

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.ARCH. – SEMESTER– III EXAMINATION – SUMMER 2019

Subject Code: 1035006

Date: 11/06/2019

Subject Name: Surveying and Levelling

Time: 02:30 PM TO 04:30 PM

Total Marks: 50

Instructions

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
1. Figures to the right indicate full marks.

- Q.1** (A) Enlist the instruments required for chain & tape survey with their uses. **06**
(B) Describe principles of Surveying in details with figure. **06**

- Q.2** (A) Explain indirect ranging with neat & clean figure. **06**
(B) Convert following WCB (Whole Circle Bearing) to QB (Quadrant Bearing). **06**

13°	85°	127°	200°	247°	308°
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OR

- (B) Convert following FB (Fore Bearing) to BB (Back Bearing). **06**

32°	92°	137°	217°	301°	334°
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- Q.3** (A) The offsets from base line to boundary of an area are shown below at an interval of 10m. **06**
Find area between base line and boundary by Trapezoidal & Simpson's rule.

0.47	1.30	1.75	2.14	3.17	2.42	1.38
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- (B) What are the characteristics of contour lines? **06**

OR

- Q.3** (A) Following are the bearing taken by Prismatic compass for a traverse ABCDA. Find the interior angle. Also show the check. **06**

Line	F.B.	B.B.
AB	52°	232°
BC	105°	285°
CD	217°	37°
DA	308°	128°

- (B) Explain the terms: 1. Base Line, 2. Check Line, 3. Tie Line **06**

- Q.4** (A) The following readings were taken by a dumpy level. The 1st reading was taken on BM of value 100m. The instrument was shifted after 4th & 7th readings. Show Arithmetic checks using Rise-fall of H.I. Method. **08**

0.50	1.20	2.15	3.40	1.25	2.30	3.50	1.47	2.10	3.10
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- (B) Draw a neat & clean sketch of a dumpy level & label the parts. **06**

OR

- Q.4** (A) The following readings were taken by a dumpy level on a constantly falling ground. The BM was taken on 1st reading as 100m. Show Arithmetic checks by H.I. method. **08**

0.42	0.97	1.30	2.35	0.30	1.40	2.10
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- (B) Draw contour of following Hill, Valley & Pond. **06**
