Combined First and Second Semester B.Tech. Degree Examination, May 2011
(2008 Scheme)
08-106 : BASIC CIVIL ENGINEERING
(CMNPHE TARUF B)

Time : 3 Hours
Max. Marks : 100

PART – A

Answer all questions, each question carries 5 marks.

1. What are the various sources of error in chain surveying?

2. What are the principles of levelling?

3. Differentiate total station and GPS in surveying.

4. What are the factors to be considered in the selection of site for a residence?

5. Write the importance of determination of bearing capacity of soil.

6. Write a note on the common types of steel used in construction.

7. Differentiate precast and prestressed concrete construction.

8. Write notes on ‘Escalators and Elevators’.

(8×5=40 Marks)
PART – B

Module – I

Each question carries 20 marks.

9. a) Explain in detail the different types of tape corrections.

b) The following perpendicular offsets were taken at 10 m intervals from a survey line to an irregular boundary.

3.50, 4.20, 6.50, 5.90, 4.75, 7.50, 8.20, 4.80, 3.80 and 5.30 m.

Calculate the area enclosed between the survey line, the irregular boundary and the first and last offsets, using

1) Trapezoidal rule

2) Simpson’s rule.

OR

10. a) What are the temporary adjustments of a level?

b) The following consecutive readings were taken with a dumpy level and a 4 m levelling staff on a continuously sloping ground at a common interval of 20 m.

0.575, 0.930, 1.905, 2.840, 3.545, 3.930, 0.860, 1.335, 1.680, 2.435, 3.845, 0.935, 1.675 and 2.015

Rule out a page of a level field book and enter the readings and calculate the RL of all points if the RL of 1st point was 300.000 m. Also find the gradient of the line joining the 1st and last point.

Module – II

11. a) What are the different types of foundations? Explain with neat sketches.

b) List the different types of flooring materials used for buildings. Explain the procedure of preparing a marble floor.

OR
12. a) What are the different types of brick masonry? Explain with sketches. 12

b) What are the relative advantages and disadvantages of flat roof and sloping roof? 8

Module – III

13. a) What are the different tests conducted in the laboratory for testing the quality of cement as per IS specifications? Explain with neat sketches. 15

b) What are the advantages of RCC over plain cement concrete? 5

OR

14. a) What are the different types of stairs used in buildings. Explain with sketches. 10

b) Explain how a sewage disposal arrangement is done in residential buildings? 10