

Printed Pages : 3



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(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 181116**

Roll No.

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**B.Arch. (Semester-I)**

**THEORY EXAMINATION 2015**

**SURVEYING & LEVELING**

**[CARRY OVER]**

*Time : 3 Hours]*

*[Total Marks : 50*

**Note:** Attempt any five questions. All questions carry equal marks.

1. (a) Discuss functional classification of surveying.  
(b) Discuss classification of surveying based instruments used.
2. Explain the following:
  - (i) Intersection
  - (ii) Angle
  - (iii) Resection

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(1)

[Contd...

- (iv) Engineer's scale
  - (v) Representative fraction (RF)
3. (a) Explain the instruments used in chain surveying.  
(b) Explain the method of cover an area using chain surveying with diagram.
  4. (a) Explain the plane table surveying and its use.  
(b) Explain three point problem in plane table survey.
  5. (a) Explain the following types of bearing:
    - (i) Whole circle bearing
    - (ii) Quadrapol bearing
    - (iii) Reduced bearing
    - (iv) Fore bearing
    - (v) Back bearing
  - (b) Bearing observed in a traverse surveying given below:

Line	Fore bearing	Back bearing
PQ	124° 30'	304° 30'
QR	68° 15'	246° 0'
RS	310° 30'	135° 15'
SP	200° 15'	17° 45'

Determine included angle.

6. (a) Define contour and contour lines. Plot contour lines for hill, lake, ridge, valley and saddle.  
(b) Discuss uses of contours maps for various engineering purposes.
7. (a) Explain the rea of a segment in a circular area.  
(b) Explain Simpson's rule for area of a irregular boundaries.

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