b.	Discuss in detail about the elements of photo interpretation key techniques.	10	3	4	1,5,9
30. a.	Describe about EMR interaction with atmosphere.	10	3	5	1,5,9
	(OR)				
b.	Discuss in detail about remote sensing platforms and sensors systems.	10	3	5	1,5,9

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Reg. No.														

B.Tech. DEGREE EXAMINATION, MAY 2022

Sixth Semester

18CEO303J – MODERN TOOLS IN ENGINEERING SURVEYING

(For the candidates admitted from the academic year 2018-2019 to 2019-2020)

Note:

(i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.

(ii) **Part - B** should be answered in answer booklet.

Time: 2½ Hours Max. Marks: 75

PART – A (25 × 1 = 25 Marks)

Answer **ALL** Questions

		Marks	BL	CO	PO
1.	In primary triangulation, length of the base is _____. (A) 5 to 15 kilometers (B) 1 to 1.5 kilometers (C) 0.3 to 3 kilometers (D) 1.5 to 5 kilometers	1	1	1	1,2,9
2.	Triangulation surveys were first carried out by _____. (A) Jordan (B) Snell (C) Colby (D) Hunter	1	1	1	1,2,9
3.	In signals, pole signal can be used upto _____ kilometers. (A) 12 kilometers (B) 10 kilometers (C) 8 kilometers (D) 6 kilometers	1	2	1	1,2,9
4.	Which of the following method can be adopted if, there is any object in the point of instrument station? (A) Centric station (B) Controlled station (C) Satellite station (D) True station	1	2	1	1,2,9
5.	If the height of the signal is not the same as that of the height of the instrument axis above the station, a correction known as _____. (A) Axis signal correction (B) The eccentrically of signal correction (C) Satellite station reduction (D) Staff station correction	1	1	1	1,2,9
6.	In a hydrological survey, which device can be used for depths upto 30 m. (A) Sound in boat (B) Lead line (C) Sounding machine (D) Fathometer	1	1	2	1,2,9
7.	A graduated scale with an index mark is placed near the wire for taking the reading which is? (A) Staff gauge (B) Float gauge (C) Self-registering gauge (D) Weight gauge	1	2	2	1,2,9
8.	What is the length of the sounding rod or pole? (A) 7-8 m (B) 5-8 m (C) 10-18 m (D) 15-18 m	1	2	2	1,2,9

9.	In sounding, Weddle's machine can be used upto a depth of _____.	1	2	2	1,2,9
	(A) 100 feet (B) 10 feet (C) 1000 feet (D) 1 feet				
10.	Float made of light wood or airtight vessel which is weighted at the bottom kept vertical by anchoring with, guy wires are called _____.	1	2	2	1,2,9
	(A) Shore signal (B) Satellite station (C) Buoys (D) Heliotropes				
11.	Geodimeter distance measurement instrument was first introduced by?	1	1	3	1,5,9
	(A) Dr.T.L Wadley (B) Dr. Eric Bregstrad (C) Dr. Weddle (D) Dr. Jaderien				
12.	_____ kind of modulation can applied in geodimeters.	1	2	3	1,5,9
	(A) Frequency modulation (B) Phase modulation (C) Velocity modulation (D) Amplitude modulation				
13.	How many numbers of spare satellites are in the space segment of GPS?	1	1	3	1,5,9
	(A) 4 (B) 8 (C) 16 (D) 24				
14.	The orbital height of a GPS satellite is about _____.	1	2	3	1,5,9
	(A) 10200 km (B) 20200 km (C) 30200 km (D) 36200 km				
15.	The frequency of P-code is	1	2	3	1,5,9
	(A) 1023 MHz (B) 102.3 MHz (C) 10.23 MHz (D) 1.023 MHz				
16.	How many location photographs are required (at least) for photogrammetry?	1	2	4	1,5,9
	(A) One (B) Two (C) Three (D) Four				
17.	Which instrument lets an operators see two photos at once?	1	1	4	1,5,9
	(A) Goniometer (B) Collimator (C) Theodolite (D) Stereo plotter				
18.	Which of the following type of photographs can be used for the generation of maps?	1	1	4	1,5,9
	(A) Tilted photograph (B) Horizontal photograph (C) Datum photograph (D) Vertical photograph				
19.	Does relief distortion depend on which of the following.	1	2	4	1,5,9
	(A) Datum (B) Focal length (C) Flying height (D) Zenith				
20.	Overlapping in the direction of flight can be described as _____.	1	2	4	1,5,9
	(A) Forward overlap (B) Adjacent overlap (C) Backward overlap (D) Side lap				

21.	In false colour composite image healthy vegetation appears	1	2	5	1,5,9
	(A) Blue (B) Red (C) Green (D) Orange				
22.	Water surfaces in images record _____ areas in the near-infrared channel	1	1	5	1,5,9
	(A) Dark (B) Light (C) Bright (D) Similar				
23.	The altitudinal distance of a geostationary satellite from the earth is about	1	1	5	1,5,9
	(A) 26,000 km (B) 30,000 km (C) 36,000 km (D) 44,000 km				
24.	The microwave portion of the electromagnetic spectrum involves wave lengths within a range of?	1	2	5	1,5,9
	(A) 1 m to 1 km (B) 1 cm to 10 m (C) 1 m to 10 m (D) 1 mm to 1 m				
25.	The difference in the reflectance/ emittance characteristics with respect to wavelengths is called	1	2	5	1,5,9
	(A) Spectral signature (B) Special signature (C) Spatial signature (D) Scattering signature				

PART – B (5 × 10 = 50 Marks) Marks BL CO PO

Answer **ALL** Questions

26. a.	Discuss the various classification of signals in detail along with neat sketch.	10	3	1	1,2,9
	(OR)				
b.	Elaborate the satellite station and reduction to centre derivation along with neat sketch.	10	4	1	1,2,9
27. a.	Explain the sounding equipment which is used to determine the depth of water at different points on the surface of a water body with suitable sketch.	10	3	2	1,2,9
	(OR)				
b.	Formulate the station pointer used for sounding station by analytical method.	10	4	2	1,2,9
28. a.	Explain the working and measuring principles involved in total station along with advantage and disadvantages.	10	3	3	1,5,9
	(OR)				
b.	Discuss in detail about various GPS errors.	10	3	3	1,5,9
29. a.	Discuss the development stages of photogrammetry along with its field application.	10	3	4	1,5,9
	(OR)				