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**A – 2112**

Reg. No. : .....

Name : .....

**Combined First and Second Semester B.Tech. Degree  
Examination, April 2016  
(2008 Scheme)**

**08-106 : BASIC CIVIL ENGINEERING**

Time : 3 Hours

Max. Marks : 100

**PART – A**

Answer **all** questions :

- I. a) Briefly explain any three methods of taking measurements in sloping ground.
- b) Discuss the temporary adjustments of a dumpy level.
- c) What are the advantages of a total station ?
- d) What are the factors affecting selection of site of a residential building ?
- e) Compare cast-in-situ piles and precast piles.
- f) List any five roofing materials along with its suitability.
- g) What are the main ingredients of cement ?
- h) Distinguish between escalators and elevators.

**(8×5=40 Marks)**

**PART – B**

- II. a) Write a note on the characteristics of contours and its uses. **10**
- b) A series of offsets were taken from a survey line to a curved boundary line at intervals of 10 m in the following order :  
0, 2.72, 3.64, 3.72, 4.63, 3.42, 4.84, 5.74. Compute the area between the base line, the curved boundary and the end offsets using Simpson's rule and trapezoidal rule. **10**

OR

P.T.O.



c) The following consecutive readings were taken with a level on a continuously sloping ground at a common interval of 20 m.

0.600, 1.235, 1.860, 2.575, 0.235, 0.915, 1.935, 2.870, 0.565, 1.825 and 2.725.

The reduced level of the first point was 192.125. Rule out a page of the level book and enter the above readings. Calculate the reduced levels of the points and find the gradient of the line joining the first and last points. 10

d) What are the components of global positioning system ? Give the system overview. 10

III. a) Compare English bond and Flemish bond with neat sketches of  $1\frac{1}{2}$  brick walls. 10

b) What are the characteristics of a good plaster ? Discuss on the different types of plasters. 10

OR

c) What is pile foundation ? Explain how pile foundations are classified. 10

d) What are the different types of Windows ? Explain. 10

IV. a) Explain the steps involved in the preparation and placing of cement concrete. 10

b) How will you determine the compressive strength of cement concrete ? 10

OR

c) What is bulking of fine aggregate ? How is it determined ? 10

d) What are the different systems of plumbing for a residential building ? Explain with sketches. 10