

72/2019

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. The part of a circle bounded by an arc and its chord is always called :
(A) Sector (B) Value of Pi
(C) Segment (D) Semi-circle
2. The main principle of surveying is to work from :
(A) Relative position to base line (B) Part to the whole
(C) Whole to the part (D) None of the above
3. Among the following, a total station does not directly measures :
(A) Horizontal angle (B) Level difference
(C) Vertical angle (D) Slope distance
4. The ratio of isometric length to its true length is approximately equal to :
(A) 0.082 (B) 1.195
(C) 0.315 (D) 0.815
5. The most accurate method for measuring traverse angle is :
(A) Ordinary (B) Deflection
(C) Repetition (D) Reiteration
6. In a perfect check leveling the result of arithmetic check is always :
(A) Less than zero (B) Zero
(C) Greater than zero (D) RL of the bench mark
7. The top view of an object comes above the front view always in :
(A) Second angle projection (B) First angle projection
(C) Fourth angle projection (D) Third angle projection
8. _____ field book is generally used for large scale surveying with detailed dimension work.
(A) Single line (B) Double line
(C) Topographical (D) Frame work and base line

A

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[P.T.O.]

9. The error due to bad ranging is always :
- (A) Cumulative (B) Instrumental
(C) Compensative (D) Natural
10. To make multiple copies of an objects in a regular interval, in terms of rows or columns or at a uniform angular distance around a centre point, _____ command is used in Auto CAD.
- (A) Mirror (B) Copy
(C) Array (D) Offset
11. The key board function key for 'Online Help' in Auto CAD is :
- (A) F11 (B) F6
(C) F8 (D) F1
12. The surveying, which carried out for determining the area of unearthing relics of antiquities :
- (A) Mine surveying (B) Geological surveying
(C) Topographical surveying (D) Archeological surveying
13. Isometric projection of a circle is always :
- (A) A Circle (B) A Semi-circle
(C) An Ellipse (D) A Spheroid
14. In Auto CAD, Key strokes 'Ctrl+Y' function defined as :
- (A) Undo (B) Redo
(C) Polar tracking ON/OFF (D) None of the above
15. The lead of the drawing pencil is sharpened to 'chisel edged' is used for :
- (A) Drawing lines (B) Lettering
(C) Freehand sketching (D) All of the above
16. Files, edit, view etc. are easily available in Auto CAD from :
- (A) Title Bar (B) Status Bars
(C) Standard Tool Bar (D) Menu Bar
17. When the locus of a point moving in a plane, in such a way that, the ratio of its distance from the focus to the distance from the directrix is constant and greater than one is a :
- (A) Ellipse (B) Hyperbola
(C) Parabola (D) Hypocycloids

18. When a cone is cut off by a plane inclined to its base, but not passing through base, and the portion obtained after removing the part containing the apex is :
- (A) Tetrahedron (B) Frustum of cone
(C) Pentahedron (D) Truncated cone
19. The abbreviated character or short cut key 'C' is used as a command for _____ in Auto CAD.
- (A) Drawing circle (B) Copying selected object
(C) Chamfering (D) None of these
20. By the combination of set squares, we can create _____ angle.
- (A) 90°, 60°, 45°, 30° (B) 90°
(C) Multiples of 15° (D) Any one
21. For creating 'an Arc' in Auto CAD, _____ short cut key is used.
- (A) AR (B) A
(C) AC (D) None of the above
22. From the following, which is not an EDM instrument?
- (A) Distomats (B) Geodimeter
(C) Tellurometer (D) Theodolite
23. _____ command creates parallel lines, parallel curves, concentric circles etc, in a specified distance at the time of Auto CAD drawing.
- (A) Copy (B) Array
(C) Mirror (D) Offset
24. The type of light beam usually send out from a modern EDM instrument is :
- (A) Gamma rays (B) X-rays
(C) Infrared rays (D) Normal light rays
25. If the length of a survey line is ' l ' and the reduced bearing is θ , then latitude of the line is :
- (A) $l \cos \theta$ (B) $l \sin \theta$
(C) $l \cot \theta$ (D) $l \tan \theta$

26. The lines joining the points of equal dip are :
- (A) Isogonics lines (B) Isoclinic lines
(C) Aclinic lines (D) Agonic lines
27. The working edge of a plain alidade is known as :
- (A) Fiducial edge (B) Ebony edge
(C) Object vane (D) Tacheometric scale
28. The upper plate of a leveling head of a level is known as :
- (A) Trivet (B) Graduated plate
(C) Tribarch (D) Vernier plate
29. The area of trimmed size A2 drawing sheet is :
- (A) 0.25 square metre (B) 0.50 square feet
(C) One square metre (D) None of the above
30. The correction due to curvature and refraction is —————, where D is the distance of observation in kilometer.
- (A) $0.0673 D^2$ metres (B) $0.0112 D^2$ metres
(C) $0.0785 D^2$ metres (D) None of the above
31. The imaginary line joining the point of inter section of cross hair at diaphragm and the optical centre of the object glass and its continuation is :
- (A) Axis of the level tube (B) Line of collimation
(C) Axis of the telescope (D) None of the above
32. The Auto CAD command which is used to breaks a polyline into its individual segments :
- (A) Extend (B) Extrude
(C) Explode (D) Break
33. The IS code recommended for trimmed drawing sheets is :
- (A) IS 456 : 1978 (B) IS 10711 : 2001
(C) IS 816 : 1969 (D) IS 692 : 1989
34. Sandstone is an example of :
- (A) Igneous rock (B) Argillaceous rock
(C) Siliceous rock (D) Calcareous rock

35. Red colour of the tile is mainly due to :
- (A) Iron oxide (B) Silica
(C) Alumina (D) None of the above
36. Volume of 1 bag cement weighing 50 kg is :
- (A) 0.034 m^3 (B) 3.4 m^3
(C) 1.05 m^3 (D) 0.020 m^3
37. Lime is used for :
- (A) As a matrix for concrete (B) Improving soil for agricultural
(C) For plastering (D) All of the above
38. A brick moulded with a round angle is termed as :
- (A) Bull nose brick (B) Cow nose brick
(C) Coping brick (D) All of the above
39. Most commonly used base for making paint :
- (A) White lead (B) Linseed oil
(C) Turpentine (D) None of the above
40. Stair turning through two right angle is known half-turn stair :
- (A) Quarter turn stair (B) Half-turn stair
(C) Straight (D) Three quarter turn
41. This is the common type of sloping roof which slope in two direction :
- (A) Lean to roof (B) Gable roof
(C) Hip roof (D) Mansard roof
42. A slab when supported on two sides or all four sides and if the length of the slab exceeds two times its width, is named as :
- (A) one way slab (B) two way slab
(C) cantilever slab (D) None of these
43. Concrete without reinforcement is called :
- (A) P.C.C. (B) R.B.C.
(C) R.C.C. (D) R.M.C.

44. Which type of piles are commonly recommended for safe and economical foundation in black cotton soil?
- (A) sheet pile (B) bearing pile
(C) under reamed pile (D) friction pile
45. A temporary rigid structure having platforms raised up as the building increases in height is called :
- (A) underpinning (B) scaffolding
(C) shoring (D) jacking
46. A stretcher bond is usually used for :
- (A) Half brick wall (B) One brick wall
(C) One and a half brick wall (D) Two brick wall
47. The termination of a wall in stepped fashion is known as :
- (A) Quoin (B) Toothing
(C) Racking back (D) Squint
48. A projecting stone which usually provide to serve as support for roof truss, beam, weather shed is known as :
- (A) Course (B) Coping
(C) Corbel (D) Cornice
49. Screening provided for the individuals from others :
- (A) aspect (B) prospect
(C) flexibility (D) privacy
50. The parameters which govern the orientation of the building :
- (A) temperature (B) wind
(C) humidity (D) All of the above

51. Usable floor area excluding staircase, lift, walls etc. are called :
- (A) plinth area (B) floor area
(C) carpet area (D) covered area
52. The lower storey of the building below or partly below the ground level :
- (A) Cellar floor (B) Ground floor
(C) Mezzanine floor (D) All of the above
53. The most reliable estimate is:
- (A) Plinth area estimate (B) Preliminary estimate
(C) Cube rate estimate (D) Detailed estimate
54. It is observed by the experiment and experience that the volume of dry material required for one m³ of wet concrete are :
- (A) 1.52 m³ – 1.54 m³ (B) 1.55 m³ – 1.57 m³
(C) 1.57 m³ – 1.59 m³ (D) 1.59 m³ – 1.62 m³
55. The essential requirements to prepare good estimate are :
- (A) a full dimensioned drawing to a scale
(B) detailed specification
(C) schedule of rates
(D) all of the above
56. The volume of coarse aggregate required to make 100 m³ of 1 : 2 : 4 concrete is :
- (A) 84 m³ (B) 88 m³
(C) 92 m³ (D) 96 m³
57. It is the value at the end of utility period without being dismantled :
- (A) market value (B) salvage value
(C) scrap value (D) book value
58. For calculating quantity of steel, density of steel may be taken as :
- (A) 7850 quintal/m³ (B) 785 quintal/m³
(C) 78.5 quintal/m³ (D) None of the above

59. The total area which can be irrigated by a canal system is called :
- (A) gross command area (B) cultural command area
(C) cultural cultivated area (D) cultural uncultivated area
60. The method of irrigation in which water is applied in the form of a spray as in ordination rain :
- (A) furrow irrigation (B) sprinkler irrigation
(C) subsurface irrigation (D) none of the above
61. The small reservoir used for water supply in a city :
- (A) Distribution reservoir (B) Storage reservoir
(C) Flood control reservoir (D) Multipurpose reservoir
62. The difference of water level in the head race and in the tail race in a hydroelectric project is known as :
- (A) Net head (B) Operating head
(C) Gross head (D) None of these
63. It is provided to reduce the water hammer pressure formed in the penstock in hydroelectric project :
- (A) Turbine (B) Surge tank
(C) Fore bay (D) Intake
64. It is a canal generally carries water directly from the river :
- (A) Main canal (B) Branch canal
(C) Major distributary (D) Minor distributary
65. It is a structure in which the canal flows over the drainage :
- (A) Aqueduct (B) Super passage
(C) Canal syphon (D) Level crossing
66. Which dams are made of locally available soils and gravels?
- (A) Earthen dam (B) Rock fill dam
(C) Gravity dam (D) Rigid dam
67. A fluid having no viscosity is known as :
- (A) Real fluid (B) Ideal fluid
(C) Newtonian fluid (D) Non newtonian fluid

68. Which is the pressure measuring device in a pipe line?
 (A) Passometer (B) Manometer
 (C) Thermometer (D) All of these
69. Siliceous rock example :
 (A) Granite (B) Lime
 (C) Surkhi (D) Clay
70. Oil well cement IS : CODE :
 (A) 8229–1986 (B) 820–1975
 (C) 839–1988 (D) 8231–1983
71. The vertical joints separating the bricks in either length or cross direction :
 (A) Bat (B) Closer
 (C) King Closer (D) Perpend
72. Auger boring may be of :
 (A) Post-hole type (B) Well
 (C) Tube type (D) Pile
73. Eye foundation bolt used :
 (A) Well foundation (B) Machine foundation
 (C) Raft foundation (D) Pile foundation
74. Used in X-ray rooms to protect the persons working :
 (A) Cement plaster (B) Mud plaster
 (C) Barium plaster (D) Surkhi plaster
75. Bar Quiteodorous products ventilation air $M^3/h/person$:
 (A) 35 (B) 45
 (C) 50 (D) 25
76. Projection : in the form of balconies, veranda, etc are provided on ————— vasuthu.
 (A) All sides (B) East sides
 (C) East and west sides (D) North sides

77. Group C _____ buildings.
- (A) Institutional building (B) Private building
(C) Flat building (D) All of these
78. Work-charged establishment a percentage of _____ to _____ of the estimated cost is included in the estimated.
- (A) 2% to 3% (B) 4% to 5%
(C) 6% to 8% (D) $1\frac{1}{2}$ % to 2%
79. Cement mortar or lime mortar rubbing units of measurement in MKS :
- (A) sq.m. (B) cu.m.
(C) quintal (D) kg
80. 'C' Type Area of plot 201 sq.m. to 1000 sq.m. permissible covered area :
- (A) 50% of the site area (B) 20% of the site area
(C) 30% of the site area (D) 40% of the site area
81. Non-rigid dams example :
- (A) Rock dam (B) Earth dam
(C) Brick dam (D) All of these
82. Non-recording rain gauge is more common in India and the one that is most used in India is called the _____ gauge.
- (A) Simon's (B) Rain gauge
(C) Meter gauge (D) All of these
83. In an estimate a certain amount in the form of contingencies of _____% to _____% of estimate cost.
- (A) 45% to 20% (B) 5% to 8%
(C) 10% to 20% (D) 3% to 5%
84. The angle of inclination of stair with the floor :
- (A) Pitch (B) Rise
(C) Tread (D) All of above
85. A sloping roof is known as _____ roof.
- (A) Curved roof (B) Flat roof
(C) Pitched roof (D) Lean-to-roof

86. Series of step between landing :
- (A) Rise (B) Flight
(C) Nosing (D) Tread
87. Drawing board sizes in mm “Bo” :
- (A) $1500 \times 1000 \times 25$ (B) $1000 \times 700 \times 25$
(C) $700 \times 500 \times 15$ (D) $500 \times 350 \times 10$
88. ONE-centered arch example :
- (A) Bull’s eye arch (B) Two centered arch
(C) Three centered arch (D) Four centered arch
89. Unit of force is :
- (A) Watt (B) Joule
(C) Dyne (D) Pound
90. Area of an Isosceles triangle is 1000 mm^2 Base = 100 mm, then height of the triangle is :
- (A) 10 mm (B) 15 mm
(C) 20 mm (D) 25 mm
91. The sides of a triangle are 3 cm, 4 cm, 5 cm. Find its area :
- (A) 6.7 cm^2 (B) 6 cm^2
(C) 8 cm^2 (D) 7.8 cm^2
92. Area of a rhombus having diagonals d_1 and d_2 is :
- (A) $d_1 d_2$ (B) $\frac{d_1 d_2}{2}$
(C) $2 d_1 d_2$ (D) $d_1 + d_2$
93. The area of a circle having diameter ‘ D ’ is :
- (A) πD^2 (B) $\frac{\pi D^2}{2}$
(C) $\frac{\pi D^2}{4}$ (D) $(\pi D)^2$

94. A bucket of base diameter 95 cm rim diameter 120 cm and height 100 cm is full of sand. Find the volume of sand :
- (A) 756600 cm³ (B) 956600 cm³
 (C) 553210 cm³ (D) 873214 cm³
95. A car is moving with a velocity of 50 km/hr, is brought to rest in 45 secs. Find out the retardation :
- (A) 3 m/sec² (B) 0.3 m/sec²
 (C) 1.1 m/sec² (D) 3.5 m/sec²
96. When a body offers resistance to deformation when acted by external load is called :
- (A) Stress (B) Strain
 (C) Poisson's ratio (D) None of these
97. A load of 1000 kg is lifted by a simple machine having a velocity ratio 5. The mechanical advantage is _____ if the effort applied is 250 kg.
- (A) 20 (B) 4/5
 (C) 4 (D) 5/4
98. A man lifted a luggage of 25 kg from the ground and put it on his head 1.5 m above the ground. What will be the work done?
- (A) 37.5 J (B) 367.5 J
 (C) 3.82 J (D) None of these
99. A block weighs 100 kg. If the co-efficient of friction between it and ground is 0.3. Find the force required to move the block :
- (A) 30 N (B) 294 N
 (C) 98 N (D) 29.4 N
100. A load of 3 kN is applied at the free end of a cantilever beam of length 5 m. Then the bending momentum at the free end will be :
- (A) -3 kNm (B) 0
 (C) 15 kNm (D) 1.5 kNm

SPACE FOR ROUGH WORK

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