

**Department of Urban Planning
(Architecture Wing)**

**POST: Junior Draftsman
Question Booklet & Answer Key
10.03.2024 (Sunday) Evening**

Directions (Q.No. 1 & Q.No. 3) Out of the four given options, choose the correct opposite of the words given below:

1. Imprecation
A) Bless B) Imprecise C) Precise D) Criticize
2. Meagre
A) Scantly B) Excessive C) Inadequate D) Exceptional
3. Mulish
A) Obedient B) Patronizing C) Docile D) Stubborn

Directions (Q.No. 4 & Q.No. 6) Out of the four given options, choose the correct synonym of the words given below:

4. Spot
A) Site B) Dot C) Ground D) Situation
5. Importunate
A) Clever B) Practical C) Persistent D) Irrelevant
6. Itinerant
A) Wandering B) Sedentary C) Quiet D) Vocal

Directions (Q.No. 7 & Q.No. 8) Choose the correct preposition, out of the four options, to be filled in the gaps of the following sentences:

7. Hari is ignorant _____ his mistake.
A) with B) of C) for D) at
8. Put _____ the fire.
A) upon B) out C) about D) off

Directions (Q.No. 9 & Q.No. 10) Out of the four options given below, choose and mark the expression that best expresses the meaning of the following idioms and phrases:

9. To fall in with.
A) to meet accidentally B) to be crazy about something
C) to be full of despair D) to be full of hope
10. To be above board :-
A) to criticize B) to show respect of others
C) to board a vehicle D) to be honest

Directions for (Q.No. 11 & 12) Read the pattern of letters/numbers/terms and find the missing term from the given alternatives:

11. 9, 27, 31, 155, 161, 1127, ?
A) 1135 B) 1288 C) 316 D) 2254
12. IAZ, KEB, ? , OOF, QUH
A) MDD B) MII C) MIO D) MID
13. If BRIGHTEN is written as HJSCMDSG. How is COMPLETE written in that code?
A) DSDKQNPD B) QNPDDSDK C) QNPDFUFM D) OLNBFUFM
14. If \div stands for greater than; \times stands for addition; $+$ stands for division; $-$ stands for equal to; $>$ stands for multiplication; $=$ stands for less than; $<$ stands for minus, then which of the following is correct?
A) $3 + 2 < 4 \div 6 > 3 \times 2$ B) $3 \times 2 < 4 \div 6 + 3 < 2$
C) $3 > 2 < 4 - 6 \times 3 \times 2$ D) $3 \times 2 \times 4 = 6 + 3 < 2$

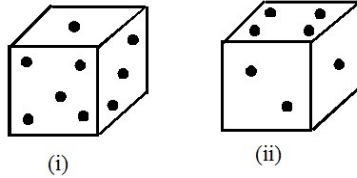
Directions for (Q.No. 15 & 16) P, Q, R, S, T, U, V and W are eight friends. They are sitting around a round table and having coffee. P is sitting between U and V. Q is sitting between W and T. R is sitting to the third left of V. W is sitting third right of S.

15. How many persons are sitting between R and S?
A) 2 B) 3 C) 4 D) 5
16. Which of the following is true?
A) U is sitting immediate right of R
B) U is sitting immediate left of P
C) There is only one friend between W and T
D) All of the above
17. At the end of a business conference, 10 people present shake hands with each other once. How many hand shakes will be there all together?
A) 20 B) 45 C) 55 D) 90
18. A person was asked to state his age in years. His reply was, 'take my age three years hence, multiply it by 3 and then subtract three times my age three years ago and you will know how old I am'. What was the age of the person?
A) 18 years B) 20 years C) 24 years D) 32 years
19. A clock seen through a mirror shows quarter past three. What is the correct time?
A) 9:45 B) 9:15 C) 8:45 D) 3:15
20. In a certain code language, 'lu ra de' means 'what was it'; 'mo nil' means 'you go'; 'nil pam ra' means 'you like it' and 'tok lu fo' means 'she was sick'. How will you write 'what you like' in that code?
A) nil ra lu B) pom nil ra C) pom ra lu D) de nil pam
21. 36 vehicles are parked in a parking lot in a single row. After the 1st car, there is one scooter, after 2nd car there are two scooters, after 3rd car there are three scooters and so on. Find out the number of scooters in the second half of the row.
A) 10 B) 12 C) 15 D) 17

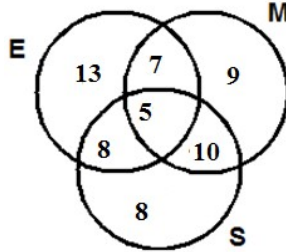
Directions for (Q.No. 22 & 23): All the given members belong to the same family. J is the brother of L. J is the only son of R. W is the father in law of L. D is the maternal grandfather of P, who is a male. Q is the only son of W. W is the grandfather of N and C is the daughter of N.

22. How L is related to C?
A) Mother B) Son C) Brother D) None of these
23. How is P related to N?
A) Son B) Mother C) Brother D) None of these
24. Ravi starts walking towards East from a point 'S' and after walking 15 m turns to his left and walks 10 m, again he walks 10 m turning to his left and finally walks 22 m turning to his left and reaches a point 'Q'. How far and in which direction is he from the point 'S'?
A) 15 m South B) 22 m South-East
C) 12 m South D) 13 m South-East
25. A painter has painted a cubical box with six different colours for different faces of the cube. Red face is between yellow and brown faces. Green face is adjacent to the silver face. Pink face is adjacent to the green face. Brown face is at the bottom. Silver and pink faces are opposite to each other. The face opposite to red will be :
A) Yellow B) Green C) Pink D) Silver
26. Select the option in which the words share the same relationship as that shared by the given pair of words:
Hive: Bee
A) Burrow : Hare B) Sty : Dog C) Eyrie : Bear D) Stable : Cow

27. Two positions of a dice are shown below. When there are two dots at the bottom, the number of dots at the top will be

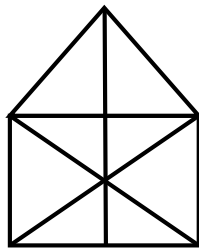


- A) 2 B) 3 C) 5 D) 6
28. 120 candidates appeared for examination in three subjects namely English (E), Maths (M) and Science (S). The number of candidates who failed in (E), (M) and (S) are shown in the diagram given below:

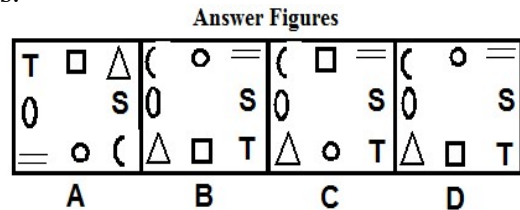
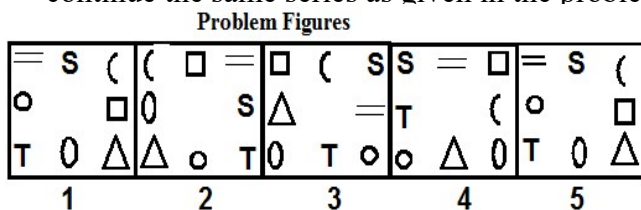


The number of candidates who failed in at least one subject is :

- A) 25 B) 30 C) 60 D) None of the above
29. How many triangles are there in the following figure?



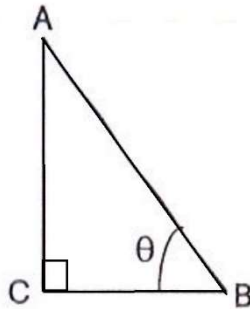
- A) 17 B) 16 C) 19 D) 21
30. There are two sets of figures namely the Problem figures containing five figures 1, 2, 3, 4, 5 and the answer figures A, B, C, D. You have to select one figure from the answer figure which will continue the same series as given in the problem figures.



31. The part of a building which transfers its load to the soil below is known as
 A) foundation B) ground floor C) basement D) superstructure
32. Masonry bond in which every course contains stretchers as well as headers is called
 A) English bond B) Flemish bond C) Double Flemish bond D) Dutch bond
33. How many standard bricks can be accommodated in 1 cubic meter of brick masonry?
 A) 350 B) 400 C) 500 D) 520
34. In masonry construction, bricks are normally placed with their frogs facing
 A) downwards B) upwards C) sideways D) depends on type of wall
35. Window which has its shutters opening and closing like that of doors is known as
 A) Bay window B) Corner window C) Swing window D) Casement window

36. Jamb is
A) exposed vertical face of door or window opening beside frame
B) bottom surface of a door or window opening
C) open space for the window or door
D) vertical cross wall face of a window or door opening which supports the frame
37. As per National Building Code, in a residential low-rise building, the minimum width for stairways is
A) 110 cm B) 90 cm C) 120 cm D) 150 cm
38. A half-turn staircase is called as
A) winder staircase B) spiral staircase
C) quarter landing staircase D) dog-legged staircase
39. If a building has fire resistance of more than 4 hours, then as per National Building Code of India, what is the category of the building based on fire resistance?
A) Type 1 B) Type 2 C) Type 3 D) Type 4
40. In architectural design, the contrast is
A) Absence of proportion B) Absence of rhythm
C) Absence of monotony D) Absence of balance
41. One radian angle converted to degrees is equal to _____.
A) 60° B) 57.29° C) 180° D) 45.26°
42. Area of a building excluding area occupied by its walls is known as
A) plinth area B) carpet area C) floor area D) plot area
43. The covering provided at the top face of a wall is commonly known as
A) cramp B) coping C) cornice D) corbel
44. As per NBC, the height of a bathroom in residential building should not be less than
A) 2.0 m B) 2.4 m C) 3.0 m D) 3.3 m
45. Steel gets its corrosion resistance from which of the following metals?
A) Vanadium B) Chromium C) Manganese D) Vanadium
46. The section obtained by the intersection of the right circular cone by a plane in different position relative to the axis of the cone are called
A) Ovals B) Circles C) Conics D) Parabola
47. In which of the orthographic projections, the plan is drawn below front view and left-hand side view comes on right-hand side of front view?
A) Fourth angle projection B) Third-angle projection
C) Second-angle projection D) First-angle projection
48. When a plane is parallel to a reference plane, then its projection on that reference plane will show
A) Its true length only and true shape
B) Its true width only and true shape
C) Its true length and width both, and true shape
D) Its true length and width both, and false shape
49. When the cutting (section) plane is parallel to HP or the ground, the true shape of the section will be seen in
A) Front view B) Left hand side view C) Top view D) Back-side view

50. In the isometric projection, the ratio of reduced dimensions to true dimensions is
 A) 1.552 B) 0.816 C) 0.750 D) 0.667
51. Which type of cement is more suitable for the construction of chemical plants and furnace?
 A) High alumina cement B) Expanding cement
 C) Rapid hardening cement D) Hydrophobic cement
52. The minimum period for removal of props to beams for a span of 6 m in formwork is
 A) 7 days B) 14 days C) 21 days D) 24 days
53. Which of the following factors are important for deciding orientation of a building?
 A) prevailing wind direction in the area
 B) walls and roof's exposure to sunlight
 C) extent to which sun rays reach into the verandah
 D) All of these
54. In the following right-angles triangle, $\tan\theta$ can be expressed as



- A) AC/BC B) AC/AB C) BC/AB D) $2(AC/AB)$
55. The development of lateral surfaces of an oblique prism consists of a number of _____
 A) squares B) parallelograms C) trapeziums D) rectangles
56. What is the type of trap shown in figure?



- A) S-trap B) Q-trap C) P-trap D) D-trap
57. A point is 6 cm away from vertical plane and horizontal plane both, and 10 cm away from profile plane in first quadrant. Its projections are drawn on sheet. What is the distance between front view and top view of the point?
 A) 14 cm B) 12 cm C) 16 cm D) 4 cm
58. What is the primary purpose of building climatology?
 A) Studying ancient architecture
 B) Analyzing climate patterns in urban areas
 C) Investigating geological formations
 D) Understanding climate of a given area
59. Which factor is NOT typically considered in building climatology studies?
 A) Temperature B) Wind speed C) Soil composition D) Humidity
60. Which of the following factors is crucial for preventing mold growth in buildings?
 A) High humidity B) Poor ventilation
 C) Adequate insulation D) Lack of sunlight exposure

61. In a cold climate, which design strategy is effective for maximizing passive solar heating in a building?
- A) Large windows on the north side
B) Minimal insulation
C) Small windows on the south side
D) Dark-colored roofing material
62. What is the color rendering index (CRI) in lighting design?
- A) The cost of installing lighting fixtures
B) The ability of a light source to accurately reveal colors of objects
C) The efficiency of a lighting system
D) The lifespan of a light bulb
63. What is the recommended color temperature for warm, inviting lighting in residential areas?
- A) 3500K
B) 5000K
C) 6500K
D) 2700K
64. What is the primary goal of daylighting in building design?
- A) Reducing energy consumption
B) Maximizing artificial lighting
C) Enhancing privacy
D) Improving ventilation
65. What is the purpose of the "floor area ratio" (FAR) as specified in the National Building Code?
- A) Determining the building height
B) Regulating the density of construction
C) Setting standards for materials used in construction
D) Assessing structural stability
66. In the context of fire safety, what does "means of egress" refer to in a building?
- A) Methods of construction
B) Fire detection systems
C) Exit routes and exit doors
D) Emergency lighting systems
67. What does the term "ergonomics" refer to in the context of interior design?
- A) The study of ancient architecture
B) The science of designing spaces to optimize human well-being and efficiency
C) The use of bold and vibrant colors
D) The arrangement of furniture for aesthetic appeal
68. Which element of design involves the actual feel or tactile quality of surfaces in a space?
- A) Color
B) Texture
C) Lighting
D) Pattern
69. A septic tank is
- A) Sedimentation tank
B) Digestion tank
C) Combination of sedimentation of digestion tank
D) Combination of sedimentation and aeration tank
70. What does the term "form follows function" mean in architectural design?
- A) The shape of a building is unrelated to its purpose
B) The function of a building determines its form or design
C) Aesthetic considerations always take precedence over functionality
D) Form and function are entirely independent in architectural design
71. What is the difference between 'Scale' command and 'Zoom' command?
- A) Scale is for object whereas Zoom is for entire plan
B) Scale can shrink or enlarge objects upto 10 times while Zoom has no limit
C) Scale changes the size of the object, while Zoom changes the visibility of the project
D) Both are same commands

72. From which toolbar, design centre palette can be opened?
A) Standard toolbar
B) Layer toolbar
C) Modify toolbar
D) Property toolbar
73. The representative fraction (RF) for a scale of 1 cm = 5 km will be equal to
A) 1:500
B) 1:5000
C) 1:50000
D) 1 : 500000
74. The ratio of length of large dashes to length of small dashes is normally kept as
A) 8:1 to 6:1
B) 6:1 to 2:1
C) 5:1 to 1:1
D) 6:1 to 4:1
75. In AutoCAD, an arc can be converted into circle with which of the following commands?
A) Join
B) Union
C) Complete
D) Finish
76. While using CAD, which of the following commands is used to draw contour lines?
A) Arc
B) Polyline
C) Draw
D) Spline
77. Which of the following is not a property of an object?
A) Hyperlink
B) Line-weight
C) Elevation
D) Measure
78. In AutoCAD, what is the purpose of the "Purge" command?
A) To delete selected objects
B) To clean and remove unused items from the drawing
C) To create a backup of the drawing
D) To undo the last operation
79. Which command is used to measure the distance between two points in a drawing?
A) Measure
B) Distance
C) DIMDIST
D) MEASUREDIST
80. What is the function of the "DWGCONVERT" command in AutoCAD?
A) To convert a drawing to a different file format
B) To convert units in the drawing
C) To convert text to polylines
D) To convert layers to blocks
81. What is the purpose of the "BATMAN" command in AutoCAD?
A) Manage block attributes
B) Create a bat file for batch processing
C) Adjust the background color of the drawing
D) Manage battery settings
82. How can you apply a gradient fill to an object in AutoCAD?
A) GRADIENT
B) HATCHGRADIENT
C) FILLGRADIENT
D) APPLYGRADIENT
83. What is the default method for specifying points in AutoCAD?
A) Cartesian coordinates (X, Y, Z)
B) Polar coordinates (distance, angle)
C) Relative coordinates (@X, @Y, @Z)
D) Spherical coordinates (r, θ , ϕ)
84. How can you undo the last operation in AutoCAD?
A) Ctrl + Z
B) Alt + U
C) Esc key
D) F9 key
85. The ratio between two adjacent sides of the drawing sheets is
A) 1: 2
B) 1: $\sqrt{2}$
C) 1: $\sqrt{3}$
D) 1: 2.414
86. The Indian Standard code IS-10714: 2001 covers the specifications of
A) Scales
B) Lines
C) Lettering
D) Projection methods
87. Which lines are used to indicate termination (end) of dimension lines?
A) Outlines
B) Leader lines
C) Extension lines
D) Dashed lines

88. A solid which has four equal faces each an equilateral triangle is
 A) Tetrahedron B) Hexahedron C) Octahedron D) Square pyramid
89. The maximum number of tangents that can be drawn to a circle from a point outside the circle is
 A) One B) Two C) Eight D) Infinite number
90. A right regular hexagonal prism is standing on HP on its base in front of VP, then its top view and front view will respectively look like
 A) Square and Hexagon B) Rectangle and Hexagon
 C) Hexagon and Rectangle D) Square and Rectangle
91. Which of the following is not a solid of revolution?
 A) Sphere B) Cone C) Cylinder D) Prism
92. In order to plot a specific portion of a drawing in AutoCAD, which option can be used in plot area panel of PLOT window?
 A) Display B) Window C) Limits D) Zone
93. Which of the following commands allows the draftsman to pick specific points in a drawing like end point, mid-point, tangent, etc. very precisely?
 A) Grid On B) Ortho C) Qselect D) Osnap
94. This command can be used to convert a polyline into separate lines:
 A) Join B) Trim C) Explore D) Explode
95. For creating multiple copies of an object at a regular interval in rows and / or columns, which command is commonly used?
 A) Mirror B) Array C) Multicopy D) Offset
96. What is the correct sequence to create a polyline with three connected line segments?
 A) PLINE > Specify start point > Specify next point > Repeat
 B) LINE > PLINE > Specify points
 C) POLYLINE > Specify start point > Specify end point > Close
 D) DRAW > POLYLINE > Define vertices
97. A Boolean operation that is used to select interfering region between solids,
 A) Union B) Intersect C) Subtract D) Overlap
98. How will you create a line representing length 15 units at an angle of 30 degrees with respect to the positive direction of the X-axis and the first point of the line is not at the origin?
 A) 30<15 B) 15<30 C) @30<15 D) @15<30
99. What will be length of a line drawn from coordinates (2, 4) to coordinates (7, 16)?
 A) 17 units B) 12 units C) 13 units D) 15 units
100. The 'Design Centre' is a
 A) drop-down menu B) dialogue box C) palette D) command to design circles

Urban Planning (Architecture wing)
Post : Junior Draftsman (Evening)
10-03-2024 (Sunday)

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