

Questions

2 Marks

Land Survey. I

- (1) What is dip in magnetic needle?
- (2) What is Isogonic & Isoclinic line?
- (3) What is true & magnetic meridian.
- (4) The whole circle bearing of a line is 180° to 270°
What will be its Reduced Bearing.
- (5) What is datum line.
- (6) What is line of collimation?
- (7) What is local attraction.
- (8) What is orientation.
- (9) What is contouring?
- (10) What is the principle of plane table surveying.
- (11) What is contour interval & horizontal equivalent.

5 marks

(1) The bearing of the sides of a closed traverse.

ABCDEA are as follow.

Side	FB	BB
AB	$107^\circ 15'$	$287^\circ 15'$
BC	$22^\circ 00'$	$202^\circ 00'$
CD	$281^\circ 30'$	$101^\circ 30'$
DE	$181^\circ 15'$	$1^\circ 15'$
EA	$124^\circ 45'$	$304^\circ 45'$

compute the interior angle of the traverse and Exercise necessary check.

(2) What is two point problem? Explain with neat sketch.

- (3) What are the methods of contouring? Explain one method with neat sketch.
- (4) Enlist and explain the function of each of the instrument required for plane table surveying.
- (5) Explain the errors in chaining.
- (6) Explain how a chain is tested and adjusted in the field.
- (7) What is orientation? What are the methods of orientation and describe any one of them.

7 Marks

(1) The following consecutive readings were taken with a dumpy level along a chain line at a interval of 15m. The first reading was at a chainage of 165m. Where the RL is 98.085. The instrument was shifted after the 4th & 9th reading.

3.150, 2.245, 1.125, 0.860, 3.125, 2.760, 1.835, 1.470
1.965, 1.225, 2.390, 3.035m.

Apply usual check.

(2) What are the characteristics of contours? Explain with neat sketches.

(3) Find the area of the closed traverse as per data given. By any one method.

<u>Side</u>	<u>Latitude</u>	<u>Departure</u>
AB	+225.5	+120.5
BC	-245.0	+210.0
CD	-150.5	-110.5
DA	+170.0	-220.0

(4) The following bearings were observed in case of a closed traverse. At what stations local attraction is suspected. Also compute the corrected bearings.

<u>Line</u>	<u>FB</u>	<u>BB</u>
AB	S40°30'W	N41°15'E
BC	S80°45'W	N79°30'E
CD	N19°30'E	S20°00'E
DA	S80°00'E	N80°00'W

(5) Explain Temporary Adjustment of Dumpy level.

(6) State the Advantages & disadvantages of Plane table Surveying.

(7) Explain how will you measure the horizontal angles by a theodolite by methods of repetition and reiteration.