

SURVEYING & LEVELLING

1. The important instrument used for measuring horizontal and vertical angles in surveying is **Theodolite**.
2. A branch of surveying in which horizontal and vertical distances are determined by taking angular observations with an instrument is known as **Tacheometry survey**.
3. The lower silvered plate is the main scale plate graduated ranging from in clock wise direction is **0° to 360°**.
4. The vertical axis of the theodolite is the axis about which the instrument rotates in the horizontal plane is called as **azimuthal** axis.
5. It is an imaginary line passing through the intersection of the cross hairs of the diaphragm and the optical center of the objectives is called as **line collimation**.
6. The line joining the points of commencement to point of tangency is called **long chord**.
7. The method generally adopted, where degree of accuracy desired in the measurement of horizontal angle is **Reiteration method**.
8. The processing of setting the theodolite exactly over station mark is known **Centering**.
9. The line passing through the center of the inner spindle, outer spindle and bearing in the tribach is known as **Vertical axis**.
10. The angle on vertical circle other than zero is called **360° or Index error**.
11. A curve whose radius varies gradually from infinity to finite value equal to the radius of circular curve to be connected is known as **transition curve**.
12. The grid method is used when the area to be contoured is small and ground is not **much undulating**.
13. The plumb bob is used for **Centreing** the instruments exactly over the ground station.
14. In Indirect method of contouring, reduced level of a point is also called **Spot level**.
15. The contouring method used for determination of contours along a fixed route such as roads is **cross section method**.
16. The area enclosed by various contours can be measured by **Planimeter**.

17. The process of placing the contours proportionally between the plotted ground points is called **interpolation contour**.
18. The angle between the back tangent and the forward tangent is known as **Angle of intersection**.
19. The principle of tachometry is based on the property of **Isosceles triangle**.
20. Reconnaissance survey is to be conducted before the selection of **survey station**.
21. The accuracy of the electromagnetic distance measurement is 10^5 .
22. **Least count** is the smallest value that can be read from the instrument.
23. The curve which is having a single arc of circle connecting the two straight is called **simple curve**.
24. Length of long chord (L) in terms of geometry of curve is $2r \sin (\theta/2)$.
25. The least count of vernier is **20"**.
26. Regular curve pattern followed by a railway (or) highway alignment is called **Curve**.
27. The process of turning the telescope about the axis in a horizontal plane through 180° is known as **Reversing**.
28. Expand EDM- **Electronic distance measurement**.
29. The leveling head is usually consists of two parallel triangular plates are known as **Tribach plate**.
30. The instrument which is a combination of an electronic theodolite and an electronic distance meter is known as **Total station**.
31. Horizontal axis is also called as **trunion** axis.
32. The vertical circle of the theodolite is on the left side of the observer and the observation taken is called as **Face left observation**.
32. Electronic Theodolite is also called as **Theomat**.
33. The transits are most commonly used in **precise** work.
34. Expand GPS - **Global position system**.
35. Expand ODM- **Optical distance measurement**.

- 36. Distomat use Infra-red rays to measure distance.
- 37. Least count of Theodolite is 20 seconds.
- 38. Expand FRL - Finished road level.
- 39. Surveying is the art of measuring slope, horizontal and vertical distance between objects.
- 40. In plane tabling inaccessible points may be located by the Intersection method.

THANK YOU