

SAMPLE EXAM QUESTIONS FROM PREVIOUS TESTS

- Fill in the blanks for the following questions:
 - Lines running north-south, converging at the poles are lines of _____.
 - A(n) _____ tape is made of a nickel-steel alloy with a low coefficient of thermal expansion and is used when taping specifications require a high order of accuracy.
 - A(n) _____ survey involves, in part, charting bottom areas of streams, lakes, harbors, and coastal waters.
 - A(n) _____ is used to project a point on the ground up to the tape, or to project a point on the tape down to the ground when taping.
 - _____ errors are those left after the systematic errors are removed.
- What is the difference between geodetic and plane surveying?
- What are the five general requirements of field notes? Briefly describe each.
- What is the difference between precision and accuracy?
- A survey shows a line to be 7 chains, 5 links long. What is this distance in feet?
- The distance between points in two towns is known to be 936,255.33m. What is the distance expressed in feet (use the U.S. Survey Foot conversion)?
- It is required to stake out a line 537.63' in length. Taping will be performed fully supported along a slope of 5%. What is the desired field measurement?
- A 100' steel tape was used to measure a distance of 938.62' with a tension of 25lbs. The standard tension was 15lbs. If the cross-sectional area is 0.0040 sq in. and Young's modulus of elasticity is 29,000,000 psi, what is the correct length of the line?
- A distance was measured and found to be 2418.62'. Later, the tape was compared to the standard and found to be 99.97' long between the ends. What is the correct length of the line?
- It is required to set out two points 876.42m apart. A 30-m tape was used and the field temperature was 24°C. If the tape measures 30m exact when tested at 20°C, what is the correct distance to read in the field?
- The slope distance between two points is 728.81', measured by EDM, and the vertical angle is +2° 45'. If the elevation of the instrument station is 630.15' and the height of the instrument, height of the target and height of the EDM reflector are all equal to 5.26', compute the elevation of the target station.

- Complete and check the following set of level notes. If the elevation of BM#2 is known to be 117.74', adjust the elevations if any error exists.

STA	BS	HI	FS	ELEV	ADJ. ELEV
BM #1	6.49			100.00	
TP #1	8.21		6.48		
TP #2	9.06		5.03		
TP #3	10.34		3.96		
BM #2			1.09		

- If the bubble on a level is moved 5 divisions and the change in the rod readings was found to be 0.012' over a distance of 300', compute the bubble sensitivity.
- A peg test of a level is performed. Two stakes were set out 200' apart. The level was set up in the middle and a backsight taken on point **A** was 6.567' and the foresight on **B** was 2.341'. The level was then placed 20' beyond point **B** and the backsight on **A** was 7.740' while the foresight on **B** was 3.342'. What should the rod reading on **A** be to correct for the collimation error?
- A line **AB** as found to have a magnetic bearing of N 37° 15' W on January 2, 1985. From this isogonic map dated January 1980.0, the magnetic declination was shown to be 10° E. The annual change was 7' W. What is the true (astronomic) bearing of line **AB**?