Important 13mark Questions

Unit I

1. The following consecutive readings were taken with a levelling instrument at intervals of 20 m. The readings are 2.375, 1.730, 0.615, 3.450, 2.835, 2.070, 1.835, 0.985, 0.435, 1.630, 2.255 and 3.630 m. The instrument was shifted after fourth and eighth readings. The last reading was taken on a BM of RL 110.200 m. Find the RL of all the points.
2. In a closed traverse ABCDE, the bearing of the line AB was measured as $150^0 30'$. The included angles were measured as under, Angle A = $130^0 10'$, Angle B = $89^0 45'$, Angle C = $125^0 22'$, Angle D = $135^0 34'$, Angle E = $59^0 9'$. Calculate the bearings of all other lines.

Unit II

1. What is contouring? Describe about direct contouring and various methods of indirect Contouring.
2. What is two-point problem and explain with neat sketch.

Unit III

1. Calculate the heights and distances by trigonometrical levelling.
2. A level was set up at a point 'O' and the distances to two staff stations A and B were 60 m and 200 m. The observed staff readings, On A and B were 2.25 and 1.815. Find the correct differences of levels between stations A and B.

Unit IV

1. Explain the different coordinates systems by which the position of heavenly body can be specified.
2. Explain various sounding methods in detail.

Unit V

1. Explain in detail about the different segments of GPS.
2. Draw a neat sketch and explain the working principle of a Microwave Total Station equipment.