1. As per BIS (IS 1444-1989) the standard size of B1 drawing board is,

   (A) 1000 × 1500 mm

   (B) 700 × 1000 mm

   (C) 500 × 700 mm

   (D) 350 × 500 mm

   Explanation :

Designation	Width x Length (mm)	Recommended for use with sheet sizes
B0	1000 x 1500	A0
B1	700 x 1000	A1
B2	500 x 700	A2
B3	350 x 500	A3

2. For drawing long thin lines of uniform thickness the pencil should be sharpened

   (A) Chisel edge

   (B) Pointed lead
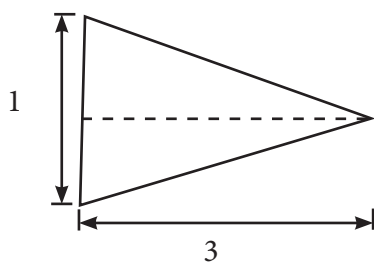
   (C) Conical point

   (D) Flat blade

   Explanation :

Type of lead	Function
Cylindrical lead	Sketching and shading
Conical lead	Lettering and dimensioning
Chisel lead	Drawing straight line
Bevel lead	In compass for drawing circles

3. The ratio of length to width of all arrow heads in drawing is

   (A) 2:1

   (B) 4:1

   (C) 3:1

   (D) 2:4

Explanation :

length to width →3:1

4. For thin chain line alternate long and short dashes are in proportion ranging from

    (A) 6:1 to 4:1

    (B) 9:1 to 3:1

    (C) 6:2 to 4:2

    (D) 9:1 to 4:1

    Explanation :

    The ratio of long dashes to short dashes in thin chain line ranges from 6:1 to 4:1

5. The plan and elevation of a line segment are seen coincides, the line is situated in

    (A) First quadrant

    (B) Second quadrant

    (C) Third quadrant

    (D) Quadrantal axis

    Explanation :

    In quandrantal axis the plan and elevation of line segment coincides.

6. The recommended dimensioning of a sphere of Diameter 20 mm is

    (A) 20 φ S

    (B) S φ20

    (C) S φ 20

    (D) φ 20 S

    Explanation :

    The recommended method of dimensioning a sphere with diameter 20 mm is to use a diameter

symbol (S φ) followed by the dimension 20 mm

7. The type of Vernier in which the Vernier divisions are marked in the opposite direction of the main scale is

(A) Vernier Scale

(B) Forward Vernier

(C) Backward Vernier

(D) None of these

Explanation :

The type of vernier in which thevernier divisions are marked in the opposite direction of the main scale is Backward Vernier.

8. The method of projection in which the projectors are parallel to each other and perpendicular to the plane the projection is

(A) Isometric Projection

(B) Orthographic Projection

(C) Perspective Projection

(D) Oblique Projection

Explanation :

Orthographic projection- Projectors are parallel to each other and perpendicular to the projection plane . i.e. angle between projection plane and projectors will be 90^0.

Isometric projection – Three mutually perpendicular edges of an object is equally inclined to the plane of projection. All isometric axis makes an angle 120^0 between them.

Oblique projection – One of the principle faces of the object is placed psarallel to the plane of projection and other adjascent faces are inclined at an angle with the plane of projection.

9. The path tracked by a projectile is called

(A) Trajectory

(B) Horizontal Range

(C) Velocity Projection

(D) None of these

Explanation :

The path traced by a projectile in space is known as trajectory.

10. RF-2001 represents a

(A) Enlarging Scale

(B) Reducing Scale

(C) Full Size

(D) Comparative Scale

Explanation :

The value of R.F is always expressed in the form of x:y, in which both x and y are lengths converted into the same units. Hence RF has no decimal and it is unitless.

RF for full-sized scale =1

RF for reducing scale <1

RF for enlarging scale> 1.

11. The survey in which earth's curvature is taken into account is

(A) Levelling

(B) Geodetic survey

(C) Theodolite Survey

(D) None of these

Explanation :

The survey in which earth's curvature is taken into account is Geodetic survey and the survey in which Earth's curvature is not considered is Plane survey

12. Surveying Chain is Made up of

(A) Galvanised MS Wire

(B) MS Wire

(C) High carbon steel

(D) None of these

Explanation :

Surveying chain is made up of Galvanized mild steel wire of 4mm diameter

13. π Radians = _____ grades

(A) 100

(B) 200

(C) 180

(D) 90

Explanation :

2π radians = 400 grades

14. The Length of surveyor's chain is

(A) 100 ft

(B) 66 ft

(C) 33 ft

(D) 30 m

Explanation :

length of surveyors chain / Gunter's chain – 66ft

Engineers chain – 100ft

Metric chain – 20m/30m

Revenue chain – 33ft

15. In ordinary chain survey the maximum permissible error is

(A) 1 in 250

(B) 1 in 1000

(C) 1 in 2000

(D) 1 in 5000

Explanation :

Conditions	Permisible error
Ordinary chain survey	1 in 1000
Hilly ground or rough ground using chain	1 in 250
Steel tape or a steel band	1 in 2000
Standardized steel or invar tape	1 In 5000

16. The correction for sag is always.

(A) + ve

(B) -ve

(C) + ve or-ve

(D) None of these

Explanation :

The difference between the true value and observed/measured value is known as a correction

Correction = True value – Measured value

If, Measured value > True value, C<0 i.e. Negative

Measured value < True value, C> 0 i.e. Positive

17. If L is the correct length of a chain. L' is the incorrect length and D' is the measured length, then the correct length is

A. $\dfrac{L'}{L} \times D'$

B. $\dfrac{L}{L'} \times D'$

C. $\dfrac{L}{D'} \times L'$

D. $\dfrac{D'}{L} \times L'$

Explanation :

Let ,

L is the true/designated length of the tape or chain

L' is the incorrect length of the chain or tape used

D' is the measured length of the chain or tape

Then,

True length of the line, $D = L'/L * D'$

18. The instrument which is not used in chain survey is

(A) Ranging Rod

(B) Cross Staff

(C) Offset Rod

(D) Levelling Staff

Explanation :

Ranging rod – Used to range intermediate points in survey lines and is available in 2m and 3m.

Cross staff - It is used for setting out right angles

Offset rod - It is a tool used to make measurements at an angle or distance from a reference point

Levelling staff- A level staff, also called levelling rod, is a graduated wooden or aluminium rod, used with a levelling instrument to determine the difference in height between points or

heights of points above a vertical datum.

19. The Principle of chain surveying is

(A) Work from Whole to Part

(B) Triangulation

(C) Traversing

(D) None of these

Explanation :

In triangulation, the area to be surveyed is divided into number of triangles and each triangle is separately surveyed. It prevents the accumulation of errors. It localizes minor errors

20. The system of lines or Triangles covering the area to be surveyed is

(A) Triangulation

(B) Frame Work

(C) Traversing

(D) All of the above

21. In a well-conditioned triangle the angles are

(A) 20" or 120°

(B) Greater than 30° and less than 120°

(C) Greater than 20° & less than 120°

(D) None of these

Explanation :

A triangle is stated to be a well-conditioned triangle when all angle in it is more than 30° or lesser than 120°.

A triangle in which an angle of the triangle is less than 30 or greater than 120° is known as ill conditioned triangle.

Equilateral Triangle is the best-suited triangle in Chain Triangulation or Chain Surveying.

22. The line joining some fixed points termed as tie stations on main survey line is called

(A) Base line

(B) Check line

(C) Proof line

(D) Tie line

Explanation :

Tie line: The line joining tie stations is termed as a tie line. It is run to take the interior details which are far away from the main lines and also to avoids long offsets.

Check line: The line joining the apex point of a triangle to some fixed points on its base is known as the Check line. It is taken to check the accuracy of the triangle.

Chain line: The line joining the main stations are called main survey lines or chain lines.

Base line: The line on which the framework of the survey is built is known as Base line. It is the most important line of the survey. Generally, the longest of the main survey lines is considered as the base line.

23. The horizontal angle which a line makes with the meridian is called

(A) Included angle

(B) Inclination

(C) Bearing

(D) Declination

Explanation :

The Bearing of a line is its direction relative to the given meridian

24. The graduated ring being attached to the magnetic needle remains stationary in

(A) Surveyor's compass

(B) Prismatic compass

(C) Trough compass

(D) None of these

Explanation :

The graduated ring being attached to the magnetic needle remains stationary when the compass-box and the sight vane is rotated.

The graduations are marked on the ring in a clock-wise direction with 0° or 360° at South end of the needle so that 90° is marked at the West

25. In a prismatic compass 180° is marked at

(A) North end

(B) South end

(C) East

(D) West

Explanation :

Angles measured by prismatic compass are in whole circle bearing having 0º at south, 90º at west, 180º at north and 270º at east.

26. The bearing of a line taken from the starting point of the line towards the direction in which survey progress is called

(A) True bearing

(B) Back bearing

(C) Whole circle bearing

(D) Fore bearing

Explanation :

Bearings measured in the direction of progress of the survey are known as fore bearing and bearings measured opposite to the direction of the survey are known as back bearing.

27. In the whole circle bearing systems, S 85º - 45' W will be expressed as

(A) 94º - 15'

(B) 85º - 45'

(C) 265º - 45'

(D) 180º - 45'

Explanation :

$180 + 85º45' = 265º45'$
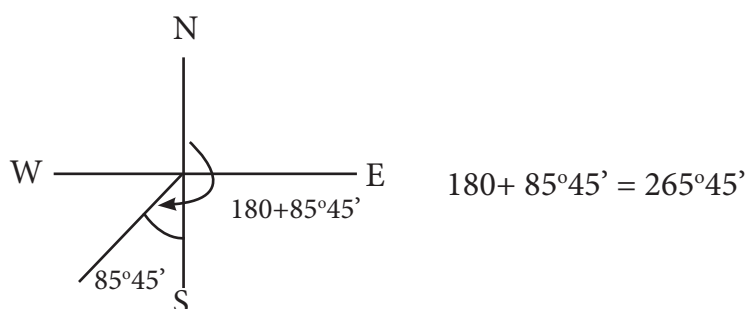
28. At poles the magnetic dip is equal to

(A) 180º

(B) 90º

(C) 0º

(D)   45°

Explanation :

The dip is 0°at equator and 90° at poles

29.   The whole circle bearing of a line observed by a prismatic compass is 110", its bearing read on a surveyor's compass is
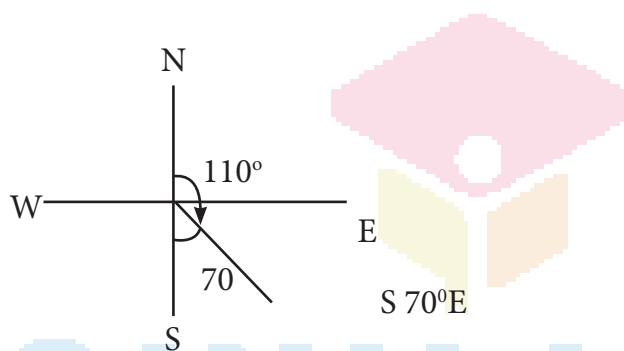
(A)   N 75° E

(B)   N 80° E

(C)   S 110° E

(D)   S 70° E

Explanation :

S 70⁰E

30.   The horizontal angle which magnetic meridian makes with the true meridian is called

(A)   Magnetic Declination

(B)   Dip

(C)   Bearing

(D)   None of these

Explanation :

Declination: The horizontal angle between the True meridian and magnetic meridian is called declination. It is positive if it is to the east and negative it is to the west

Dip : Angle made by the line of force with the surface of earth is called Dio or Angle of dip.

Bearing: Bearing of a line is its direction relative to the given meridian.

31.   The line joining places of equal declination

(A)   Agonic lines

(B)   Isogonic lines

(C)   Tie line

(D)   Base line

Explanation :

Isogonic line: A line passing through points of equal declination is known as the Isogonic line.

Agonic line: A line passing through the zero declination is known as the Agonic line.

32.   The fore bearing of a line is S 45°10E find the back bearing

(A)   45°-10'

(B)   N45°-10'W

(C)   225°-10'

(D)   134° - 50'

Explanation :

 If the fore bearing of a line is given as the quadrantal bearing,

Back bearing = Numerically equal to fore bearing.

Just change N for S, and vice versa and E for W, and vice versa.

Fore bearing of a line = S 45° 10' E

From above explanation

Back bearing of a line = N 45° 10' W

33.   The magnetic bearing of a line is 190° and the magnetic declination is 2° WFind the true bearing of the line

(A)   190°

(B)   188°

(C)   192°

(D)   None of these

Explanation :

Magnetic Bearing of Line OE = 190°

Magnetic Declination = 2° W= -2°

∵ Declination is given in Western direction, so

T.B = M.B - θW

T.B. = 190 – 2 = 188°

34. The permissible error in prismatic compass survey is

(A) 1 in 20°

(B) 1 in 120°

(C) 1 in 340°

(D) 1 in 220°

Explanation :

The permissible error in prismatic compass survey is 1 in 340°

35. Which method of plane table survey is also used for plotting the distant and inaccessible objects, broken boundaries, river etc?

(A) Intersection method

(B) Radiation method

(C) Traversing

(D) Resection

Explanation :

Radiation method- This method is suitable for the survey of small areas which can be commanded from a single station

Intersection method- This method is largely employed for locating the points to be used subsequently as instrument stations, for plotting the distant and inaccessible objects, the broken boundaries of the river etc.It is much suitable for surveying hilly country where it is difficult to measure the horizontal distances.

Traversing - It is used for running survey lines of a closed or open traverse.

Resection - This method is used for locating the station points only

36. The process of putting the positions occupied by the board at various survey stations are kept parallel is known as

(A) Centering the plane table

(B) Levelling the plane table

(C) Orienting the plane table

(D) Traversing the plane table

Explanation :

Orienting the plane table: The process of keeping the plane table always parallel to the position, which is occupied at the first station, is known as orientation. When the plane table is oriented, the lines on the board are parallel to the lines on the ground.

Centering the plane table surveying: Centering refers to the process of precisely aligning the plane table over the survey point or station.

Levelling the plane table : Plane table surveying to ensure that the table is horizontal and provides accurate measurements.

37. What is the name of method used in plane table survey similar to that of compass survey?

(A)   Radiation

(B)   Intersection

(C)   Resection

(D)   Traversing

Explanation :

Traversing is a surveying technique used to determine the coordinates and positions of various points within a surveyed area by measuring both the angles and distances between consecutive points. It involves a series of connected survey lines or traverse legs, forming a closed polygon or loop

38. Which type of survey cannot be done in dense wooded areas?

(A)   Chain survey

(B)   Compass survey

(C)   Plane table survey

(D)   Theodolite survey

Explanation :

Plane table surveying is not suitable for work in a wet climate and in a densely wooded country. The absence of measurements are inconvenient, if the survey is to be replotted to some different scale

39. The three points problem may be solved by

(A)   Tracing paper method

(B)   Bessel's method

(C)   Trial and Error method

(D)   All of the above

Explanation :

Methods for solution of the three point problem:

- Trial and Error method (Lehman's method)
- Mechanical method (Tracing paper method)
- Graphical method (Bessel's method)

40. What is the term that is normal to plumb line at all points?

(A) Level surface

(B) Datum surface

(C) Horizontal surface

(D) Vertical surface

Explanation :

Level Surface: A surface parallel to the mean spheroid of the earth is called a level surface and the line drawn on the level surface is known as a level line

Horizontal Surface: A surface tangential to level surface at a given point is called horizontal surface at that point. Hence a horizontal line is at right angles to the plumb line at that point

41. What is the benchmarks established between the G.T.S. benchmarks by the state PWD is known as

(A) Arbitrary benchmark

(B) Permanent benchmark

(C) Temporary benchmark

(D) G.T.S. benchmark

Explanation :

GTS benchmark (great trigonometrical survey benchmark)- This benchmark is established by the survey of India department at a large interval all over the country.

Permanent benchmark- This is a fixed point or mark established by different government department like PWD railway, irrigation etc

Arbitrary benchmark- when small ordinary levelling work is to be carried out or when the permeant benchmark is not nearby the place where the survey is to be carried out then to start the levelling work any prominent object like plinth or step of building etc. is chosen as the benchmark and its elevation is assumed arbitrarily.

Temporary benchmark- The survey for big project normally continues for a number of the day. Hence at the end of the day when the levelling work for that day has to be stopped. Then any permanent object is chosen on which the work is stopped and can be started further on

the next day. Then these types of benchmark chosen are known as the temporary benchmark. With reference to this temporary benchmark, the work is carried forward on the next day and so on.

42. Which level is used for precise levelling work?

(A) Auto level

(B) Dumpy level

(C) Wye level

(D) Tilting level

Explanation :

Auto level - it is also known as an automatic level or dumpy level, is a surveying instrument used to measure and establish horizontal levels.

Dumpy level - Dumpy level is commonly used leveling instrument to locate the points in same horizontal plane. It is also called as automatic level or builder's level. Elevations of different points and distance between the points of same elevation can be determined by dumpy level.

Wye level - Consisting of a spirit level mounted under and parallel to a telescope, that can be rotated in its Y-shaped supports for adjustment.

Tilting level - A surveying instrument with sighting telescope so mounted that it can be raised or lowered through a limited arc without impairing accuracy of reading, though axis of rotation is not precisely horizontal.

43. In which staff consist of three parts and one slides into another?

(A) Telescopic staff

(B) Invar staff

(C) Target staff

(D) Folding staff

Explanation :

Folding staff- A staff of two pieces each of 2 m which can be folded one over the other.

Telescopic staff- A staff of 3 pieces with upper one solid and lower two hollow. The upper part can slide into the central one and the central part can go into the lower part. Each length can be pulled up and held in position by means of a brass spring. The total length may be 4 m or 5 m.

Target staff- If the sighting distance is more, instrument man finds it difficult to read self-reading staff. In such a case, a target staff may be used.

The instrument man directs the person holding the target staff to move the target, till its centre is in the horizontal line of sight.

44. What is the smallest graduated division in levelling staff?

(A)   0.5 m

(B)   .05 m

(C)   .005 m

(D) 0.0005m

Explanation :

The smallest value that can be measured by a measuring instrument is called its least count.

The smallest division in levelling staff is 5 mm.

45. Which method of contour is suitable for small and undulating area?

(A)   By levelling method

(B)   By cross section

(C)   By tacheometric method

(D)   By square method

Explanation :

Different methods of contouring are:

1.   **Tachometric method of contouring- .**

This method is used for angular surveying and is best suited for hilly terrains as the number of stations which can be commanded by a tachometer is

2.   **Direct Method**

The reduced level of different selected points is located and joined to form a contour. And this method is accurate but very tedious and slow.

3.   **Square method or grid method**

In this method, we draw a grid point on the ground and measure the reduce level of all these points and is generally used in plain terrain.

4.   **Cross Section method**

This method is generally used for hilly terrain to produce contour lines

46. Which method is not included in the interpolation of contours?

(A) Estimation

(B) Arithmetical calculation

(C) Cross section

(D) Graphical

47. Combined correction for curvature and refraction is

(A) 0.6723 D2

(B) 0.0673D2

(C) 0.0112D2

(D) 0.112D2

Explanation :

Correction due to curvature

$C_c = -0.0785\ d^2$

Corrections due to refraction

$C_r = +0.0112\ d^2$

:: Combine correction

$C = -0.0785\ d^2 + 0.0112\ d^2$

$C = -0.0673\ d^2$

where d is in km, C in m

48. What is the name of the staff 3m long and the band fitted is graduated in mm used for percise levelling?

(A) Invar Staff

(B) Telescopic staff

(C) Target Staff

(D) Folding staff

Explanation :

Folding staff- A staff of two pieces each of 2 m which can be folded one over the other.

Telescopic staff- A staff of 3 pieces with upper one solid and lower two hollow. The upper part can slide into the central one and the central part can go into the lower part. Each length can be pulled up and held in position by means of a brass spring. The total length may be 4 m or 5 m.

Target staff- If the sighting distance is more, instrument man finds it difficult to read self-

reading staff. In such a case, a target staff may be used.

The instrument man directs the person holding the target staff to move the target, till its centre is in the horizontal line of sight.

49. What R.F. is select for drawing town planning schemes, reservoirs etc?

(A) 1/1000

(B) 1/5000

(C) 1/100

(D) 1/100000

50. Contour lines of different elevations can unite to form one line in.

(A) Vertical cliff

(B) Overhanging cliff

(C) Hill

(D) Valley

Explanation :

Steep slope → Contour lines are closely spaced and for mild slope, contour lines are apart from each - other.

Hill → Closed contour lines with higher values inside indicate hill and with lower values inside indicate pond or depression.

Overhanging cliff → Two contours of different elevations cannot cross each other except in case of a vertical cliff, cave, or overhang ground surfaces.

Vertical cliff → Contour lines of different elevations unite to form one line.

Uniform slope → Parallel contour lines

51. The method of indirect levelling in which the relative elevations of different points are obtained by measuring the vertical angles and horizontal distance is known as

(A) Barometric levelling

(B) Hypsometry

(C) Trigonometrical levelling

(D) Check Levelling

Explanation :

It is an indirect method of levelling in which the difference of elevation of the points is determined from the observed vertical angles and the measured distances. It is commonly used in topographical work to find out the elevations of the top of buildings, chimneys, churches etc.

52. What benchmark is established for short duration such as at the end of a day's work?

    (A)   Arbitrary benchmark

    (B)   Temporary benchmark

    (C)   Permanent benchmark

    (D)   G.T.S. benchmark

Explanation :

1) GTS benchmark (great trigonometrical survey benchmark)- This benchmark is established by the survey of India department at a large interval all over the country.

2) Permanent benchmark- This is a fixed point or mark established by different government department like PWD railway, irrigation etc.

3) Arbitrary benchmark- when small ordinary levelling work is to be carried out or when the permeant benchmark is not nearby the place where the survey is to be carried out then to start the levelling work any prominent object like plinth or step of building etc. is chosen as the benchmark and its elevation is assumed arbitrarily.

4) Temporary benchmark- The survey for big project normally continues for a number of the day. Hence at the end of the day when the levelling work for that day has to be stopped

53. Which instrument is used to establishing grade contour?

    (A)   Prismatic compass

    (B)   Telescopic alidade

    (C)   Abney level

    (D)   Pentagraph

Explanation :

Abney Level is one of the various forms of clinometers used for the measurement of slopes, taking cross-sections, tracking contours, setting grades and all other rough levelling operations

It is a light, compact and hand instrument with low precision as compared to the engineer's level.

54. Which is prismoidal formula for volume?

(A) L/6(A1+4A2+A3)

(B) L/3(A1+4A2+A3)

(C) L/2(A1+4A2+A3)

(D) L(A1+4A2+A3)

Explanation :

Prismoidal Formula:

1. This formula is based on the assumption that A1 and A2 are the areas at the ends and Am is the area of mid section parallel to ends, L-Length between the ends.

2. From mensuration, volume of a prism having end faces is in parallel planes:

3. V= L/6*(A1+A2+4Am)

4. This is known as prismoidal formula

55. The latitude and departure with reference to preceding point are known as

(A) Independent co-ordinate

(B) Consecutive co-ordinate

(C) Close co-ordinate

(D) Origin co-ordinate

Explanation :

Latitude and departure co-ordinates of any point with reference to the preceding point are equal to the latitude and departure of the line joining the preceding point to the point under consideration. Such co-ordinates are known as consecutive co-ordinates

56. What is the type of angle useful for alignment of highways, railways, canals etc?

(A) Deflection angle

(B) Direct angle

(C) Azimuth angle

(D) Chain angle

Explanation :

This type of traversing is more suitable for the survey of roads, railways, pipe-lines, etc where the survey lines make small deflection angles.

57. What is the test carried in theodolite to make the horizontal axis perpendicular to the vertical axis?

(A) Plate level

(B) Collimation test

(C) Spire test

(D) Cross-hair ring test

Explanation :

Spire test: It is a test carried out to remove Error due to non-perpendicularity of the horizontal axis and the vertical axis in surveying Instrument.

Cross hair ring Test: This test is done to make the vertical cross hair lie in a plane perpendicular to the horizontal axis.

Plate level Test: This test is done to make the plate bubbles central to their run when the vertical axis of the theodolite is truly vertical

Vertical arc Test: This test is done to make the vertical circle indicate zero when the line of sight is perpendicular to the vertical axis.

58. When the angular measurements are more precise than the linear measurements, balancing the traverse is done by

(A) Bowditch's method

(B) Transit rule method

(C) Graphical methods

(D) Axis method

Explanation :

1) Bowditch rule (Compass rule)/Compass rule:

It is most commonly adopted when angular measurement and linear measurement both are nearly of same precision.

The correction is considered directly proportional to the length of the side.

2) Transit rule:

When angular measurements are more precise than linear measurements, the transit method is adopted

59. The chord between two successive regular stations on a curve is known as

(A) Long chord

(B)   Mid chord

(C)   Normal chord

(D)   Intersection chord

Explanation :

A chord between two successive regular station on a curve is called normal chord.

60.   What is the multiplying constant, if adopting anallatic lens in the telescope of a tacheometer?

(A)   10

(B)   20

(C)   30

(D)   100

Explanation :

Multiplying constant is 100 and additive constant is zero

61.   What is the distance between point of intersection to point of tangency?

(A)   Length of the curve

(B)   External distance

(C)   Tangent distance

(D)   Long chord

Explanation :

Tangent Length/Distance (T): The distance between point of curve/point of tangency and the point of intersection is called tangent distance/length.

External Distance (E): The distance between mid-point of the curve and point of intersection is called external distance.

Arc length is the distance between two points along a section of a curve.

62.   Which curve is generally introduced on highway between a straight and circular curve to provide ease and gradual change of direction?

(A)   Simple

(B)   Compound

(C)   Reverse

(D) Transition

Explanation :

Transitional curve is provided between a circular curve and straight road. It provides gradual introduction of centrifugal force, gradual introduction of super elevation and comfort and security to passengers.

63. Which method is used for short traverse in theodolite survey?

(A) Fast needle method

(B) Direct method

(C) Loose needle method

(D) Included angle method

Explanation :

By fast needle method: In this method, the magnetic meridian is established at the first station and the magnetic bearings of the subsequent lines are worked out accordingly. Hence, this method is referred to as fast needle method and it is used for short traverses.

64. What is the multiplying constant in tacheometric survey?

(A) (f/i)

(B) (f+d)

(C) (f+i)

(D) (f/d)

Explanation :

Tachometer:

Distance calculation involves the computation of two constants i.e. multiplying constant (k) and additive constant (c).

$k = f/i$

$c = f+d$

Where

$1/f = 1/f_1 + 1/f_2$

f = combined focal length

f_1 = focal length of objective

f_2 = focal length of the eyepiece

d = distance of the objective from the center of the instrument.

65. What is the abbreviation for MOEF?

(A) Ministry of ecology and forest

(B) Ministry of environment and federation

(C) Ministry of environment and forest

(D) Ministry of ecology and fire

Explanation :

MOEF Ministry of Environment & Forests

The Ministry of Environment & Forests is primarily concerned with planning, promotion, coordination and overseeing the implementation of the various environmental and forestry policies and programmes.

66. Which year does first microprocessor was invented?

(A) 1970

(B) 1971

(C) 1972

(D) 1973

Explanation :

The Intel 4004 was the world's first microprocessor—a complete general-purpose CPU on a single chip. Released in March 1971, and using cutting-edge silicon-gate technology, the 4004 marked the beginning of Intel's rise to global dominance in the processor industry.

67. What is the full form of GUI?

(A) Golden closer installation

(B) Graphical user installation

(C) Graphical user interface

(D) Geometrical user interface

Explanation :

The full form of GUI is the Graphical User Interface. The GUI is a user-friendly interface used to aid electronic devices in communicating. It shows all the content a user needs to imagine, whether a text file, entity, images or videos.

68. What is the other name of dwelling unit?

(A) Raw building

(B) Residential building

(C) Commercial building

(D)   Educational building

Explanation :

Dwelling type refers to the type of living quarters in which a person resides. In general terms a dwelling is defined as a set of living quarters. Two types of dwelling are identified in the Census, collective dwellings and private dwellings.

69.   What is the normal life period of residential building with concrete roof according to NBC 2005?

(A)   50

(B)   70

(C)   100

(D)   110

Explanation :

50Years is the normal life period of residential building with concrete roof according NBC 2005.

70.   What is the use of function key F3?

(A)   O SNAP

(B)   TABLET

(C)   ISOPLANE

(D)   SAVE AS

Explanation :

F1	Display Help
F2	Toggle text screen
F3	Toggle object snap mode
F4	Toggle 3DOsnap
F5	Toggle Isoplane
F6	Toggle Dynamic UCS
F7	Toggle grid mode
F8	Toggle ortho mode
F9	Toggle snap mode
F10	Toggle polar mode
F11	Toggle object snap tracking
F12	Toggle dynamic input mode

71. Which of the following software is limited for AutoCAD installation?

(A) Window DOS

(B) Window 58

(C) Window 03

(D) Window 10

Explanation :

Windows 10

72. What is the use of the short cut key M text?

(A) Modifying text

(B) Move text

(C) Multi text

(D) Menu Text

Explanation :

MULTILINE text object, use MTEXT

73. What is the full form of UCS?

(A) User CAD system

(B) User CADD system

(C) User co-ordinate system

(D) User circle system

Explanation :

UCS - User co-ordinate system

The user coordinate system (UCS) establishes the location and orientation of a movable Cartesian coordinate system. The UCS is an essential tool for many precision operations. By default, the UCS icon appears in the lower-left corner of the drawing area for the current model viewport.

74. Which of the following pointing device is cheaper while comparing the digitilizer?

(A) Key Board

(B) Puck

(C) Mouse

(D) Enter key

Explanation :

The mouse is a small, movable device that lets you control a range of things on a computer. Most types of mouse have two buttons, and some will have a wheel in between the buttons. Most types of mouse connect to the computer with a cable, and use the computer's power to work. Some types of mouse are wireless.

75. Which short cut key does the work of redo last action?

(A) Ctrl + z

(B) Ctrl + y

(C) Ctrl + c

(D) Curi +x

Explanation :

Ctrl + V Paste content from clipboard.

Ctrl + A Select all content.

Ctrl + Z Undo an action.

Ctrl + Y Redo an action.

76. The standard size of brick

(A) 19 x 9 x 9 cm

(B) 20 x10 x 10 cm

(C) 20 x 20 x 10 cm

(D) 19 x 19x 9 cm

Explanation :

In India, clay is burned in a kiln to create bricks. Bricks that are standard size are 190 x 90 x 90 mm without mortar. The nominal size is defined as 200 x 100 x 100 mm for bricks with mortar (10 mm)

77. The central part of the tree is called

(A) Sap wood

(B) Cambium layer

(C) Heart wood

(D) Pith

Explanation :

Sl. no	Parts of the tree	Definition
1	Pith	It is the innermost portion or core of the tree. It consists of cellular tissues. It is the darkest portion of the tress signifying that it does not take any active part in the growth of the tree.
2	Heartwood	It is the inner annular ring surrounding the pith. It is between sapwood and pith. It is used for all engineering works.
3	Sapwood	It is the annular rings between the cambium layer and heartwood. It takes part in the growth of the tree. It is not used for any engineering works.
4	Cambium layer	It is the thin layer of sap between sapwood and inner bark. It represents the future growth of the tree.
5	Inner bark	Inner bark gives protection to the cambium

78. Weight of 1 bag of cement

(A) 74 kg

(B) 50 kg

(C) 40 kg

(D) 100 kg

Explanation :

Weight of 1 bag of cement = 50kg

79. Chemically which rock is calcarious rock?

(A) Granite

(B) Silica

(C) Marble

(D) Basalt stone

Explanation :

Chemically marble is called the calcareous rock.

80. Vical's apparatus is used to determine the

(A) initial setting time of cement

(B) final setting time of cement

(C) normal consistency of cement

(D) all of these

Explanation :

Vicat's Apparatus: It is used to find out the consistency, initial setting time and final setting time of the cement. In the normal consistency test, we have to find out the amount of water to be added to the cement to form a cement paste of normal consistency.

81. The fine adjustment in theodolite is done by

(A) focusing screw

(B) tangent screw

(C) clamb screw

(D) foot screw

Explanation :

The fine adjustment in theodolite is done by tangent screw

82. The face left position is also called

(A) Telescope inverted

(B) Telescope normal

(C) Telescope reversed

(D) None of these

Explanation :

Face left observation:

While taking the reading, if the vertical side is towards the left of the observer then it is called face left observation. (Also called as Telescope Normal condition).

83. Which of the following is not a traversing method?

(A) Plane table traversing

(B) Theodolite traversing

(C) Open traversing

(D) Chain traversing

Explanation :

1. Chain traverse: In the chain traverse, the directions of the traverse lines are fixed by taking adequate ties near the traverse stations.

2. Compass traverse: Here In this method of traversing, the angles are measured with the help of a magnetic compass.

3. Plane table traverse: It is a unique method of traversing in a way that traverse can be plotted

directly in the field but it is not a very precise method.

84. The telescope is rotated in horizontal plane relative to which axis?

(A) Vertical axis

(B) Horizontal axis

(C) Trunnion axis

(D) Plate bubble tube axis

Explanation :

Transiting: It is the rotation of the telescope about its horizontal axis in a vertical plane.

It is also known as reversing or plunging.

(ii) Swinging: It is the rotation of the telescope about its vertical axis in a horizontal plane.

∴ The process of turning the telescope about the vertical axis in a horizontal plane is known as swinging.

85. The most widely used antenna in GPS is

(A) Hom antenna.

(B) Slotted antenna

(C) Parabolic antenna

(D) Micro strip antenna

Explanation :

Microstrip antenna is most widely used antenna in GPS as it is circular or rectangular shaped metallic patch above the ground plane

86. The first GPS satellite was launched in

(A) 1955

(B) 1967

(C) 1978

(D) 1993

Explanation :

In February 1978, the first Block I developmental Navstar/GPS satellite launched, with three more Navstar satellites launched by the end of 1978.

87. Which type of wave is used to operate EDM?

(A) Ultrasonic wave

(B) Electric wave

(C) Electromagnetic wave

(D) All of these

Explanation :

Electromagnetic waves are formed when an electric field (which is shown in red arrows) couples with a magnetic field (which is shown in blue arrows). Magnetic and electric fields of an electromagnetic wave are perpendicular to each other and to the direction of the wave.

88. Data collector is used for total station?

(A) Controlling the total station

(B) Keeping data records

(C) Helping data processing

(D) Knowing position of pointing

Explanation :

Data collector is used for total station for Keeping Data records

89. What is termed as the quantity of matter contained in a body?

(A) Density

(B) Volume

(C) Mass

(D) Specific gravity

Explanation :

The quantity of matter in a body is called its mass

90. How many watts for 1 horse power in British system?

(A) 726 watts

(B)   736 watts

(C)   746 watts

(D) 756 watts

Explanation :

- Horse power is the unit tof measurement of power.

- It was first used by James Watt.

- 1 hp is approximately equal to 746 watts or 0.746 kW.

- To convert from horsepower to watts, multiply by 746.

91. What is the S.I. unit of heat?

(A) Calorie

(B) Joule

(C) Centigrade heat unit

(D) British thermal unit

Explanation :

A form of energy associated with the motion of atoms or molecules and capable of being transmitted through solid and fluid media by conduction, through fluid media by convection, and through empty space by radiation.

It's SI unit is Joule(J).

92. What is called for the materials that restricts heat flow by radiation, conduction and convection?

(A) Conductors

(B) Insulators

(C) Ferrous

(D) Non-ferrous

Explanation :

The materials which do not allow heat to pass through them easily are poor conductors of heat and are known as insulators.

93. What is the term for the object seen higher than eye level?

(A) Angle of inclination

(B) Angle of friction

(C) Angle of elevation

(D) Angle of depression

Explanation :

Angle of elevation: When we try to view an object above us, there forms an angle of elevation between the horizontal line and our line of sight to the object seen

94. What is the centre of gravity of a sphere?

(A) At the centre

(B) On the circumference

(C)   At the diameter

(D)   At the radius

Explanation :

Spheres: The center of gravity of a sphere lies at the midpoint or the center (G) of the sphere. The point G can be determined by placing the sphere on a horizontal surface and placing two planes on either side such that the outer surface of the sphere touches the vertical planes.
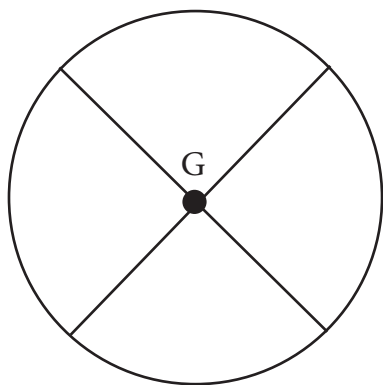
95.   What is the purpose of tempering a steel?

(A)   To reduce the brittleness

(B)   To remove the ductility

(C)   To increase the hardness

(D)   To increase the brittleness

Explanation :

Purpose of the tempering is to reduce the brittleness imparted by hardening and to produce definite physical properties within the steel.

96.   What is the term used for maximum stress attained by a material before rupture?

(A)   Tensile stress

(B)   Compressive stress

(C)   Working stress

(D)   Ultimate stress

Explanation :

Ultimate Tensile Strength: The maximum tensile stress a material is capable of carrying is known as the ultimate tensile stress. It corresponds to the highest point on the tensile stress-strain curve.

97.   Which formula is suitable for the area of a circle, whose diameter is (d)?

(A) $\pi d^2/4$

(B)   πr

(C)   2πr

(D)   πd

Explanation :

Area of Circle, $A = \pi r^2$

The Circumference (or) perimeter of circle = 2πR

98.   What is the area of irregular shape by Simpson's rule?

(A) $h/3 [y_1 + y_7 + 4(y_2 + y_4 + y_{6)} + 2(y_3 + y_6)]$

(C) $h/3 [y_2 + y_4 + y_6]$

(B) $h/2 [y_1 + y_7]$

(D) $h/2 [y_1 = y_7 + (y + y_5)]$

Explanation :
Simpson Rule

$D/3$ [first area + last area + 4 Σ Even area + 2 Σ odd areas

99.   What are the three consecutive numbers if their sum is 42?

(A)   11, 12, 13

(B)   12, 13, 14

(C)   13, 14, 15

(D)   14, 15, 16

Explanation :

13+14+15 = 42

100.   What is the value of $(a^5)^7$

(A) a^{35}

(B) a^{12}

(C) $a^2 1$

(D) a^{22}

Explanation :

A. a^{35}

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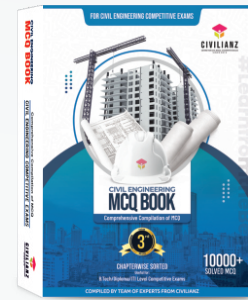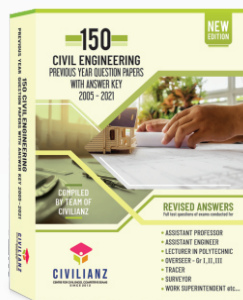
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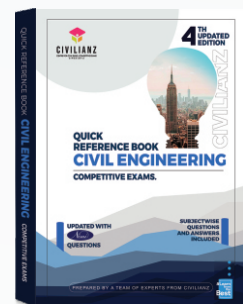
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