TEST-1 EXAMINATION- Feb2018
B Tech IVSemester (Civil Engineering)

Course Code: 10 B11CE412   **Max. Marks: 15**
Course Name: Surveying   **Max. Time: 1 hrs**
Course credit: 4

Note: All questions are compulsory. Assume suitable data if required.

Q1. Answer the following briefly. Each carries equal marks.   **[2.5]**
   (a) Explain the fundamental principles of surveying.
   (b) Differentiate between plane surveying and geodetic surveying with their salient features.
   (c) Differentiate between BS, IS and FS
   (d) Differentiate between Fly leveling and check leveling.

   (e) Define the term magnetic declination.

Q2. How will you perform a chaining operation when chaining is free but vision is obstructed? Explain the procedure.   **[2.5]**

Q3. (a) Differentiate between Quadrantal bearing system and whole circle bearing system.   **[0.5]**

   (b) The following are the observed forbearing of a traverse *ABCD*

   Line AB 45° 30′   Line BC 120°   Line CD 190° 30′   Line DA 284° 15′
   Find interior angles of traverse.   **[2.5]**

Q4. A survey line CDE crosses a river, D being on the near bank and E on the opposite. A perpendicular, DF = 100 m is ranged at D on the left. From F , bearing of E and C are observed to be 35° 15′ and 135° 15′ respectively. Chainage of C is 5010 and that of D is 5060 m, Find the chainage of E.   **[3]**

Q5. The following readings were taken with a level and 4 m staff at different stations. Rule out a page of level book and enter the reading. Work out RL of all the stations by the height of instrument method.

   0.57 BM (= 58.25 m), 0.933, 1.768, 2.450, (2.05 and 0.567) C.P., 1.888, 1.181, (3.679 and 0.612) C.P., 0.705, 1.810.   **[4]**