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Elements of Civil Engineering
(Old) (1110)

P. Pages : 2

Time : Two Hours   **Max. Marks : 50**

Instructions to Candidates :
1. Do not write anything on question paper except Seat No.
2. Answer sheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Solve **any two** questions from each unit.
5. Assume suitable data if necessary.
6. Draw neat sketches, figures wherever necessary.
7. Non programmable calculator is allowed.

UNIT - I

1. a) What are the types of bridges ? Explain any one.   **5**

   b) Define 'pollution'. What are the different sources of pollution ?   **5**

   c) Explain the important of Environmental engineering.   **5**

UNIT - II

2. a) State various tape corrections ?   **5**

   b) A Chain was tested before. Starting a survey of a field and was   **5**
       found to be exactly 30.00 m. At the end of survey it was tested
       again and was found to measure 30.16 m. The area of plan drawn
       to a scale of 1 cm = 60 m. was 92.50 cm^2. Find the true area of the
       field.

   c) Define the following   **5**
       i)   Bearing of a line.

       ii) Fore bearing.

iii) Back bearing.

iv) Reduced bearing.

v) The whole circle bearing.

UNIT - III

3. a) Explain the temporary adjustment of dumpy level. **5**

   b) State the uses of contours. **5**

   c) The following consecutive readings were taken with a level and a 4.0 m staff on a sloping ground at a common internal of 30 m. The readings are
   0.780, 1.535, 1.955, 2.430, 2.985, 3.480, 1.155, 1.960, 2.365, 3.640, 0.935, 1.045, 1.630 and 2.545.
   The RL of the first point A was 180.750 m. Rule out a page of level field book. Calculate the reduced levels of the points by the collimation system. Also calculate the gradient of the line joining the first & the last points. **5**

UNIT - IV

4. a) Differentiate between load bearing structure and frame structure. **5**

   b) What is mean by horizontal circulation & vertical circulation and ways to achieve them ? **5**

   c) Define foundation & state different functions of foundations. **5**

UNIT - V

5. a) What are the characteristics of good bricks. **5**

   b) State the characteristics of good timber. **5**

   c) Explain the term RCC (Reinforced Cement Concrete) **5**

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