Reg. No.											

Question Paper Code	11916

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2023
Sixth Semester
Civil Engineering
20CEEL606 - ADVANCED SURVEYING
(Regulations 2020)

Duration: 3 Hours   Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

		Marks, K-Level, CO
1.	Distinguish between Zenith and Nadir.	2,K2,CO1
2.	Write the equation of time.	2,K1,CO1
3.	Distinguish between crab and drift.	2,K2,CO3
4.	What do you mean by overlap?	2,K2,CO3
5.	What are the cares required for total station at the time of operation?	2,K2,CO4
6.	List out the errors in Total station.	2,K1,CO4
7.	List the advantages of GPS Surveying.	2,K1,CO5
8.	Define Hand held receivers.	2,K1,CO5
9.	Define MSL.	2,K1,CO6
10.	List out the aims of route survey.	2,K1,CO6

PART - B (5 × 13 = 65 Marks)
Answer ALL Questions

11.	a)	Describe the different types of time systems.	13,K2,CO1

OR

	b)	(i)	Explain the Motion of Sun.	6,K2,CO1
		(ii)	Explain the zones of the earth.	7,K2,CO1

12.	a)	What is image interpretation? Explain the elements of image interpretation.	13,K2,CO3

OR

	b)	Two points A and B which appear in a vertical photograph taken from a camera having focal length of 220mm and from an altitude of 2800m, have their elevations as 400m and 600m respectively. Their corrected photo co-ordinates as under: Point Photo co-ordinates.	13,K2,CO3

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create   **11916**

	x (mm)	y (mm)
a	+23.8	+16.4
b	-13.6	-29.7

13. a) Explain the fundamental measurement system of total station. *13,K2,CO4*

OR

b) Enumerate the measuring and working principles of electro-optical total station surveying with a neat sketch. *13,K2,CO4*

14. a) Explain in detail about the different segments of GPS. *13,K2,CO5*

OR

b) (i) Explain in detail the orbit determination and orbit representation of GPS. *7,K2,CO5*

(ii) Explain in detail the Anti spoofing & selective availability of GPS. *6,K2,CO5*

15. a) Explain various sounding methods in detail. *13,K2,CO6*

OR

b) What is a compound curve? Explain the step by step procedure for setting out a compound curve. *13,K2,CO6*

PART - C (1 × 15 = 15 Marks)

16. a) Find the hour angle and declination of a star from the following data *15,K3,CO2*
Latitude of the place = 48° 30'N
Azimuth of star = 50°00W
Altitude of star = 28°24'

OR

b) Discuss in detail the procedure for determining the azimuth by hour angle and altitude method. *15,K2,CO2*