

B.TECH. IN CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

December, 2011

BICE-002 : SURVEYING

Time : 3 hours

Maximum Marks : 70

Note : *Attempt any seven questions.*

All the questions are to be answered in english language only.

1. What do you understand by the term well - conditioned triangle ? What considerations would you have while selecting survey stations and survey line in a chain survey ? 10
2. Explain the various points which you will keep in mind while recording entries in a field book. Give a neat sketch of a page of the field book. 10
3. (a) Explain the use and working of a line ranger. 5
(b) What do you understand by indirect ranging ? Describe it in detail. 5

4. What is local attraction ? A closed traverse ABCDE was run and the observed bearings of the lines were obtained as under. Correct the bearings for local attraction. 10

Line	F. B	B. B
PQ	72°45'	252°0'
QR	349°0'	167°15'
RS	298°30'	118°30'
ST	229°0'	48°00'
TP	135°30'	319°0'

5. What is levelling ? Differentiate between direct levelling and indirect levelling. Describe the various methods of direct levelling. 10
6. The following consecutive readings were taken with a level on a continuously sloping ground at a common interval of 20 m. 10
0.600, 1.235, 1.860, 2.575, 0.235, 0.915, 1.935, 2.870, 0.560, 1.825, 2.725.
The reduced level of the first point was 192.125.
Rule out a page of level book; and enter the above readings.
Calculate the reduced levels of the points using rise and fall method.
7. Explain the procedure for plane table traversing in detail including the setting up of the table over a station. 10

8. What is three point problem ? Explain any one method for solving three point problem in detail. 10
9. Draw a neat sketch of a vernier theodolite and explain the functions of the various parts. 10
10. Write a short note *any two* of the following : 10
- (a) Bench Mark
 - (b) Prismatic Compass
 - (c) Latitude and Departure in Survey
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