

Code No: R204101T

R20

SET - 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURAJADA VIZIANAGARAM
IV B. Tech I Semester Advanced Supplementary Examinations March 2025
ELEMENTS OF CIVIL ENGINEERING

(Open Elective)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**
All Questions Carry Equal Marks

UNIT-I

1. a) Discuss the importance of planning, scheduling, and construction management in Civil Engineering. [7M]
b) Explain the role of Civil Engineers in infrastructural development. [7M]
(OR)
2. a) What are the fundamental principles of surveying? Explain in detail. [7M]
b) Differentiate between maps and plans. How are scales used in surveying? [7M]

UNIT-II

3. a) Explain the different types of compasses used in surveying with neat sketches. [7M]
b) Define meridian, declination, and dip of the needle in compass surveying. [7M]
(OR)
4. a) Explain the different leveling instruments and their uses. [7M]
b) What are the different methods of leveling? Explain any one method in detail. [7M]

UNIT-III

5. a) What are the important properties and uses of stones in construction? [7M]
b) Explain the different types of bricks and their properties. [7M]
(OR)
6. a) Differentiate and characterize the ferrous and non ferrous metals? [7M]
b) Explain the different types of paints and their uses in construction. [7M]

UNIT-IV

7. a) What are the elementary principles of building planning? Explain with examples. [7M]
b) Draw a simple layout plan for a residential building and explain the elements. [7M]
(OR)
8. a) Explain the classification of buildings based on occupancy, structural system, and design loads with suitable examples [7M]
b) Define building bye-laws and explain their significance. [7M]

UNIT-V

9. a) Define watershed development and explain its importance in water conservation. [7M]
b) What are the different sources of water? Explain their significance. [7M]
(OR)
10. a) Explain the different types of hydraulic structures used for water storage. [7M]
b) What are dams? Classify different types of dams and explain their functions. [7M]
