



SNS COLLEGE OF TECHNOLOGY

Coimbatore – 641 035

An Autonomous Institution



DEPARTMENT OF CIVIL ENGINEERING

23GET102-BASIC CIVIL AND MECHANICAL ENGINEERING

I YEAR / I SEMESTER

UNIT 1 : CIVIL ENGINEERING MATERIALS AND SURVEYING

Topic : Introduction and Scope of Civil Engineering



UNIT 1 :CIVIL ENGINEERING MATERIALS AND SURVEYING



1. Introduction to Civil engineering
2. Scope of civil engineering
3. Building materials
4. Brick, stone, cement, concrete, properties-uses
5. Introduction to Surveying
6. Objectives – types – classification – principles of Surveying
7. Measurements of distances, angles
8. Concepts of Levelling
9. determination of areas
10. Illustrative examples.



What is Civil Engineering?

- Civil Engineering is the field of engineering concerned with **planning, design and construction** for environmental control, development of natural resources, buildings, transportation facilities and other structures required for health, welfare, safety, employment and pleasure of mankind.
- The main scope of civil engineering or the task of civil engineering is **planning, designing, estimating, supervising construction, execution, and maintenance** of structures like building, roads, bridges, dams, etc.
- **Population demographics** along with increasing urbanization have facilitated the need for sustainable and efficient infrastructure solutions.
- **Development in green buildings, sensor-embedded roads and buildings, geopolymer concrete, and water management** will stimulate global civil engineering industry growth.



Specialized disciplines in civil engineering



1. Building materials
2. Building construction
3. Structural engineering
4. Geotechnical engineering
5. Hydraulics, water resources and irrigation engineering
6. Water supply and sanitary engineering
7. Environmental engineering
1. Water supply and sanitary engineering
2. Environmental engineering
3. Transportation engineering
4. Town planning and architecture
5. Surveying
6. Drawing
7. Estimation and specification
8. Management techniques
9. Computer application



Scope of Civil Engineering



Fields in Civil Engineering



