

173/2015

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. A rectilinear figure bounded by more than five sides :
(A) Trapezium (B) Polygons
(C) Rhombus (D) Quadrilateral
2. A line 135 m long represents 22.5 on plan, then R.F is :
(A) 1/100 (B) 1/200
(C) 1/300 (D) 1/600
3. As per Indian standard, the length of one link in 30 meter chain is :
(A) 30 cm (B) 20 cm
(C) 40 cm (D) 10 cm
4. Limit of areas at which the survey is treated as plain is :
(A) 100 KM² (B) 150 KM²
(C) 200 KM² (D) 260 KM²
5. The total number of zeros graduated on surveyor's compass is :
(A) One (B) Two
(C) Three (D) Four
6. If the whole circle bearing of a line is 250°, its reduced bearing is :
(A) N 70° W (B) S 70° W
(C) S 70° E (D) N 70° E
7. In plane table survey measuring of lines and angles is mostly dispensed, but they are obtained :
(A) Graphically (B) By trigonometrically
(C) By calculations (D) All the above

8. The alidade used in plane table survey, its beveled edges is also known as :
- (A) Ruling edge (B) Working edge
(C) Fiducial edge (D) All the above
9. Scale of chord is used to measure :
- (A) Angles (B) Area
(C) Length (D) Diameter
10. A King post truss consists of two longer inclined member known as :
- (A) Struts (B) Principal rafter
(C) King post (D) Beam
11. Survey conducted for unearthing relics of antiquity :
- (A) Geological survey (B) Mine survey
(C) Military survey (D) Archeological survey
12. The maximum value of measurement in quadrilateral bearing is:
- (A) 0° (B) 360°
(C) 90° (D) 180°
13. Lines passing through points having same declination at a given point is:
- (A) Isogonic line (B) Agonic line
(C) Bearing of line (D) Contour line
14. _____ is done to set the plane table in meridian at successive station.
- (A) Centering (B) Leveling
(C) Orientation (D) Both (A) and (B)
15. To locate an electric pole near the plane table station :
- (A) Intersection (B) Radiation
(C) Traversing (D) Offsetting
16. The method used for locating station points only by sighting towards well defined objects :
- (A) Intersection (B) Radiation
(C) Traversing (D) Resection

17. Leveling is the art of finding the _____ of the objects on the surface of the earth.
- (A) Relative heights and depths (B) Relative angles
(C) Distance (D) Depth only
18. Reduced level is also known as :
- (A) Datum (B) Bench mark
(C) Elevation of the point (D) Change point
19. The error is leveling operation during settlement of tripod on turning point is :
- (A) Instrumental error (B) Natural
(C) Personal (D) All the above
20. The staff reading on a certain peg is 1.680 when the staff is held 0.25 m out of the plumb in its total length of 4 m. The correct reading for the staff held vertical is :
- (A) 1.80 m (B) 1.780 m
(C) 1.670 m (D) 1.676 m
21. In rise and fall method of reduction of levels provides a check on :
- (A) Back sight only (B) Fore sight only
(C) Intermediate sight only (D) All the sights
22. Crop period is the time elapsed between :
- (A) First watering to last watering (B) First watering before sowing
(C) Last watering before harvesting (D) Sowing to harvesting
23. For a closed traverse the algebraic sum of the deflection angle is equal to :
- (A) 90° (B) 180°
(C) 270° (D) 360°
24. The constant vertical distance between two consecutive contours is called :
- (A) Horizontal equivalent (B) Rise
(C) Level difference (D) Contour interval

25. In Theodolite traversing method consists in measuring the several angles successively and finally closing the horizon at the starting point :
- (A) Repetition method (B) Reiteration method
(C) Ordinary method (D) Direct method
26. The vertical circle of the instrument is on the left of the observer while taking a reading, the position is called :
- (A) Face right observation (B) Face left observation
(C) Normal position (D) Both (B) and (C)
27. The functional 1 key for ortho command used in CAD :
- (A) F₅ (B) F₆
(C) F₇ (D) F₈
28. The CAD command used to lengthen or shorten the lines or object is :
- (A) Stretch (B) Extend
(C) Offset (D) Distance
29. The drafting setting used to pick a geometric point on an object is :
- (A) SNAP (B) O-SNAP
(C) ORTHO (D) POLAR TRACKING
30. The CAD command used to join 2 parallel line is :
- (A) Chamfer (B) Extend
(C) Fillet (D) Stretch
31. In a well conditioned triangle, no angle should be less than :
- (A) 30° (B) 40°
(C) 50° (D) 60°
32. Number of arrows accompanying each chain :
- (A) 12 (B) 10
(C) 8 (D) 6

33. In one setting up of the level the maximum number of back sight and fore sight is :
(A) One and two (B) Two each
(C) One each (D) Two and one
34. In Leveling station is a point where :
(A) Staff is held (B) Instrument is fixed
(C) Ranging rod is fixed (D) Peg is marked
35. Contour map is used for :
(A) Inter visibility between ground points (B) Quantities of earth work
(C) Tracing route (D) All the above
36. Plunging or reversing of the theodolite telescope is also called :
(A) Swinging (B) Transisting
(C) Change the face (D) None of these
37. The type of bond employed in brick work consist of alternate courses of headers and stretchers :
(A) English (B) Flemish
(C) Dutch (D) Heading
38. Agate cap is fitted with a :
(A) Cross staff (B) Level
(C) Chain (D) Prismatic compass
39. The closing error in a closed traverse is adjusted by :
(A) Lehmann's rule (B) Trapezoidal rule
(C) Bowditch's rule (D) Simpson's rule
40. For ranging a line number of ranging rod required is :
(A) atleast 3 (B) atleast 4
(C) atleast 5 (D) atleast 2
41. Curvature effect of the earth is taken into account in :
(A) Geodetic survey (B) Plane survey
(C) Plane table survey (D) Hydrographic survey

42. The T- square is used for drawing :
- (A) Vertical (B) Horizontal
(C) Inclined (D) Curve
43. To prevent warping of the board _____ are cleared at its back.
- (A) Packing (B) Wooden block
(C) Battens (D) Blades
44. The first dimension line should be placed atleast :
- (A) 10 mm from the construction line (B) 12 mm from the construction line
(C) 8 mm from the construction line (D) 9 mm from the construction line
45. The sum of the included angle of a hexagon is :
- (A) 720° (B) 540°
(C) 900° (D) 360°
46. The angle of inclined letters :
- (A) 30° (B) 60°
(C) 45° (D) 75°
47. The standard size of B₂ imperial drawing is :
- (A) 700 × 600 (B) 800 × 600
(C) 800 × 500 (D) 700 × 500
48. The lowest part of the structure which transmit the load to the soil is :
- (A) Superstructure (B) Basement
(C) Plinth (D) Substructure
49. Area of trimmed A₀ sheet designated by ISO is :
- (A) 1 m² (B) 0.5 m²
(C) 0.25 m² (D) 0.125 m²
50. A right angled parallelogram with its opposite sides are equal :
- (A) Pentagon (B) Triangle
(C) Rectangle (D) Trapezium

51. Number of bricks required for one cubic meter :
- (A) 600 (B) 900
(C) 800 (D) 500
52. A lintel is provided :
- (A) Over a door opening (B) Below a door opening
(C) Inner a door opening (D) Side a door opening
53. The Diameter of the graduated circle on the lower plate determines the :
- (A) Size of theodolite (B) Length of theodolite
(C) Thickness of theodolite (D) Accuracy of theodolite
54. In Theodolite the verniers A and B are marked in :
- (A) Upper plate (B) Lower plate
(C) Vertical plate (D) Graduated circle
55. Pantograph is used for :
- (A) Measuring right angles (B) Enlarging and reducing plans
(C) Measuring distances (D) Measuring volume
56. Simplify : $44 - [33 - \{44(33 - 44 - 33)\}]$.
- (A) 11 (B) 1925
(C) -11 (D) 33
57. Factorize : $49x^2 - 81y^2 =$
- (A) $(7x - 9y)(7x - 9y)$ (B) $(7x + 9y)(7x - 9y)$
(C) $(7x + 9y)(7x + 9y)$ (D) $(7x + 6y)(7x - 9y)$
58. Volume of a sphere is given by :
- (A) $\frac{4}{3} \pi r^3$ (B) $\frac{3}{4} \pi r^2$
(C) $\frac{4}{3} \pi r$ (D) $\frac{4}{3} \pi r^2$

59. Volume of a cylinder is given by :

(A) πr^3

(B) πr^2

(C) $\pi r^2 h$

(D) $\pi r h$

60. The equation of a straight line in a graph is shown by :

(A) $y = mx^2$

(B) $y = mx$

(C) $y = mx$

(D) $y = mx^3$

61. The volume of a cube with each side measures 2 m is :

(A) 4 m^2

(B) 8 m^2

(C) 4 m^3

(D) 8 m^3

62. The value of $\sin 90^\circ$ is:

(A) 1

(B) 0

(C) 5

(D) $1/\sqrt{2}$

63. The value of $1 + \tan^2 \theta$ is :

(A) $\operatorname{cosec}^2 \theta$

(B) $\sec^2 \theta$

(C) $\cot \theta$

(D) $\sec \theta$

64. The value of $\sin 2A$:

(A) $1 - \sin^2 A$

(B) $1 - \cos^2 A$

(C) $2 \sin A / \cos A$

(D) $2 \sin A \cos A$

65. One chain is :

(A) 22 yards

(B) 11 yards

(C) 27 yards

(D) 10 yards

66. The base unit of length in S.I system :

(A) Yards

(B) Meter

(C) Feet

(D) Inch

67. The multiple factor of the prefix deci is :
(A) 0.1 (B) 0.01
(C) 0.01 (D) 0.001
68. The rate at which work is done:
(A) Energy (B) Force
(C) Power (D) Work
69. The unit of velocity is :
(A) Rate of change of position of 1 m per second
(B) Rate of change of one radian per second
(C) One radian per second
(D) Watt
70. A combination of two reverse curve used to avoid intervening obstructions like buildings etc :
(A) Simple curve (B) Compound
(C) Reverse (D) Deviation
71. A quantity having both magnitude and direction is :
(A) Scalar (B) Scale
(C) Vector (D) Co-ordinate
72. The eccentricity of a parabola is usually :
(A) >1 (B) <1
(C) 1 (D) $\neq 1$
73. The value of "g"(acceleration due to gravity) is :
(A) 9.8 m/s^2 (B) 8.9 m/s^2
(C) 9.6 m/s^2 (D) 98 m/s^2
74. The change in dimension per unit dimension of a body is called :
(A) Stress (B) Strain
(C) Tension (D) Plasticity