Test 1

1. What slope distance must be laid out along a line that rises 5m/100m in order to establish a horizontal distance of 830m? 2.5
2. A 30.48m tape standardised in catenary at 111.21N is used in field with a tension of 88.96N. Calculate sag correction if weight of tape is =0.0312 kgf/m 2.5
3. Following observations are made in fly levelling: B.S.: 0.62, 2.05, 1.42, 2.63 and 2.42 m. F.S.: 2.44, 1.35, 0.53 and 2.41 m. The first reading was taken on a B.M. of R.L. 100.00 m. From the last B.S. it is required to set 4 pegs each at a distance of 30 m on a rising gradient of 1 in 200. Enter these notes in the form of a level book and calculate the R.L. of the top of each peg by the rise and fall method. Also, calculate the staff readings on each peg. 5
4. Details of a traverse survey are as follows: 5

Line	Length(m)	Bearing (degree)
AB	150	342
BC	513	14
CD	315	137

Calculate the distance between a point E on AB, 100m from A and a point F on CD, 125 from C.