**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**

**Mid Semester Examination – Oct 2018**

**Course: S.Y. B. Tech in Civil Engg (I)**          **Sem: III**

**Subject Name:Surveying-II**          **Subject Code: CV402**          **Max Marks: 20**

**Date:- 12-3-19**          **Duration:- 1 Hr.**

**Instructions to the Students:**
1.Figures to the right indicate Full marks
2.Assume suitable data wherever necessary

| | (Level/CO) | Level | Marks |
|---|---|---|---|
| **Q. 1** | | | **6** |
| 1. The point on the celestial sphere vertically below the observer's position is called. | CO3 | C1 | |
| a) Nadir.  b) Pole c) Zenith  d) Celestial point. | | | |
| 2. While making astronomical observations, the observer is mainly concerned with | CO3 | C2 | |
| a) All     b) The directions of the poles of the celestial sphere | | | |
| c)The direction of the star from the instrument  d) The direction of vertical axis of instrument. | | | |
| 3.  Which of the following is an independent quantity | CO1 | C2 | |
| a) Side of a triangle  b) Sum of included angles  c) R.L of B.M  d) R.L of a point | CO1 | C2 | |
| 4. The equation which is obtained by multiplying each equation by the coefficient of its un-knowns and by adding the equations thus formed, is known as | CO1 | C1 | |
| a) None of these b) Normal equation) Conditional equation d) Observation equation. | | | |
| 5. For mapping any country | | | |
| a)Geodetic triangulation of greatest possible sides and accuracy is | | | |

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carried out

b) Primary triangles are broken down into secondary triangles of less accuracy

c) All

d) Secondary triangles are further broken into third and fourth order triangles, the points of which are used for detail survey.

6.A total station is a combination of:

a) EDM and Theodolite  b) Compass and EDM c) Electronic theodolite and EDM d) EDM and electronic compass.  **CO5  C2**

**Q.2  Solve Any Two of the following.**  **3 X 2**

**(A)** What are the different corrections that may have to be applied to base line measurement?  **CO1  C1**

**(B)** Give the classification of a triangulation system  **CO1  C1**

**(C)** What are the applications of field astronomy  **CO3  C2**

**Q.3  Solve Any One of the following.**

**(A)** The following observations were taken using a tacheometer fitted with anallatic lens, the staff being held vertically.  **CO2  C3**

| Inst. Station | Height of Axis | Staff station | Vertical Angle | Hair readings | | |
|---|---|---|---|---|---|---|
| P | 1.45 | BM | -6°12' | 0.98 | 1.54 | 2.10 |
| P | 1.45 | Q | 7°05' | 0.83 | 1.36 | 1.89 |
| Q | 1.57 | R | 12°21' | 1.89 | 2.48 | 3.07 |

Determine the distances PQ and QR, and the RLs of P, Q and R.

**(B)** Find the most probable values of the angles A and B from the following observations at station 'O'  **CO1  C3**

A = 49°48'36.6''    Weight=2

B = 54°37'48.3''    Weight=3

A+B = 104°26'28.5''    Weight=4

*** End ***