

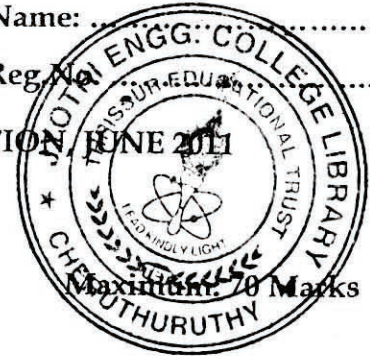
15637

Name: .....

Reg. No. ....

## FOURTH SEMESTER B.TECH DEGREE EXAMINATION, JUNE 2011

CE 09 406 - SURVEYING II



Time : Three Hours

**PART - A***Answer all questions*

1. What is the difference between staff intercept and stadia intercept?
2. List some disadvantages of tangential method of tacheometry.
3. Define: Most Probable Value
4. Define: Azimuth
5. What do you mean by trigonometrical leveling?

(5 × 2 = 10)

**PART - B***Answer any four*

1. Explain about advantages and disadvantages of analytic lens.
2. What is hydrographic survey? Brief about the scope of it.
3. Explain the principle of triangulation system and brief about the types of triangulation stations.
4. Explain about field astronomy.
5. Briefly discuss about total stations.

(4 × 5 = 20)

**PART - C**

1. A tacheometer was setup at a station A and the following readings were obtained on vertically held staff.

Instrument Station	Staff Station	Vertical angle	Hair readings	Remarks
	BM	-2°18'	3.225, 3.550, 3.875	RL of BM
A	B	+8°36'	1.650, 2.515, 3.380	437.655

Calculate the horizontal distance from A to B and the RL of B, if the constants of the instrument were 100 and 0.

(OR)

2. Discuss the various methods of solving three point problem in sounding technique.
3. (i) Explain the concept of satellite station and Reduction to centre  
(ii) The altitudes of 2 proposed stations A and B, 100 km apart, are respectively 420 m and 700 m. The intervening obstruction situated at C, 70 km from A has an elevation of 478 m. Ascertain if A and B are intervisible, and if necessary, find by how much B should be raised so that the line of sight must now where be less than 3 m above the surface of the ground.

(OR)

4. Find the most probable value of angles A, B, C and D by the method correlates from the following observations closing the horizon at a station:

$$A = 110^{\circ}20'48'' \quad \text{wt} = 4$$

$$B = 92^{\circ}30'12'' \quad \text{wt} = 1$$

$$C = 56^{\circ}12'00'' \quad \text{wt} = 2$$

$$D = 100^{\circ}57'04'' \quad \text{wt} = 3$$

5. The angles of triangle ABC were recorded as follows.

$$\angle A = 77^{\circ}14'20'' \quad \text{weight} = 4$$

$$\angle B = 49^{\circ}40'35'' \quad \text{weight} = 3$$

$$\angle C = 53^{\circ}04'52'' \quad \text{weight} = 2$$

Find the corrected values of the angles by normal equation method.

(OR)

6. Determine the hour angle and declination of a star from the following data.

$$\text{Latitude of the place} = 48^{\circ}30'N$$

$$\text{Azimuth of the star} = 50^{\circ}W$$

$$\text{Altitude of the star} = 28^{\circ}24'$$

7. Discuss the various methods of Trigonometric leveling.

(OR)

8. Explain the fundamental principles of ground and aerial photogrammetry.

(4 × 10 = 40)

\*\*\*\*\*