 13311: 1992)

- Ultrasonic Pulse Velocity
- Rebound Hammer

COAL/ BIOMASS PELLETS (IS: 1350, IS: 16612 & IS: 16609)

- Total Moisture/Surface/ Inherent Moisture
- Ash Content
- Volatile Matter
- Proximate Analysis (M/C+A/C+VM)
- Ash Content and Moisture Content
- Carbon
- Hydrogen
- Nitrogen
- Sulphur
- Gross Calorific Value

CEMENT CONCRETE FLOORING TILES AND MARBLE GRANITE TILES (IS: 1237 and IS 1124)

- Wet Transverse Strength
- Water Absorption
- Dimension
- Specific Gravity
- Apparent Porosity

ADVANCED FACILITIES

- Laser PSD - Particle Size Distribution of Samples
- Autogenous Shrinkage of Paste/Mortar Samples
- ICOES-Elemental Analyses in Solution
- X-ray Fluorescence-Chemical Analysis
- XRD with Quantitative Analysis using Rietveld Refinement - Cement and SCM's
- Infrared Spectroscopic Analysis (FTIR)
- TGA/DSC Analysis from Room Temperature to 1450^{oC}

NOTE:

- Submit sufficient quality samples with a test request letter stating the nature of samples, required tests, protocol, and customer details.
- A quotation for testing charges and the required quantity can be made by contacting the address or email given below.
- Payment must be made 100% in advance through NEFT/RTGS/internet banking.
- Taxes are applicable as per the norms.