



St. Michael Polytechnic College



St. Santhiyagappar Nagar
Kalayarkoil-630 551.

DEPT: CIVIL ENGG

YEAR/SEMESTER: II / III

SUB.NAME: SURVEYING - I

Each question carries 1(one) mark in PART-A and 12(twelve) marks in PART-B

UNIT-1

PART-A

1. Define surveying.
2. Write the main objects of surveying.
3. What are the two main divisions of surveying?
4. What are the two main principle of surveying?
5. What are the other classification of surveying based on the various aspects such of field, objects, method and instruments?
6. Define chain surveying.
7. Write the different types of chain surveying.
8. What is the purpose of chain surveying?
9. Explain types of ranging.
10. Explain the direct ranging method.
11. Define offsets. Write any types of offsets?
12. What are the limits of errors in the chain surveying?
13. What are the types of errors in chain surveying?
14. Explain the types of tape correction.

PART -B

1. In passing an obstacle in the form of a pond. Station 'A' and 'D' on the main line where taken on the opposite side of the pond. On the left of AD. A line AB, 200m long was laid down and second line AC, 250m long was ranged on the right of AD. The points B, D and C being in the same straight line. BD and DC where chained and formed to be 125m and 150m respectively. Find the length of AD.
2. A survey lines 'BAC' crosses a river and 'C' being on the near and distant banks respectively. Standing at 'D' a point 50m measured perpendicular to 'AB' from A and the bearings of C and B are 320^0 and 320^0 respectively. AB being 25 meters find the width of river
3. A survey line ABC cuts the banks of a river at 'B' and 'C' any to determine the distance 'BC' line BE 60m long was set out roughly parallel to the river. A point D was found in CE produced any middle point 'F' at DB determined. EF was then produced to G. Making FG equal to EF and HB and DG produced to cut the surveying line in 'H'. 'GH'

and 'HB' where found to be 40 and 80 meters long respectively. Find the distance from 'B' to 'C'.

4. A survey line was measured by means of a 20m chain and found to be 4110m. The same survey line was also measured by a 30m chain found to be 4186m. If the 20m chain was 2000mm too long. What was the error in 30m chain?
5. A steel tape of 30m length standardized at 18°C was used to measure a survey line and found to be 634m. The temperature during the measurement was 26°C . Find the true length of line assuming the co-efficient of expansion, as 11.5×10^{-6} per 1°C