Civil Engineering Department

Testing & Consultancy Facilities

Material Testing: - The concepts, techniques, and devices utilized to measure the engineering properties of materials are introduced. The measurement of load-deformation properties and failure modes of fabricated and natural materials is emphasized. The aim of the MT is to determine the physical attributes of construction materials such as cement, soil, steel, water, fine and coarse aggregate, and the strength of fresh concrete provided by the various Government and private agencies.

***** Charges offered as per the guidelines of Shiksha Mandal Wardha ********

Material Testing Laboratory

1. Soil	**2.Fine& coarse aggregate**	**3.Cement**
1. Moisture Content Test 2. Specific Gravity Test 3. Dry Density Test 4. Atterberg Limits Test 5. Plastic Limit Test (PL) 6. Proctor's Compaction Test 7. California Bearing Test (CBR test) 8. Consolidation test 9. Penetration test 10. Permeability test etc	1.Sieve Analysis 2: Moisture Content Test 3: Specific Gravity Test 4: Compressive Strength Test 5: Bulk Density Test 6: Permeability Testing 7: Analyzing Organic Content 8: Test for Soundness	1. Fineness Test 2. Standard Consistency Test 3. Initial and Final Setting Time Test 4. Compressive Strength Test 5. Autoclave Test for Soundness 6. Tensile Strength Test *7.* Specific Gravity Test
4.Concrete	**5. Brick**	**6.Water**
1.Measurement of workability of concrete by slump cone test 2 Measurement of workability of concrete by compaction factor test 3 Tests for determination of compressive strength of concrete 4 Tests for determination of flexural strength of concrete 5 Tests for determination of splitting tensile strength of concrete	1.Measurement of size of the brick 2.Compressive strength of brick 3.Efflorescence 4.Water absorption	1.color 2.Turbidity 3.Ph -value 4.Total Hardness ($CaCo_3$) 5.Calcium (CS) 6.Iron (Fe) 7.Magnesium (Mg) 8.Chloride (Cl) 9.Free Residual Chloride 10.Sulphate 11.Total Alkanity as $CaCO_3$ 12.TDS

7.Steel Bar test : Physical Properties	**8.Non -destructive test**	
1. Diameter measurement of steel bar 2. Weight measurement of steel bar 3. Tensile strength of steel bar 4. Yield stress of steel bar 5. Elongation test of steel bar	1.Ultrasonic Pulse Velocity (UPV) Test 2.Rebound Hammer Test (Schmidt Hammer) 3.Carbonation Depth Measurement 4.Rebar Locator	

Consultancy Facilities

Sr.No.	Consultancy
1.	Design Mix Concrete
2.	Third party evaluation of structural design & Drawing (1. Bridge 2. Building 3. Water Tank)
3.	Electrical resistivity tests, for Electrical Resistivity Tomography (ERT), are a geophysical technique used to map subsurface structures and identify groundwater potential.