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Class Roll No.....

Enrollment No.....

**1<sup>st</sup> MID-SEM EXAMINATION, [April-2024]**

**Civil Engineering & Mechanics [CS-105]**

**II SEM**

**Time: 1 ½ Hrs.**

**Maximum Marks: 20**

**Note: Attempt all questions.**

**Q.1. Write a note on: (any two)**

**CO-2(5 marks)**

- (i) Bench Mark
- (ii) Ranging
- (iii) Height of instrument
- (iv) Profile Levelling

**OR**

Explain EDM method of survey.

**Q.2. What is local attraction? How it can be detected?**

**CO-2(5 marks)**

**OR**

The following staff readings were taken on a continuously sloping ground by a level and a 4m leveling staff-

0.230, 0.455, 0.540, 1.245, 1.90, 2.190, 3.20, 0.855, 1.50,  
2.285, 3.35, 0.590, 1.55, 2.645, 3.120, 3.45m

Calculate the RL of all station points. Apply arithmetical checks. The RL of first point was 580 m.

**Q. 3. State & derive the equation of Law of Parallelogram of forces.**

**CO-04 (5 Marks)**

**OR**

Find the tension in string AC & BC in the fig.