

## **SD-6077**

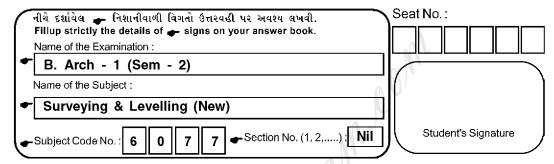
## B. Arch - I (Sem - II) Examination May / June - 2011 Surveying & Levelling

(New Course)

Time: 2 Hours] [Total Marks: 50

## **Instructions:**

(1)



- (2) Assume suitable data and specifically mention it.
- (3) Figures to the right indicate full marks.
- (4) Use of nonprogrammable scientific calculator is permitted.
- 1 Define and explain following terms: 3
  Offset, Meridian, WCB, Magnetic declination, RB, raning.
- 2 (i) Explain instruments used in chain surveying.
  6 (ii) Explain basic principles of surveying.
- 3 Following readings are taken with a prismatic compass, check if there is any local attraction and correct wrong bearings:

Line	FB	BB		
AB	60 <sup>o</sup> 15'	245° 15'		
BC	35° 20'	215°		
CD	100° 15'	280°		
DE	201 <sup>o</sup> 45'	21°		
EF	270° 30'	90° 30'		

OR

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3 Calculate interior angles for an open traverse for the given data:

Line	FB		
AB	65° 15'		
BC	35° 20'		
CD	100° 15'		
DE	201 <sup>o</sup> 45'		
EF	270° 30'		

4 Write short notes: (any three)

12

- (i) Magnetic declination
  - (ii) Process pf chain surveying
  - (iii) Instruments used in plane table surveying
  - (iv) Any one method used in plane table surveying
  - (v) Types of meridian and types of bearing.
- 5 Explain following terms : IS, Contour Equivalent, RL, property documents.
- **6** What is levelling? How it is done in field?

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7 Tabulate and calculate RL of all the stations if following readings are taken with a 3 m levelling staff. Instrument is shifted after 3<sup>rd</sup> and 6<sup>th</sup> reading. Use any method for calculation of RL. Benchmark was taken on a 1st station having 100 RL. 0.5, 0.2., 2.5, 2.9, 1, 0.36, 0.5, 0.8, 1.9, 0.5.

OR

7 Calculate area bounded between chain line and boundary using trapezium rule.

Offset (m)	1	3	4	5	8
Chain edge (m)	5	10	15	20	25

8 Write short notes on following: (any three)

**12** 

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- (1) Characteristics and use of contours
- (2) Total station
- (3) Cross section levelling
- (4) Use of GIS in surveying
- (5) Dumpy level.

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