



Reg. No. : .....

Name : .....

**Combined First and Second Semester B.Tech. Degree Examination, May 2009  
(2008 Scheme)**

**08-106 BASIC CIVIL ENGINEERING**

Time : 3 Hours

Max. Marks : 100

**PART - A**

Answer **all** questions.

1. Explain the principles of surveying.
2. List out the errors in tape measurement.
3. Sketch a typical page in a levelling field book.
4. Mention the characteristics of contour maps.
5. What is bearing capacity of soil ? How will it affect the selection of foundation ?
6. What is the criteria of selection of roofing materials ?
7. Differentiate between precast and prestressed concrete.
8. Explain any two systems of vertical transportation. (8×5=40 Marks)

**PART - B**

**MODULE - 1**

9. a) What is ranging ? Explain the different methods of ranging. 8
  - b) To measure a base line, a steel tape 30 m long standardised at 15°C with a pull of 100 N was used. Find the correction per tape length if the temperature at the time of measurement was 20°C and the pull exerted was 160 N.
- $E = 2.1 \times 10^7 \text{ N/cm}^2$ ,  $\alpha = 7.1 \times 10^{-7}/^\circ\text{C}$ , wt of  $1\text{cm}^3$  of steel = 7.86 gm. 12

OR

P.T.O.



10. a) Explain the significance of Total station and GPS in surveying in the present context. 8
- b) A series of offsets was taken from a base line to a curved boundary at intervals of 10 m in the following sequence :  
0, 2.68, 3.64, 3.70, 4.60, 3.62, 4.84, 5.74.  
Complete the area between the base line, the curved boundary line and the end offsets using Simpson's rule and compare the results with trapezoidal rule. 12

## MODULE – 2

11. a) What are the criteria for selection of site for buildings ? 8
- b) Draw neat sketches of a spread footing, isolated footing, and Mat foundation. 12
- OR
12. a) Name the different types of stone masonry with sketches. 8
- b) What is plastering ? Explain the procedure for the same. 12

## MODULE – 3

13. a) Enumerate the IS specifications for the different tests on cement. 10
- b) How is plain cement concrete mixture proportioned and prepared ? 10
- OR
14. a) How is Reinforced cement concrete compared with plain cement concrete ? 10
- b) Explain briefly the water supply and sewage disposal arrangements in a residential building. 10