

**B.Tech. DEGREE EXAMINATION, NOVEMBER 2022**

Sixth/ Seventh 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 40<sup>th</sup> 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. What is the length of engineer's chain? (A) 100 ft (B) 150 ft (C) 1000 ft (D) 30 ft	1	2	1	1
2. Triangulation survey was first carried out by "Snell", in the year _____. (A) 1616 (B) 1615 (C) 1619 (D) 1620	1	1	1	
3. The maximum triangle closure, in tertiary triangulation is _____. (A) 12 sec (B) 8 sec (C) 3 sec (D) <3 sec	1	1	1	1
4. The length of base line in tertiary triangulation is _____. (A) 0.5 to 3 km (B) 1.5 to 5 km (C) 5 to 15 km (D) 10 to 50 km	1	2	1	1
5. Which signal is a non-luminous signal? (A) Acetylene lamp (B) Heliotrope (C) Magnesium lamp (D) Pole signal	1	3	1	1
6. The discharge of the river can be done using _____ surveying. (A) Geomorphic (B) Topographic (C) Hydrographic (D) EDM	1	3	2	1
7. The height of sounding pole is about _____. (A) 5-8 m (B) 6-10 m (C) 50 mm (D) 80 mm	1	2	2	1
8. The sounding machine can be used upto a depth of _____. (A) 30 m (B) 40 m (C) 50 m (D) 60 m	1	2	2	1
9. Star leather, in lead line is marked at _____. (A) 50 feet (B) 100 feet (C) 2 feet (D) 500 feet	1	2	2	1

10. Gauge readings are obtained after  
(A) Compass survey (B) Chaining  
(C) Sounding (D) Traversing 1 4 2 1
11. What is the wavelength of microwave region?  
(A) 1 mm to 1 m (B) 1 m to 12 m  
(C) 1 m to 4 m (D) 0.4  $\mu$ m to 0.7  $\mu$ m 1 2 3 1
12. How many types of EDMs are there?  
(A) 2 (B) 3  
(C) 4 (D) 5 1 2 3 1
13. What is the range of microwave EDM?  
(A) 50 km (B) 30 km  
(C) 10 km (D) 100 km 1 3 3 1
14. What is the speed of GPS satellite?  
(A) 12,000 km/hr (B) 15,500 km/hr  
(C) 11,500 km/hr (D) 20,200 km/hr 1 2 3 1
15. How many satellites, are there in constilaiton in IRNSS?  
(A) 28 (B) 32  
(C) 8 (D) 7 1 3 3 1
16. The percentage of side to side lap is \_\_\_\_\_.  
(A) 100 (B) 25  
(C) 50 (D) 60 1 2 4 1
17. Digital photogrammetry has evolved in the year \_\_\_\_\_.  
(A) 1860 (B) 1890  
(C) 1902 (D) 1990 1 2 4 1
18. The amount of unintentional tilt in vertical photograph is \_\_\_\_\_.  
(A) 1° - 3° (B) 2° - 5°  
(C) 6° - 7° (D) 4° - 9° 1 2 4 1
19. For a focal plane place, \_\_\_\_\_ is the reference.  
(A) Focal length (B) Horizon  
(C) Azimuth (D) Collimation marks 1 2 4 1
20. What is the minimum angle, of tilted photograph?  
(A) 13° (B) 20°  
(C) 3° (D) 13° 1 3 4 1
21. The sun synchronous satellites are having an orbital height of \_\_\_\_\_.  
(A) 10000 km (B) 750-1500 km  
(C) 30,000 km (D) 20,200 km 1 3 5 1
22. What is India's space agency?  
(A) ISRO (B) IRNSS  
(C) NASA (D) NOAA 1 2 5 1

23. Which among the following is a aerial platform?  
(A) Drone (B) Crane  
(C) Lift (D) Satellite 1 4 5 1

24. The sensor that uses, own source of energy is \_\_\_\_\_.  
(A) Active sensor (B) Passive sensor  
(C) Controlled sensor (D) Uncontrolled sensor 1 4 5 1

25. What is the time dependent resolution?  
(A) Spatial (B) Spectral  
(C) Radiometric (D) Temporal 1 5 5 1

### PART – B (5 × 10 = 50 Marks)

Answer ALL Questions

Marks BL CO PO

26. a. Explain various layouts of triangulation. 10 2 1 1

(OR)

- b. Derive the expression for “Eye and object” correction. 10 4 1 1

27. a. Mention the various method of plotting the sounding. 10 3 2 1

(OR)

- b. Discuss the locating of sounding by any two methods. 10 3 2 1

28. a. Discuss the various types of EDM. 10 2 3 1

(OR)

- b. Write about various types of errors in GPS. 10 3 3 1

29. a. What are the various types of aerial photograph? Explain. 10 3 4 1

(OR)

- b. Discuss the aerial photo interpretation keys with example. 10 4 4 1

30. a. Explain various segments of EMS and their application. 10 4 5 1

(OR)

- b. Discuss the various types of platforms. 10 5 5 1

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