



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, geopolymers 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



