

CHANDIGARH HOUSING BOARD

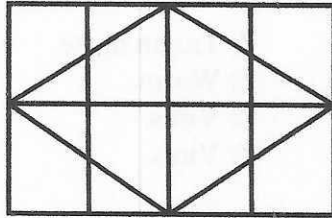
POST: JR. DRAFTSMAN (C)

Question Booklet & Answer Key

04.02.2023 (MORNING)

13. Given that:
 'P × Q' means P is the father of Q; 'P – Q' means P is the sister of Q;
 'P + Q' means P is the mother of Q; and 'P ÷ Q' means P is the brother of Q
 In the expressions B + D × M ÷ N, How is M related to B?
 A) Granddaughter B) Grandson C) Son D) Granddaughter or Grandson

14. How many triangles are there in the following figure?



- A) 22 B) 18 C) 20 D) 24
15. A cube of side 4 cm is painted red on the pair of one opposite surfaces, green on the pair of another opposite surfaces and one pair of opposite surfaces is left unpainted. Now the cube is divided into 64 smaller cubes of side 1 cm each.
 How many cubes have atleast one surface painted ?
 A) 32 B) 48 C) 24 D) 8
16. At what percent annual compound interest rate, a certain sum amounts to its 27 times in 3 years?
 A) 100% B) 150% C) 75% D) 200%
17. For what value of k will the following pair of linear equations have infinitely many solutions?

$$kx + 3y - (k - 3) = 0$$

$$12x + ky - k = 0$$

 A) 2 B) 4 C) 6 D) 8
18. Two vertices of an equilateral triangle are origin and (4, 0). What is the area of the triangle?
 A) 4 sq. units B) $\sqrt{3}$ sq. units C) $4\sqrt{3}$ sq. units D) $2\sqrt{3}$ sq. units
19. X is a% more than Y and Y is b% less than Z. If $X > 0$, $Y > 0$, $Z > 0$ and $X > Z$, the relation between a and b is :
 A) $100a < b(100 - a)$ B) $100a > b(100 + a)$
 C) $100a > b(100 - a)$ D) $100a < b(100 + a)$
20. In how many different ways, 5 boys and 5 girls can sit on a circular table so that the boys and girls are alternate?
 A) 2880 B) 2800 C) 2680 D) 2280
21. In AutoCAD, drawing templates are held in files with the file extension:
 A) .DWT B) .DWG C) .BMP D) .DWR
22. In the context of AutoCAD, an input method based on X, Y, and Z value related to a fixed origin is known as _____.
 A) Relative Polar Coordinate System B) Relative Coordinate System
 C) Absolute Coordinate System D) Direct Distance

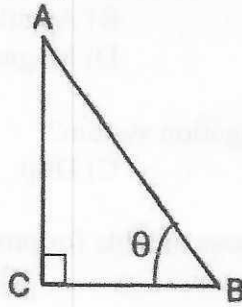
23. Read the following descriptions about X, Y and Z:
 X: It does something harmful to the computer system, but is disguised as something useful.
 Usually it does not make copies of them.
 Y: It is a computer program that propagates itself across computers, creating copies of itself in each computer and infecting the entire network.
 Z: It is a computer program designed to replicate itself by infecting other files or system areas which need a host program to spread to another computer.
 Identify X, Y, Z.
- | | | |
|---------------------|-----------------|------------------|
| A) X: Virus, | Y: Worm, | Z: Trojan horse. |
| B) X: Trojan horse, | Y: Virus, | Z: Worm. |
| C) X: Worm, | Y: Trojan horse | Z: Virus. |
| D) X: Trojan horse, | Y: Worm, | Z: Virus. |
24. When you sign up for something like a free e-mail account, you may be presented with a CAPTCHA. The most common form of CAPTCHA is an image of several distorted letters. CAPTCHA stands for:
- A) "Coverage Analysis and Planning Tool for Computers and Humans Apart."
 B) "Completely Automated Public Turing test to tell Computers and Humans Apart."
 C) "Completely Applied Parallel Technologies for Communication and Hardware Apart."
 D) "Comparable Additional Protected Turing test to tell Computers and Humans Apart."
25. Which of the following best describes a wiki?
- A) A system that allows users to add information onto a website but does not change any pre-existing information
 B) A system that allows collaborative modification of its content and structure directly from the web browser
 C) A system that serves as a publically accessible personal journal for an individual
 D) A system that monitors the modification of content within a blog
26. The large-sized circles are drawn by
- A) straight bar B) big bar C) small bar D) lengthening bar
27. What is used for drawing non-circular curves which can not be drawn by compass?
- A) small compass B) protractor C) divider D) French curves
28. In the two sides of a hexagon are required to be vertical, the starting point should be on the end of the
- A) Inclined diameter B) Vertical diameter
 C) Horizontal diameter D) At the end of diameter inclined at 45°
29. In which of the following methods of projection system, top view is drawn below front elevation?
- A) fourth angle B) third angle C) first angle D) second angle
30. When a surface is parallel to a reference plane, its projection on that plane shows
- A) its size smaller than actual B) its size larger than actual
 C) its true shape and size D) its true shape but smaller size
31. Surface area of a cube is 864 m^2 . What is its volume?
- A) 1256 m^3 B) 1728 m^3 C) 256 m^3 D) 2197 m^3
32. Which method of development of surfaces is used in cones and pyramids?
- A) Parallel line method B) Radial line method
 C) Approximate method D) Triangulation method

33. The type of isometric projection is
 A) Orthographic projection B) Perspective projection
 C) Pictorial projection D) Oblique projection
34. Which of the following is not a horizontal curve?
 A) Simple curve B) Reverse curve C) Compound curve D) Summit curve
35. One radian angle is equal to ____
 A) 60° B) 57.29° C) 72° D) 45.26°
36. Which of the following is not a compression member?
 A) rafter B) boom C) tie D) strut
37. Bricks laid with length parallel to face of wall is called as
 A) Header B) Closer C) Stretcher D) Bond
38. Which kind of plaster is suitable for X-ray rooms?
 A) Barium plaster B) Gypsum plaster C) Acoustic plaster D) Granite silicon plaster
39. Which of the following water is chemically as well as bacteriologically pure?
 A) Potable water B) Distilled water C) Rain water D) Ground water
40. Which of the following is used as base in paints?
 A) Copper B) Magnesium C) Lead D) Aluminum
41. The nominal mix 1:1.5:3 of concrete is for which grade of concrete?
 A) M15 B) M20 C) M10 D) M25
42. Temporary hardness in water is caused by
 A) Sulphates of calcium B) Chlorides of calcium
 C) Nitrates of calcium D) Carbonates of calcium
43. When steel column and beam are connected by cleat angles on both sides of beam, then this connection is known as
 A) Framed connection B) Seated connection
 C) Rigid connection D) Flexible connection
44. In AutoCAD, the Ctrl+C key is used for
 A) Grid on/off B) Copy clip C) Re-do D) Drawing circle
45. Which of the following is the principle of septic tank?
 A) Anaerobic digestion B) Aerobic digestion
 C) Continuous flow D) Aeration system
46. Full form of the abbreviation WCS is
 A) Wrong coordinate system B) World coordinate system
 C) Western coordinate system D) Web CAD system
47. The command or term used for cutting corner straight is
 A) Fillet B) Chamfer C) Explode D) Polyline
48. The internal angle of an octagon is
 A) 30° B) 22.5° C) 45° D) 72°
49. Load acting per unit area is known as
 A) Strain B) Deflection C) Elastic modulus D) Stress

50. Which of the following is not a valid option in *Units* command?
A) Decimal B) Metric C) Architectural D) Meter
51. One of the following options is not covered under Circle command. Which is that option?
A) 3 Points B) Tan Tan Radius C) Tan Tan Centre D) Tan Tan Tan
52. If the radius of a sphere is made half, then its surface area will become
A) half B) double C) one-third D) one-fourth
53. The distance between two points with coordinates (3,0) and (0,4) will be
A) 6 B) 7 C) 5 D) 16
54. Survey which depicts natural features of the country is called as
A) Cadastral survey B) Topographic survey
C) Engineering survey D) Hydrographical survey
55. If a draftsman can plot a distance as small as 0.25 mm, and the scale of plotting is 1 in 10,000 then the distance of the field can be measured to the nearest:
A) 0.25 m B) 0.025 m C) 2.5 m D) 25.0 m
56. Stopping sight distance is always _____ overtaking sight distance.
A) equal to B) less than C) more than D) inversely proportional
57. Minimum packing space provided between two sleepers is
A) 250 to 300 mm B) 300 to 350 mm C) 350 to 400 mm D) 400 to 450 mm
58. What is the edge of roof running between the eaves and ridge called?
A) cleat B) verge C) purlin D) template
59. Generally, the cross-section of a gravity dam has the shape:
A) trapezium B) rectangle C) square D) parallelogram
60. The top of ground on which the foundation of road rests is called
A) Sub-grade B) Sole C) Base D) Wearing coat
61. Just below the bark in timber which part of the wood lies?
A) Pith B) Sap wood C) Cambium D) Lumber
62. The function of coarse aggregate in concrete is to act as
A) Filler B) Binding material C) Catalyst D) Admixture
63. Which is the major component in cement manufacturing?
A) limestone B) silica C) gypsum D) fly ash
64. Which instrument is used to plot offsets on F-line?
A) Plotting scale B) Compass C) Bit scale D) Protractor
65. An obtuse angle is
A) less than 90° B) less than 180° C) more than 90° D) more than 180°
66. Which of the following is used to locate the foot of perpendicular from an object on survey line or to set up a perpendicular from a known point on survey line?
A) Tape B) Alidade C) Cross-staff D) Chain

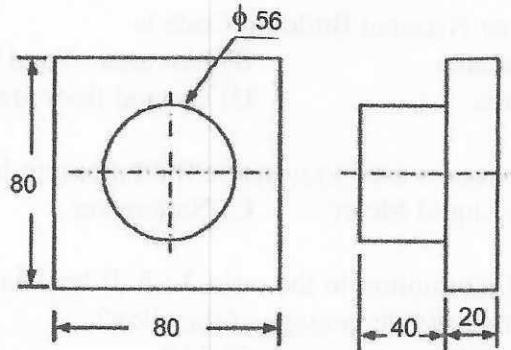
67. In surveying, theodolite is used for which of the following recording purposes
A) Linear measurement
B) Angular measurement
C) Magnetic meridian
D) Magnetic dip
68. Which is the most water-efficient irrigation system?
A) Surface
B) Flood
C) Drip
D) Sprinkler
69. Which of the following climates is most suitable for providing a courtyard in a building?
A) Warm and Humid
B) Hot and Dry
C) Cold and Humid
D) Coastal
70. The property by virtue of which a deformed body springs back to its original position after removing the external force is known as
A) Plasticity
B) Elasticity
C) Ductility
D) Tenacity
71. Floor area ratio (FAR) as per National Building Code is
A) Total built up area / Plot area
B) Plot area / Total built up area
C) Total floor area / Plot area
D) Ground floor area / Total built up area
72. Which of the following devices is used to measure fluid pressure in pipe flow?
A) Manometer
B) Liquid Meter
C) Nanometer
D) Hydrometer
73. An alloy contains lead and aluminium in the ratio 3 : 5. If lead has 15% impurity and aluminum 55%, what is the average impurity percentage of the alloy?
A) 30%
B) 40%
C) 22%
D) 35%
74. A right circular cone resting on horizontal plane on its base is cut by a section plane parallel to HP, bisecting its axis. The true shape of the section is
A) Parabola
B) Hyperbola
C) Ellipse
D) Circle
75. When a line is parallel to vertical plane and perpendicular to horizontal plane, one can get its true length in
A) Front view
B) Side view
C) Both side view and front view
D) Top view
76. Placing of a new foundation below an existing foundation is known as
A) Shorting
B) Underpinning
C) Strutting
D) Repairing
77. To construct one cubic meter of brick masonry, approximate number of bricks (size 20×10×10 cm) required is
A) 500
B) 1000
C) 750
D) 820
78. The indentation mark made on top of bricks for holding the mortar in masonry is called as
A) Depression
B) Frog
C) Key
D) Cavity
79. Which of the following joints is used in frames of timber doors and windows?
A) Dovetail joint
B) Lap joint
C) Mortise and tenon joint
D) Butt joint
80. In AutoCAD, this command is used to fill a drawn component by predefined or user drawn pattern.
A) zoom
B) hatch
C) scale
D) pline
81. Area 4.5 square metre will be equal to _____ square feet.
A) 52.4
B) 60.6
C) 40.5
D) 48.4

82. In the following triangle, $\cos\theta$ can be expressed as



- A) AC/BC B) AC/AB C) BC/AB D) $2(AC/AB)$

83. What will be the mass of the solid whose projections are shown below? Density of material is, $\rho = 10 \text{ g/cm}^3$ and $\pi = 22/7$. All dimensions in the figure are in mm.



- A) 965 g B) 2265 g C) 1565 g D) 3265 g

84. The height of a pole is $2\sqrt{3}$ metre and the length of the shadow of the pole is 2 metre, then the angle of elevation with horizontal of the sun is

- A) 30° B) 45° C) 60° D) 75°

85. The development of lateral surfaces of a pyramid consists of a number of _____

- A) squares B) triangles C) pentagons D) rectangles

86. What is the type of trap shown in figure?



- A) S-trap B) Q-trap C) P-trap D) D-trap

87. A point is 7 cm away from vertical plane and horizontal plane both, and 9 cm away from profile plane in first quadrant. Its projections are drawn on paper. What is the distance between front view and top view of the point?

- A) 14 cm B) 15 cm C) 16 cm D) 21 cm

88. The commands Copy, Erase, Trim, Extend, Break, etc. belong to which tool bar in AutoCAD?

- A) Draw toolbar B) Layers toolbar C) Style toolbar D) Modify toolbar

89. In contouring maps, the contour interval is

- A) Horizontal distance between two consecutive contour lines
 B) Vertical scale of map
 C) Vertical distance between levels of consecutive contour lines
 D) Difference between highest level and lowest level in the map

90. In case of cantilever beams and slabs, the tensile zone _____ the neutral axis.
 A) lies above B) lies below C) is at the level of D) does not exist above or below
91. The Rules and regulations framed by the government to regulate and control construction of buildings are known as
 A) Area usage rules B) Building rules
 C) Construction valuation code D) Building by-laws
92. Increase in water-cement ratio beyond recommended value in concrete causes
 A) no change in concrete strength B) increase in concrete strength
 C) reduction in concrete strength D) early setting of concrete
93. One hectare-meter (ha-m) is equal to volume of
 A) 1000 m³ B) 2500 m³ C) 5000 m³ D) 10000 m³
94. In residential buildings, Damp proof course (DPC) is provided at
 A) between water table and ground level B) at plinth level
 C) at ground level D) at windows sill level
95. For a given kerb length, maximum number of vehicles can be accommodated in which of the following parking systems?
 A) 90° parking B) 30° parking C) 45° parking D) Parallel parking
96. Which of the following methods is most suitable for carrying out contouring of hilly terrain?
 A) Squares method B) Tacheometric method C) Direct method D) Cross-section method
97. Which of the following is not considered while designing a foundation?
 A) Soil organisms B) Settlement condition of soil
 C) Bearing capacity of soil D) Ground water level
98. What does a series of closely spaced contour lines indicate?
 A) Ground having uniform slope B) Ground having gentle slope
 C) Curved surface D) Ground having steep slope
99. Which of the following causes the major loss of energy in the long pipes carrying water supply?
 A) Friction B) Gradual contraction and enlargement both
 C) Sudden contraction D) Sudden enlargement
100. What is the correct sequence of the temporary adjustment of dumpy level?
 A) Centering, leveling and setting B) Leveling, setting and centering
 C) Setting, centering and leveling D) Setting, leveling and centering

Chandigarh Housing Board
Post: JR. DRAFTSMAN (C)
Answer Key (A-Series) : 04.02.2023 (Morning)

Q.No.	Ans	Q.No.	Ans	Q.No.	Ans	Q.No.	Ans
1	C	26	D	51	C	76	B
2	D	27	D	52	D	77	A
3	D	28	B	53	C	78	B
4	A	29	C	54	B	79	C
5	B	30	C	55	C	80	B
6	B	31	B	56	B	81	D
7	C	32	B	57	B	82	C
8	A	33	C	58	B	83	B
9	C	34	D	59	A	84	C
10	D	35	B	60	A	85	B
11	C	36	C	61	B	86	C
12	C	37	C	62	A	87	A
13	B	38	A	63	A	88	D
14	A	39	B	64	C	89	C
15	B	40	C	65	C	90	A
16	D	41	B	66	C	91	D
17	C	42	D	67	B	92	C
18	C	43	A	68	C	93	D
19	B	44	B	69	B	94	B
20	A	45	A	70	B	95	A
21	A	46	B	71	C	96	B
22	C	47	B	72	A	97	A
23	D	48	C	73	B	98	D
24	B	49	D	74	D	99	A
25	B	50	D	75	C	100	C