



Work sheet(Unit wise Objective)

UNIT – III: Theodolite Surveying and Traversing

Part – A: Multiple Choice Questions (20 MCQs)

1. The instrument used for measuring both horizontal and vertical angles is
A) Compass B) Theodolite C) Level D) Plane Table
Answer: B
2. Which of the following is a type of theodolite?
A) Transit Theodolite B) Dumpy Level C) Prismatic Compass D) Planimeter
Answer: A
3. The line passing through the optical center of the objective and the intersection of crosshairs is called the
A) Horizontal Axis B) Line of Collimation C) Bubble Axis D) Vertical Axis
Answer: B
4. Temporary adjustments of a theodolite include
A) Centering B) Levelling C) Focusing D) All of the above
Answer: D
5. The repetition method is used to improve the accuracy of measuring
A) Distances B) Horizontal Angles C) Vertical Angles D) Bearings
Answer: B
6. The reiteration method is used when measuring
A) A single angle repeatedly B) Several angles around a station C) Distances D) Levels
Answer: B
7. A vertical angle is measured with respect to the
A) Magnetic Meridian B) Horizontal Plane C) True North D) Chain Line
Answer: B
8. Trigonometrical levelling is based on the measurement of
A) Area B) Angles and Distances C) Bearings Only D) Volume
Answer: B
9. Which method is used when the base is accessible?
A) Direct Levelling B) Trigonometrical Levelling C) Plane Tabling D) Contouring
Answer: B
10. Traversing consists of a series of connected
A) Curves B) Survey Lines C) Levels D) Contours
Answer: B
11. An open traverse is generally used for
A) Property Survey B) Road and Canal Surveys C) Reservoir Survey D) Building Layout
Answer: B
12. A closed traverse is commonly used for
A) Railway Survey B) Boundary Survey C) Route Survey D) Canal Survey
Answer: B
13. Traverse computations involve calculating
A) Latitudes and Departures B) Volume C) Contours D) RLs Only
Answer: A
14. The algebraic sum of latitudes in a closed traverse should be
A) One B) Zero C) Positive D) Negative
Answer: B
15. The algebraic sum of departures in a closed traverse should be
A) Zero B) One C) Equal to Area D) Equal to Length
Answer: A
16. Which rule is commonly used for balancing a traverse?
A) Bowditch Rule B) Simpson's Rule C) Trapezoidal Rule D) Mid-ordinate Rule
Answer: A

17. Omitted measurements in a traverse can be determined using
A) Traverse Computations B) Chain Survey C) Levelling D) Contouring
Answer: A
18. The horizontal axis of a theodolite is also called the
A) Trunnion Axis B) Bubble Axis C) Telescope Axis D) Vertical Axis
Answer: A
19. Which axis should be perpendicular to the vertical axis?
A) Trunnion Axis B) Line of Collimation C) Bubble Tube D) Optical Axis
Answer: A
20. The accuracy of a traverse depends mainly on
A) Proper Measurement of Angles and Distances B) Staff Readings C) Contours D) Scale of Map
Answer: A

Part – B: Fill in the Blanks (Answers Beside the Questions)

1. The instrument used to measure horizontal and vertical angles is the _____ (**Theodolite**).
2. The most commonly used type is the _____ (**Transit**) theodolite.
3. The line joining the optical center and crosshairs is called the _____ (**Line of Collimation**).
4. Temporary adjustments include centering, levelling, and _____ (**Focusing**).
5. The repetition method is used to improve the accuracy of _____ (**Horizontal Angles**).
6. The reiteration method is used to measure _____ (**Several Angles**) from one station.
7. Vertical angles are measured from the _____ (**Horizontal Plane**).
8. Trigonometrical levelling is based on _____ (**Trigonometry**).
9. An open traverse is mainly used for _____ (**Route Surveys**).
10. A closed traverse is commonly used for _____ (**Boundary Surveys**).
11. Traverse computations involve calculating _____ (**Latitudes and Departures**).
12. The algebraic sum of latitudes in a closed traverse is _____ (**Zero**).
13. The algebraic sum of departures in a closed traverse is _____ (**Zero**).
14. The _____ (**Bowditch**) rule is commonly used for traverse adjustment.
15. The balancing of a traverse reduces _____ (**Errors**).
16. Missing survey data are called _____ (**Omitted Measurements**).
17. The horizontal axis of a theodolite is known as the _____ (**Trunnion Axis**).
18. The vertical axis should be truly _____ (**Vertical**).
19. Theodolite surveying provides higher _____ (**Accuracy**) than compass surveying.
20. Traversing is a method of establishing a series of connected _____ (**Survey Lines**).