NP-124

December-2015

B.Arch., Sem.-III (New)

AR-305 : Survey and Levelling

Time : 3 Hours]   **[Max. Marks : 50**

1. (a) Define Surveying and Levelling.   **2**
   (b) Enlist Classification of Survey.   **3**
   (c) Define Ranging. Explain reciprocal ranging in detail.   **5**

2. (a) Enlist types of Chains.   **2**
   (b) Explain in detail various instruments used in levelling.   **3**
   (c) What are the instruments used in chain survey ? How is a chain survey executed in the field ?   **5**

3. (a) A 30 m. chain was found to be 0.20 m too long after chaining a distance of 4000 m. It was found to be 0.35 m too long after measuring a total distance of 8000 m. At the start of work, the chain was tested and was found to be exactly 30 m. Find correct length of the measured distance.   **5**
   (b) Convert the following Reduced bearing into Whole circle bearing.   **5**
       (1) N 30° E
       (2) S 60° W
       (3) S 45° E
       (4) N 20° E
       (5) S 75° W

4. (a) What is local attraction ? How is it detected and eliminated ?   **5**
   <div align="center">OR</div>
   (a) Explain with neat sketch prismatic compass, difference between W.C.B. and R.B.
   (b) Explain in detail intersection method of plane table survey.   **5**

5. (a) Explain the procedure of measuring and calculating the area of irregular figure by use of planimeter.   **5**
   <div align="center">OR</div>
   (a) Explain in detail temporary adjustment of Theodolite.
   (b) The following readings were taken with a dumpy level and 4 m. Levelling staff. The instrument was shifted after 3rd reading. The following are 2.890, 1.755, 1.650, 1.850, 2.125, 1.675, 1.465 m. Enter the reading in a page of level book and calculate the RL of points, if the first reading was taken with a staff held on a benchmark of 100 m. Also apply usual check.   **5**

_____