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Reg. No. : .....

Name : .....

**Combined First and Second Semester B.Tech. Degree  
Examination, April 2013  
(2008 Scheme)  
08-106 : BASIC CIVIL ENGINEERING**

Time : 3 Hours

Max. Marks : 100

**PART – A**

Answer **all** questions, **each** question carries **5** marks.

1. What are the factors to be considered for selection of survey stations ?
2. Differentiate between cumulative and compensating errors.
3. Write short notes on Total Station.
4. Differentiate between isolated footing and combined footing.
5. Write short notes on plywood and particle board.
6. Differentiate between precast and prestressed concrete.
7. What are the different methods of proportioning of concrete ?
8. Write short notes on "septic tank".

**(8×5=40 Marks)**

**PART – B  
MODULE – I**

**Each** question carries **20** marks.

9. a) Explain the various corrections to be incorporated while taking linear measurements with a tape. 6
- b) The following perpendicular offsets were taken at 10 m intervals from a survey line to an irregular boundary : 3.90, 4.370, 6.85, 5.295, 7.60, 8.75, 9.520, 8.42 and 6.43 m. Calculate the area in square meters enclosed between the survey line, the irregular boundary and the first and last offset by  
i) Simpson's rule ii) Trapezoidal rule. 14

OR

P.T.O.



10. a) What are the characteristics and uses of a contour? 8
- b) The following consecutive readings were taken with a dumpy level and 4m. levelling staff on a continuously sloping ground at a common interval of 15m. 0.595 on A, 0.945, 1.750, 2.845, 3.650, 3.945, 0.950, 1.035, 1.650, 2.540, 3.850, 0.960, 1.580, 3.015 on B. The instrument was shifted after sixth and eleventh readings. The RL of point A is 125.500. Make up a level book and determine the gradient of the line AB. 12

### MODULE - II

11. a) Classify piles depending upon the function served by them. Describe any three of them. 10
- b) Describe the process of laying a granite topped floor. 10
- OR
12. a) Explain with neat sketches the different types of sloped roof used in building construction. 10
- b) What is plastering? Explain the process of cement mortar plastering on walls. 10

### MODULE - III

13. a) What is meant by grade of cement? How will you determine it in the laboratory? 10
- b) Differentiate between Reinforced cement concrete and plain cement concrete. What are the advantages and disadvantages of RCC over PCC? 10
- OR
14. a) What are the factors affecting the workability of concrete? Explain. 6
- b) Describe any one method of prestressing. 8
- c) Write short notes on :
- i) Stairs
  - ii) Escalators
  - iii) Elevators.
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