

B.Tech. CIVIL ENGINEERING (BTCLEVI)**Term-End Examination****December, 2018****BICE-002 : SURVEYING**

00423

*Time : 3 hours**Maximum Marks : 70*

Note : Attempt any **five** questions. All questions carry equal marks. Assume missing data, if any. Use of scientific calculator is permitted.

1. (a) Explain the principles of surveying, in detail. 8
- (b) What is the importance of surveying ? Explain in detail. 6
2. (a) The bearings observed at the stations of a closed traverse are given below. Check whether the bearings are correct. If not, correct the bearings by the method of included angles. 10

Line	Fore Bearing	Back Bearing
A B	122° 15'	302° 15'
B C	66° 00'	243° 45'
C D	308° 15'	133° 00'
D A	198° 00'	15° 30'

- (b) What precautions are necessary while carrying out compass surveying? 4
3. (a) Discuss different adjustments of the plane table. 4
- (b) Differentiate between prismatic compass and surveyor's compass. 6
- (c) Explain the loose needle method used in theodolite surveying. 4
4. (a) With the help of a neat sketch, discuss various components of a theodolite. 8
- (b) Discuss the various errors in plane table surveying. 6
5. (a) Discuss the procedure of theodolite surveying in detail. 10
- (b) List the instruments and equipment used in levelling. 4
6. Write short notes on the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Reciprocal Ranging
- (b) Bearing
- (c) Local Attraction
- (d) Plumbing Fork

7. (a) Differentiate between height of collimation and RL of a point. 4
- (b) Write a note on corrections in Chain Surveying. 6
- (c) Explain the corrections for pull and temperature. 4
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