Code No: R21015/R10 | Set No. 1 |

II B.Tech I Semester Supplementary Examinations, December 2015
SURVEYING
(Civil Engineering)

Time: 3 hours   Max Marks: 75

Answer any FIVE Questions
All Questions carry equal marks
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1. (a) Describe different types of chains and tapes commonly used in Surveying stating the advantages of each.

   (b) Describe in detail how you would range and chain a line between two points which are not intervisible because of an intervening hillock.

2. (a) What are the essential differences between chain Survey and compass Survey. Under what circumstances compass Survey is preferred to other types of Surveys.

   (b) Find which station is free from local attraction and work out the correct bearings.

Line	F.B	B.B
AB	$191°45'$	$13°00'00''$
BC	$39°30'$	$222°00'30''$
CD	$22°15'$	$200°30'00''$
DE	$242°45'$	$60°45'00''$
EA	$330°15'$	$147°45'00''$

3. Give a specimen page of a level field book illustrating the height of instrument method. Show the application of arithmetic check.

4. (a) Name the three methods of measuring volume. For what purpose each one of these is use?

   (b) Explain the measurement of volume from cross sections.

5. The table below gives the lengths and bearings of the lines of a traverse ABCDEA, the length and bearing of EA having been omitted. Calculate the length and bearing of the line EA.

Line	Length (m)	Bearing
AB	204.0	$87°30'$
BC	226.0	$20°20'$
CD	187.0	$280°0'$
DE	192.0	$210°30'$
EA	?	?

6. (a) How will you find the constants of a tacheometer?

   (b) What is an analytical lens? Establish the basic equation for an anallactic lens.

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7. (a) What are the usual difficulties in ranging simple curves and how are they obviated.

   (b) Calculate the ordinates from a 150m long chord at 10m interval to set out a simple circular curve of 8^0

8. Explain about the segments of Global Positioning system?

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