

V71/BCP107/EE/20160524

Time : 3 Hours

Marks : 80

Instruction :

1. All Questions are Compulsory.
 2. Each Sub-question carry 5 marks.
 3. Each Sub-question should be answered between 75 to 100 words. Write every questions answer on separate page.
 4. Question paper of 80 Marks, it will be converted in to your programme structure marks.
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1. Solve any **four** sub-questions.
 - a) Differentiate between Direct Ranging and Indirect Ranging. 5
 - b) What are the different types of errors in chaining? 5
 - c) The area of a certain field was measured with a 30 m chain and found to be 1000 sq.m. It was after words detected that the chain used was 10 cm short. What is the true area of the field. 5
 - d) What are called as Compensating Errors? Name the compensating errors in chain. 5
 - e) The length of the line was found to be 500 meters when measured with a 20 meters chain. If the chain is 15 cm too short, find out the correct length of the line. 5
2. Solve any **four** sub-questions.
 - a) Differentiate between Prismatic Compass and Surveyor's Compass. 5
 - b) What is a Prismatic Compass? Draw a neat labelled diagram of the Prismatic Compass. 5
 - c) Convert the following Quadrant Bearings into Whole Circle Bearings: 5
 - i) N 89° 1' 59" E
 - ii) S 31° 31' 31" W
 - iii) N 20° 15' 10" W
 - iv) S 44° 30' 30" W
 - v) N 0° 35' 21" W
 - d) What is a Traverse? Differentiate between Closed Traverse and Open Traverse. 5
 - e) What is Whole Circle Bearing System and Quadrant Bearing System? 5

3. Solve any **four** sub-questions.
- a) What are the different instruments used in Plane Tabling? Explain them. 5
 - b) Explain, with neat sketches, the resection method of plane tabling for locating the current station using two-point method. 5
 - c) Define the following terms: 5
 - i) Radiation
 - ii) Intersection
 - iii) Resection
 - d) List at least five advantages and five disadvantages of plane tabling. 5
 - e) What are the Lehman's rules which are followed in estimating the position of the point sought? 5

4. Solve any **four** sub-questions.
- a) Explain the procedure of using Theodolite for the measurement of magnetic bearing of a line. 5
 - b) Draw a neat labelled diagram of Theodolite. 5
 - c) Determine the missing data in the table : (Show Calculations) 5

Station	B.S.	I.S.	F.S.	Rise	Fall	HI	RL (m)
1	?					23.18	20.00
2		1.59		?			?
3	0.28		?		1.08	?	?
4	?		4.00		?	18.33	?
5		?			2.19		?
6		?		?			15.72
7			2.95		?		?

- d) What is Parallax and how it can be reduced? 5
- e) What are the temporary adjustments of a Theodolite? Explain them. 5

