

PAPER-I (Objective Type)
DRAUGHTSMAN CIVIL (ITI Standard)
NATIONAL TRADE CERTIFICATE

Subject Code No.364

UNIT-1: BASIC ENGINEERING

Lettering, Lines, dimensioning, symbols, construction of scales, types of projections.

UNIT-2: CONSTRUCTION MATERIALS AND CONSTRUCTION PRACTICE

Brick, stone, cement, lime, sand, timber, steel, clay products, mortar, concrete, foundation, brick masonry, stone masonry floors & flooring, roof and roof covering, stairs, doors and windows, damp proofing course, pointing, plastering, lintel, arches, scaffolding. All Types of carpentry Joints, Prepare Layout drawing for Electrical works.

UNIT-3: SURVEY

Chain survey, compass survey, levelling, theodolite survey, contours. Plane Table Survey - Modern Survey - Total station, GPS. Technical Terms in Total Station - Adjustment and co-ordinate measurement - Open traverse and Closed traverse, Calculate surface area. GPS (Global Positioning System) - Practical application of GPS - Components of GPS - GPS segment organisation -

UNIT-4: BUILDING PLAN LAYOUT

Principle of planning - Orientation of Building - Local Building by Laws as per code - Lay out site and key plan - Making plan and elevation and Section of building - Approved Drawing.

UNIT-5: AUTO CAD

Create object on using Auto CAD.

Plotting of drawing from CAD-2D drafting of building plan - Elevation and Section and other Building details - Design Lay out of Furniture Electrical appliance and plumbing sanitary fittings - Basic 3D drawing.

UNIT-6:REINFORCED CEMENT CONCRETE(RCC)

Selection of materials - Details of reinforcement - One way slab and two way slab, RCC, Column, Beam details - Safety against earthquake - Grade of cement - Bar bending schedule - Details of Steel Roof Trusses.

UNIT-7: TRANSPORTATION ENGINEERING

Roads – Roads Technical Terms and uses of Roads - Cross section of different types of Road - Road curves and gradient, General principles of alignment - Road drainage System - Bridges and culvert - Different types of culvert & Bridges – Railway - Technical Terms and uses - Cross Section of Railway track - Types of gauges and rails.

UNIT-8: PUBLIC HEALTH AND SANITATION

Various pipe joints - Types of Sanitary fittings - Manholes and Septic tank - Water Supply system - Over head tank - Preparation of Service plan, Drainage plan, Sewer System - Flow diagram of water treatment plant - Terms used in Public Health - Types of Sewer.

UNIT-9: IRRIGATION

Technical terms used in irrigation - Types of cross drainage work - Types of Reservoir.

UNIT-10: ESTIMATE AND COSTING.

Prepare details estimate for each items and Abstract - Rate analysis.
