3RD SEM
Surveying-I

2 Marks questions

a. What do you mean by Surveying?
b. Define well conditioned triangle.
c. What is the reduced bearing of 345° 35'and 195 °20'?
d. Define fore bearing and back bearing.
e. What is the principle of Plane tabling?
f. State the limitation of Simpson's rule in calculating the area.
g. What do you mean by local attraction?
h. The fore bearing of a line is 145°30'.What is its back bearing?
i. Define orientation and why it is done?
j. Differentiate between open traverse and close traverse.

5 Marks Questions

a. The length of a line measured with 20 m chain was found to be 327m.Afterwards it was found that chain was 3 cm too long. What is the distance between the points?
b. What are the advantages and disadvantages of compass surveying?
c. The magnetic bearing of a line CD is S 30°29'W.Find its true bearing if its declination is 10°20'E.
d. Describe briefly the types of tapes.
e. Describe different types of errors occurs during chaining.
f. Write short notes on trapezoidal rule of computation of area.
g What are the errors that may occur during plane table surveying?

10 Marks Questions

3. A steel tape was exactly 30 m long at 20°C when supported through out its length under a pull 10 Kg. A line was measured with this tape under a pull of 15 Kg and at a mean temperature of 32°C and found to be 780 m long.
The cross sectional area of the tape=0.03 cm^2 and its total weight=0.693 kg .
α for steel=11X 10^{-6} per ^{0} C and E for steel =2.1X 10^6kg/cm^2.Compute the true length of the line if the tape was supported during measurement(a) at every 30 m and (b) at every 15m.

4 The following are the fore and back bearing of the sides of closed traverse. Calculate the interior angles of the traverse?

Side	FB	BB
AB	150°15’	330°15’
BC	20°30’	200°30’
CD	295°45’	115°45’
DE	218°0’	38°0’
EA	120°30’	300°30’

5 What are different kinds of ranging? Describe with sketches the method used for ranging across a high ground.

6 The following bearings were observed in a compass traverse. At which of the stations would local attraction be suspected. Find the corrected bearing of the lines.

Line	FB	BB
AB	305°00’	125°30’
BC	75°30’	254°30’
CD	115°30’	297°00’
DE	165°30’	345°30’
EA	225°00’	44°00’

7 Describe briefly the Intersection and traversing method of plane table surveying.