National Testing Agency

Question Paper Name :	JEE Main 2020 Paper 2A (B.Arch) Jan 6 Shift 2
Subject Name :	Paper 2A (B.Arch)
Creation Date :	2020-01-06 20:31:58
Duration :	180
Total Marks :	400

Paper 2A (B.Arch)

Group Id :	4050366

Mathematics

Section Number :	1
Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	100

Question Number : 1 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If $A = \{1, 2, 3, 4\}$, then the number of functions on the set A, which are **not** one - one, is :

Options :

1. 232

2. 240

3. 248

4. 256

Question Number : 2 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The sum of the values of x satisfying the equation, $\sqrt{x}\left(\sqrt{x}-4\right)-3\left|\sqrt{x}-2\right|+6=0$ $(x \geq 0)$, is :

Options :

1. 26

2. 25

3. 10

4. 8

Question Number : 3 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If m be the least value of $|z-3+i4|^2+|z-5-i2|^2$, $z\in\mathbb{C}$ attained at $z=z_0$, then the ordered pair $(|z_0|, m)$ is equal to :

Options :

1. $(\sqrt{13}, 10)$

2. $(\sqrt{17}, 20)$

3. $(\sqrt{17}, 10)$

4. $(\sqrt{13}, 20)$

Question Number : 4 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If for some $c < 0$, the quadratic equation, $2cx^2-2(2c-1)x+3c^2=0$ has two distinct real roots, $\frac{1}{a}$ and $\frac{1}{b}$, then the value of the determinant, $\begin{vmatrix} 1+a & 1 & 1 \\ 1 & 1+b & 1 \\ 1 & 1 & 1+c \end{vmatrix}$ is :

Options :

1. 2

2. 0

3. $\frac{4}{3}$

4. 1

Question Number : 5 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let $A = \begin{bmatrix} x & 2y \\ -1 & y \end{bmatrix}; x, y \in \mathbf{R}$.

If $AA^T = \begin{bmatrix} 1 & 0 \\ 0 & \alpha \end{bmatrix} (\alpha \in \mathbf{R})$, then $\alpha + y^2$ is equal to :

Options :

1. 1
2. $\sqrt{2} - 1$
3. 2
4. $\sqrt{2}$

Question Number : 6 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let S_n denote the sum of the first n terms of an A.P., $a_1, a_2, a_3, \ldots, a_n$. If $a_5 + a_9 = 1$ and $S_9 = 6$, then which one of the following is **not** true ?

Options :

1. $S_{13} = \frac{13}{2}$
2. $a_{13} = 0$
3. $a_6 + a_8 = 1$
4. $S_6 = \frac{19}{2}$

Question Number : 7 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If $\sum_{r=1}^{9} \left(\frac{r+3}{2^r}\right) {}^9C_r = \alpha\left(\frac{3}{2}\right)^9 + \beta$, then $\alpha + \beta$ is equal to :

Options :

1. 2

2. 9

3. 3

4. 6

Question Number : 8 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let a function, $f:(-1,3)\to \mathbf{R}$ be defined as $f(x)=\min\{x[x],\ |x[x]-2|+2\}$, where $[x]$ denotes the greatest integer $\le x$. Then f is :

Options :

1. neither continuous nor differentiable at exactly 3 points.

2. not continuous at two points and not differentiable at 3 points.

3. neither continuous nor differentiable at exactly two points.

4. not continuous at only one point and not differentiable at three points.

Question Number : 9 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

$\lim\limits_{x\to 1}\left\{\log_e\left(e^{x(x-1)}-e^{x(1-x)}\right)-\log_e(4x(x-1))\right\}$ is equal to :

Options :

1. 1

2. $-\log_e 2$

3. $-2\log_e 2$

4. $1-\log_e 2$

Question Number : 10 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The function $f(x)=e^{x+1}\,(4x^2-16x+11)$ is :

Options :

1. increasing in $\left(-\infty, -\frac{1}{2}\right) \cup \left(\frac{5}{2}, \infty\right)$

2. increasing in $(-\infty, -2) \cup (2, \infty)$

3. decreasing in $\left(-\infty, -\frac{5}{2}\right) \cup \left(\frac{1}{2}, \infty\right)$

4. decreasing in $\left(-\infty, \frac{1}{2}\right) \cup \left(\frac{5}{2}, \infty\right)$

Question Number : 11 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The area (in sq. units) of the region $\left\{(x, y) : \frac{1}{2} \le y \le \sin x,\ 0 \le x \le \pi\right\}$ is :

Options :

1. $\sqrt{3} - \frac{\pi}{3}$

2. $3 - \frac{\pi}{3}$

3. $3 - \frac{2\pi}{3}$

4. $\sqrt{3} - \frac{\pi}{6}$

Question Number : 12 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If $x = x(y)$ is the solution of the differential equation, $y\,dx - (x + 2y^2)\,dy = 0$, with $x(-\pi) = \pi^2$, then x is equal to :

Options :

1. $2y^2 - \pi^2$

2. $-2y^2 + 3\pi y$

3. $-y^2 - 2\pi y$

4. $2y^2 + \pi y$

Question Number : 13 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

A ray of light is projected from the origin at angle of 60° with the positive direction of x-axis towards the line, $y = 2$, which gets reflected from the point $(\alpha, 2)$. Then the distance of the reflected ray of light from the point $(2, 2)$ is :

Options :

1. $\sqrt{3} - 1$

2. $2\left(1 - \frac{1}{\sqrt{3}}\right)$

3. $3 - \sqrt{3}$

4. $1 - \frac{1}{\sqrt{3}}$

Question Number : 14 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let the ellipse, $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$, $a > b$, pass through the point $(2, 3)$ and have eccentricity equal to $\frac{1}{2}$. Then equation of the normal to this ellipse at $(2, 3)$ is :

Options :

1. $2y - x = 4$

2. $2x - y = 1$

3. $3x - y = 3$

4. $3x - 2y = 0$

Question Number : 15 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If a variable plane in 3-dimensional space moves in such a way that the sum of the reciprocals of its intercepts on the x and y-axes exceeds the reciprocal of its intercept on the z-axis by 2, then all such planes will pass through the point :

Options :

1. $\left(\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right)$

2. $\left(\frac{1}{2}, \frac{1}{2}, -\frac{1}{2}\right)$

3. $\left(\frac{1}{2}, -\frac{1}{2}, \frac{1}{2}\right)$

4. $\left(\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2}\right)$

Question Number : 16 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If the volume of a parallelopiped whose coterminous edges are $\vec{a}=\hat{i}+\hat{j}+2\hat{k}$, $\vec{b}=2\hat{i}+\lambda\hat{j}+\hat{k}$ and $\vec{c}=2\hat{i}+2\hat{j}+\lambda\hat{k}$ is 35 cu.m, then a value of $\vec{a}\cdot\vec{b}+\vec{b}\cdot\vec{c}-\vec{c}\cdot\vec{a}$ is:

Options :

1. 2
2. -14
3. -10
4. 22

Question Number : 17 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If $10\sin^4\alpha+15\cos^4\alpha=6$, $\alpha\in\left(-\frac{\pi}{2},\frac{\pi}{2}\right)$, then $27\,\text{cosec}^6\alpha+8\sec^6\alpha$ is equal to :

Options :

1. 280
2. 270
3. 250
4. 240

Question Number : 18 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

A bag contains 6 red balls and 10 green balls. 3 balls are drawn from it one by one randomly without replacement. If the 3rd drawn ball is red, then the probability that the first two drawn balls are green is :

Options :

1. 3/7

2. 3/8

3. 9/56

4. 9/49

Question Number : 19 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let the data $4, 10, x, y, 27$ be in the increasing order. If the median of the data is 18 and its mean deviation about mean is 7.6, then the mean of this data is :

Options :

1. 15.5

2. 16

3. 16.5

4. 17

Question Number : 20 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which of the following is not equivalent to $\sim p \wedge q$?

Options :

1. $\sim(p \vee \sim q)$

2. $\sim p \rightarrow \sim q$

3. $\sim (q \rightarrow p)$

4. $\sim p \wedge (\sim p \rightarrow q)$

Question Number : 21 Question Type : SA Correct Marks : 4 Wrong Marks : 0

If the total number of ways in which 8-digit numbers can be formed by using all the digits 0, 1, 2, 3, 4, 5, 7, 9 such that no two even digits appear together is (5!)k, then k is equal to _____.

Question Number : 22 Question Type : SA Correct Marks : 4 Wrong Marks : 0

Let $f(x) = \begin{cases} |x-3| & , \text{ if } x < -1 \\ 3x+4 & , \text{ if } x \geq -1 \end{cases}$,

$g(x) = x^2 - bx - 2$ $(x \in \mathbf{R})$ and b is a real constant. If gof is continuous at $x = -1$, then b is equal to _____.

Question Number : 23 Question Type : SA Correct Marks : 4 Wrong Marks : 0

If $\int e^{2x}(\cos x + 7\sin x)\,dx = e^{2x}g(x) + c$, where c is a constant of integration, then $g(0) + g\left(\frac{\pi}{2}\right)$ is equal to _____.

Question Number : 24 Question Type : SA Correct Marks : 4 Wrong Marks : 0

If the line joining the points $(-1, 2, 5)$ and $(3, 4, -10)$ intersects the xy-plane at the point (x, y, z), then $\frac{y}{x}$ is equal to _____.

Question Number : 25 Question Type : SA Correct Marks : 4 Wrong Marks : 0

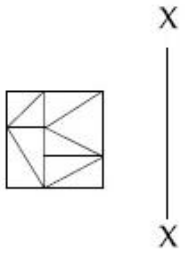
Let $a, b \in \mathbf{R}$ and $a > 0$. If the tangent at the point (2, 2) to the circle $x^2 + y^2 = 8$ touches the parabola $y^2 = 4a(x-b)$, then $b - a$ is equal to _____.

Aptitude Test

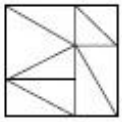
Section Number : 2
Number of Questions : 50
Number of Questions to be attempted : 50
Section Marks : 200

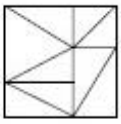
Question Number : 26 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

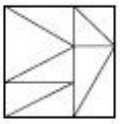
Which one of the answer figures is the correct mirror image of the problem figure with respect to X – X ?



Options :

1. 

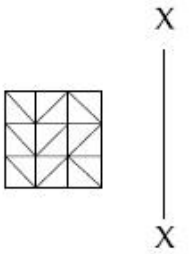
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3. 

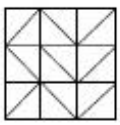
4. 

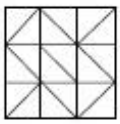
Question Number : 27 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

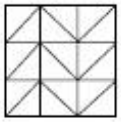
Which one of the answer figures is the correct mirror image of the problem figure with respect to X – X ?

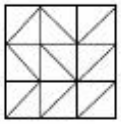


Options :

1. 

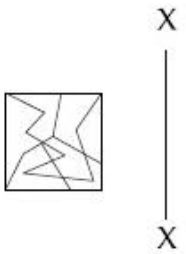
2. 

3. 

4. 

Question Number : 28 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which one of the answer figures is the correct mirror image of the problem figure with respect to X – X ?



Options :

1. 

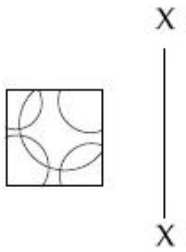
2. 

3. 

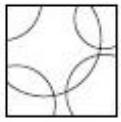
4. 

Question Number : 29 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which one of the answer figures is the correct mirror image of the problem figure with respect to X – X ?



Options :

1. 

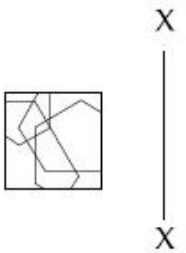
2. 

3. 

4. 

Question Number : 30 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which one of the answer figures is the correct mirror image of the problem figure with respect to X – X ?



Options :

1. 

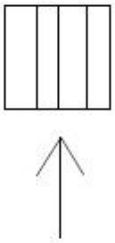
2. 

3. 

4. 

Question Number : 31 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The problem figure shows the top view of an object. Identify the correct elevation from amongst the answer figures looking in the direction of the arrow.



Options :

1. 

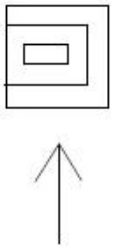
2. 

3. 

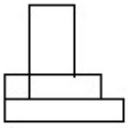
4. 

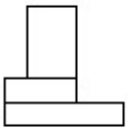
Question Number : 32 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

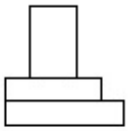
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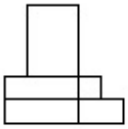


Options :

1. 

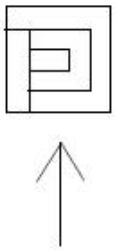
2. 

3. 

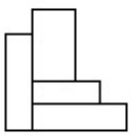
4. 

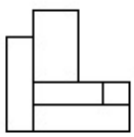
Question Number : 33 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

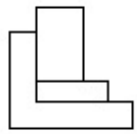
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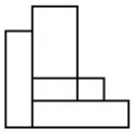


Options :

1. 

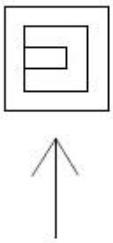
2. 

3. 

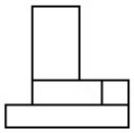
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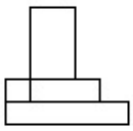
Question Number : 34 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

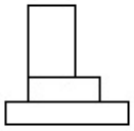
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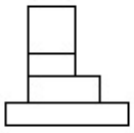


Options :

1. 

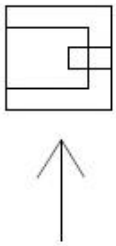
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3. 

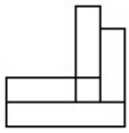
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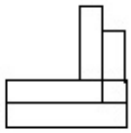
Question Number : 35 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

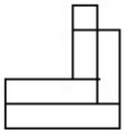
The problem figure shows the top view of an object. Identify the correct elevation from amongst the answer figures looking in the direction of the arrow.

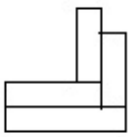


Options :

1. 

2. 

3. 

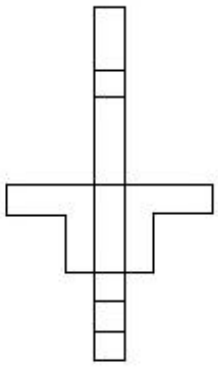
4. 

Question Number : 36 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

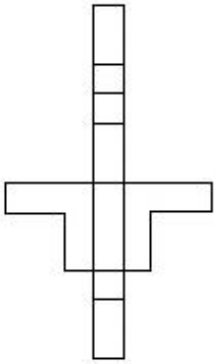
The 3 - D figure shows the view of an object. Identify the correct view when the figure is opened up, from amongst the answer figures.



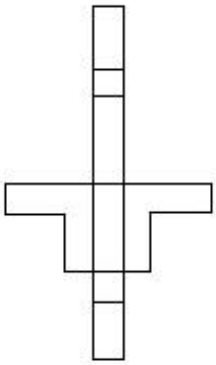
Options :

1. 

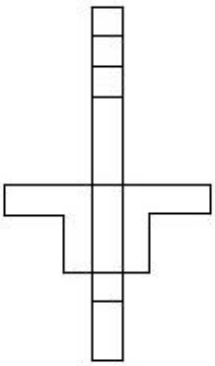
2.



3.



4.



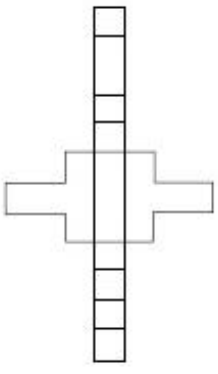
Question Number : 37 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The 3 - D figure shows the view of an object. Identify the correct view when the figure is opened up, from amongst the answer figures.

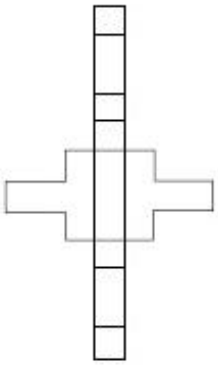


Options :

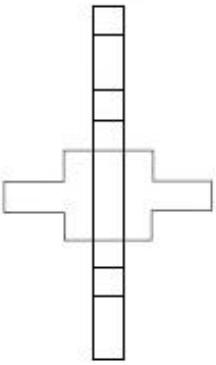
1.



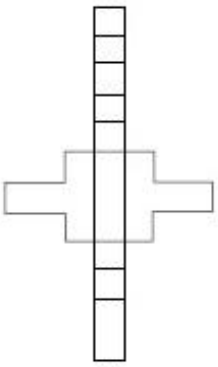
2.



3.

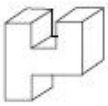


4.

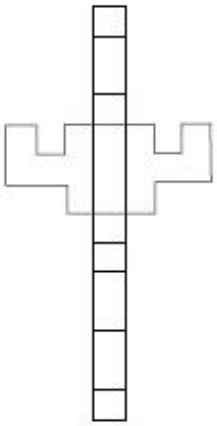


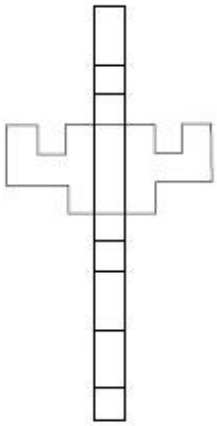
Question Number : 38 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

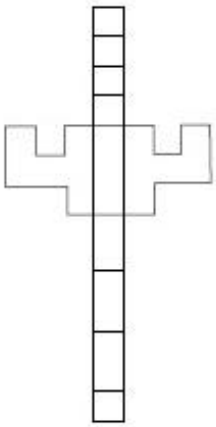
The 3 - D figure shows the view of an object. Identify the correct view when the figure is opened up, from amongst the answer figures.

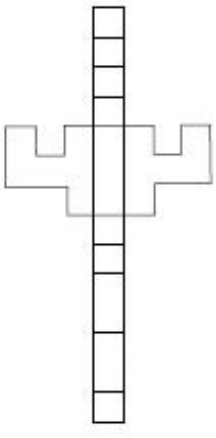


Options :

1. 

2. 

3. 

4. 

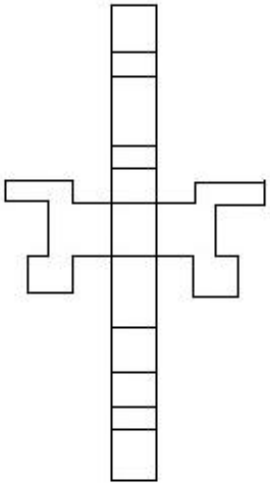
Question Number : 39 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The 3 - D figure shows the view of an object. Identify the correct view when the figure is opened up, from amongst the answer figures.

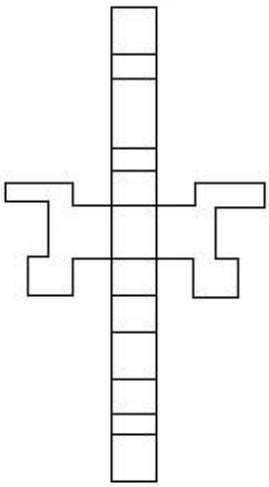


Options :

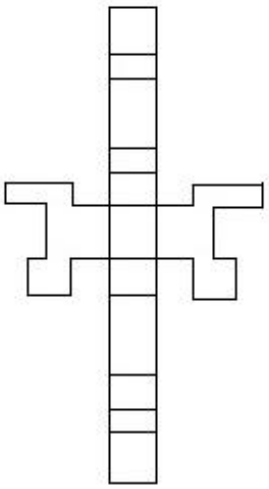
1.



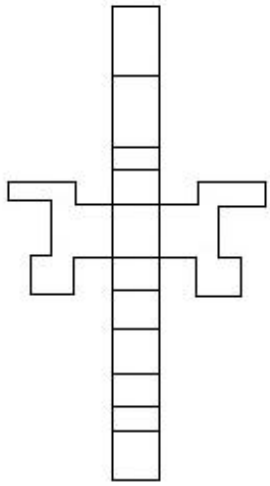
2.



3.

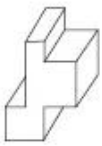


4.



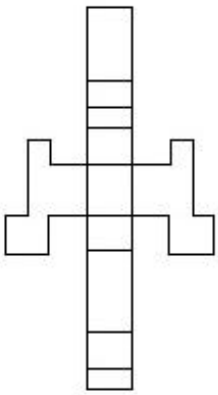
Question Number : 40 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The 3 - D figure shows the view of an object. Identify the correct view when the figure is opened up, from amongst the answer figures.

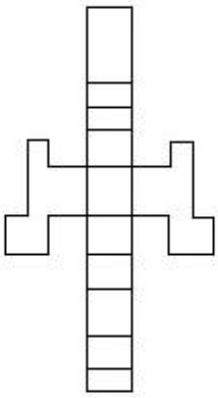


Options :

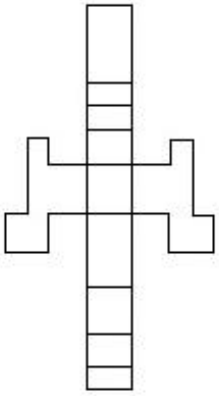
1.



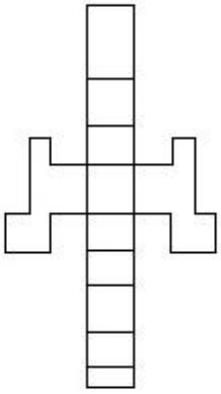
2.



3.

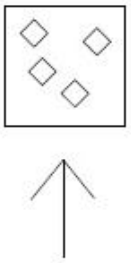


4.



Question Number : 41 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The problem figure shows the top view of objects. Looking in the direction of the arrow, identify the correct elevation, from amongst the answer figures.

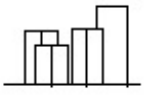


Options :

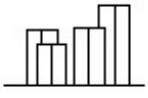
1.



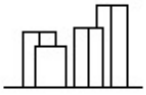
2.



3.

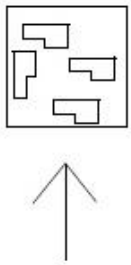


4.

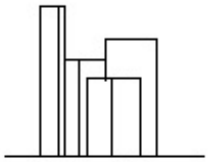


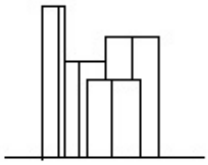
Question Number : 42 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

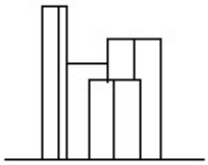
The problem figure shows the top view of objects. Looking in the direction of the arrow, identify the correct elevation, from amongst the answer figures.

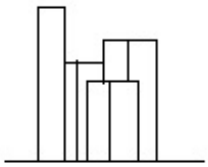


Options :

1. 

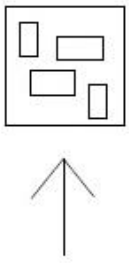
2. 

3. 

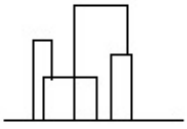
4. 

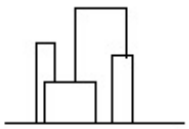
Question Number : 43 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

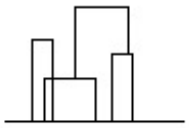
The problem figure shows the top view of objects. Looking in the direction of the arrow, identify the correct elevation, from amongst the answer figures.

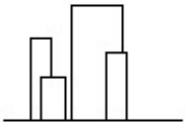


Options :

1. 

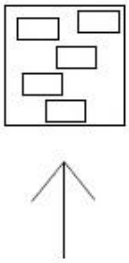
2. 

3. 

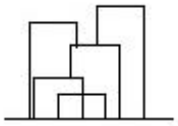
4. 

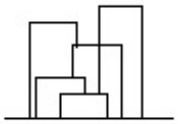
Question Number : 44 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

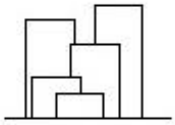
The problem figure shows the top view of objects. Looking in the direction of the arrow, identify the correct elevation, from amongst the answer figures.

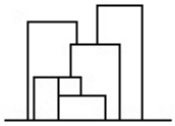


Options :

1. 

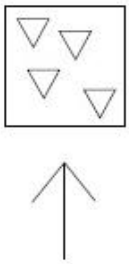
2. 

3. 

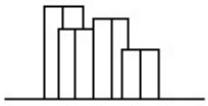
4. 

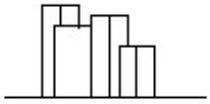
Question Number : 45 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

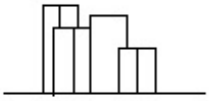
The problem figure shows the top view of objects. Looking in the direction of the arrow, identify the correct elevation, from amongst the answer figures.

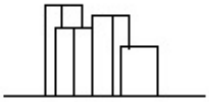


Options :

1. 

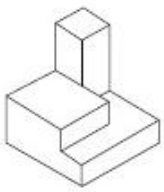
2. 

3. 

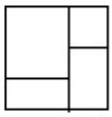
4. 

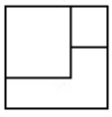
Question Number : 46 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

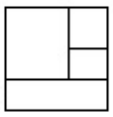
The 3 – D figure shows the view of an object. Identify the correct top view from amongst the answer figures.

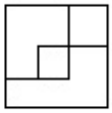


Options :

1. 

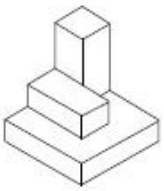
2. 

3. 

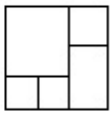
4. 

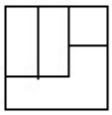
Question Number : 47 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

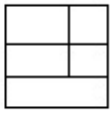
The 3 – D figure shows the view of an object. Identify the correct top view from amongst the answer figures.



Options :

1. 

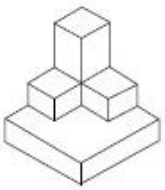
2. 

3. 

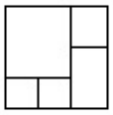
4. 

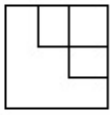
Question Number : 48 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

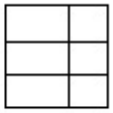
The 3 – D figure shows the view of an object. Identify the correct top view from amongst the answer figures.

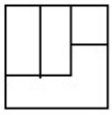


Options :

1. 

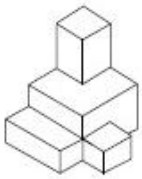
2. 

3. 

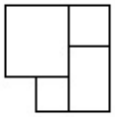
4. 

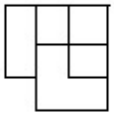
Question Number : 49 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

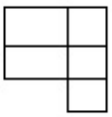
The 3 – D figure shows the view of an object. Identify the correct top view from amongst the answer figures.

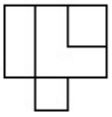


Options :

1. 

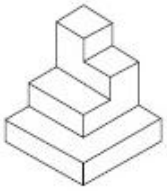
2. 

3. 

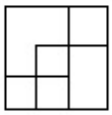
4. 

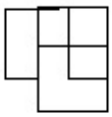
Question Number : 50 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The 3 – D figure shows the view of an object. Identify the correct top view from amongst the answer figures.

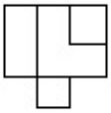


Options :

1. 

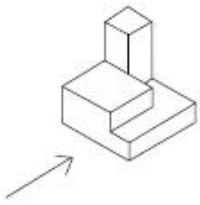
2. 

3. 

4. 

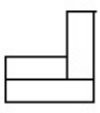
Question Number : 51 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

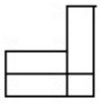
The 3 – D figure shows the view of an object. Identify the correct view in the direction of the arrow, from amongst the answer figures.

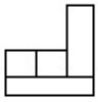


Options :

1. 

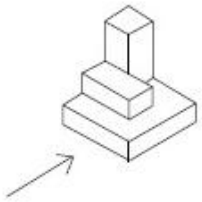
2. 

3. 

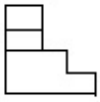
4. 

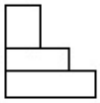
Question Number : 52 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

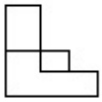
The 3 – D figure shows the view of an object. Identify the correct view in the direction of the arrow, from amongst the answer figures.

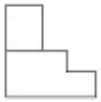


Options :

1. 

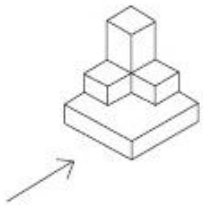
2. 

3. 

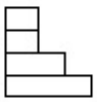
4. 

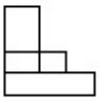
Question Number : 53 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

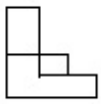
The 3 – D figure shows the view of an object. Identify the correct view in the direction of the arrow, from amongst the answer figures.

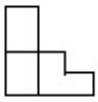


Options :

1. 

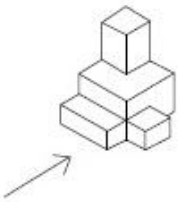
2. 

3. 

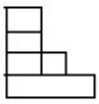
4. 

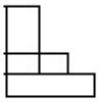
Question Number : 54 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

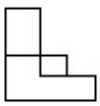
The 3 – D figure shows the view of an object. Identify the correct view in the direction of the arrow, from amongst the answer figures.

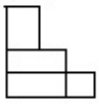


Options :

1. 

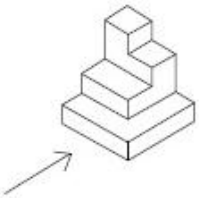
2. 

3. 

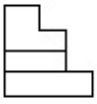
4. 

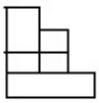
Question Number : 55 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

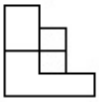
The 3 – D figure shows the view of an object. Identify the correct view in the direction of the arrow, from amongst the answer figures.

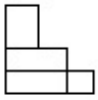


Options :

1. 

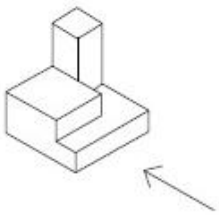
2. 

3. 

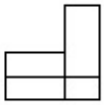
4. 

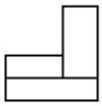
Question Number : 56 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

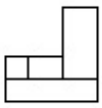
The 3 – D figure shows the view of an object. Identify the correct view in the direction of the arrow, from amongst the answer figures.

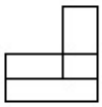


Options :

1. 

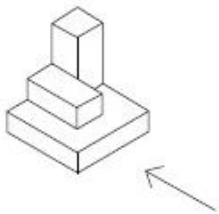
2. 

3. 

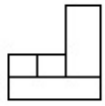
4. 

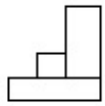
Question Number : 57 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

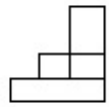
The 3 – D figure shows the view of an object. Identify the correct view in the direction of the arrow, from amongst the answer figures.

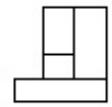


Options :

1. 

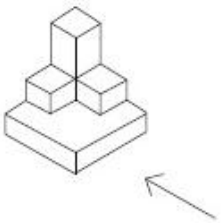
2. 

3. 

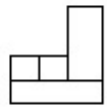
4. 

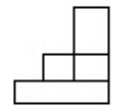
Question Number : 58 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

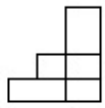
The 3 – D figure shows the view of an object. Identify the correct view in the direction of the arrow, from amongst the answer figures.

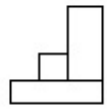


Options :

1. 

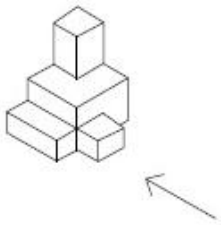
2. 

3. 

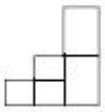
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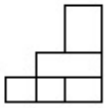
Question Number : 59 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

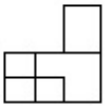
The 3 – D figure shows the view of an object. Identify the correct view in the direction of the arrow, from amongst the answer figures.

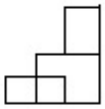


Options :

1. 

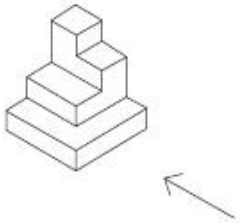
2. 

3. 

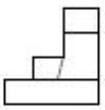
4. 

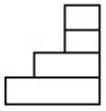
Question Number : 60 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

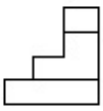
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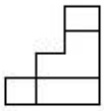


Options :

1. 

2. 

3. 

4. 

Question Number : 61 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Buckingham Palace is the Residence of which one of the following ?

Options :

1. Queen of England

2. King of Netherlands

3. King of Prussia

4. King of Nepal

Question Number : 62 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

In the Northern Hemisphere the winter sun rises from which one of the following directions ?

Options :

1. North East

2. North West

3. South East

4. South West

Question Number : 63 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which one of the following is a purpose for installing false ceilings ?

Options :

1. Supporting the walls

2. Making the building water proof

3. Making the space acoustically effective

4. Making the building fire proof

Question Number : 64 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What amongst the following is the thickness of a two brick wall ?

Options :

1. 18″

2. 20″

3. 16″

4. 22″

Question Number : 65 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Where from among the following is the famous St. Peters located ?

Options :

1. Denmark

2. Norway

3. Rome

4. Venice

Question Number : 66 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

In which State in India are the large Tea Gardens located ?

Options :

1. Punjab

2. Uttar Pradesh

3. Kerala

4. Odisha

Question Number : 67 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Where from the following is the National Gallery of Modern Art located ?

Options :

1. Bangalore

2. Lucknow

3. New Delhi

4. Mysore

Question Number : 68 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which one of the following is a secondary color ?

Options :

1. Green

2. Red

3. Yellow

4. Blue

Question Number : 69 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which one of the following is considered to be a calming color ?

Options :

1. Red
2. Orange
3. Green
4. Blue

Question Number : 70 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What is the texture of sand-paper ?

Options :

1. Coarse
2. Glossy
3. Smooth
4. Shiny

Question Number : 71 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What is the purpose of a chimney in a building ?

Options :

1. To give strength to a building
2. To hold the building up
3. To take out the smoke from a fire place
4. To make the building water proof

Question Number : 72 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What among the following would be the ideal material for flooring of a steel factory ?

Options :

1. Wood

2. Tiles

3. Granite

4. Steel

Question Number : 73 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Who was the architect of the LIC Building in Connaught Place, New Delhi ?

Options :

1. Raj Rewal

2. Charles Correa

3. Louis Kahn

4. Zaha Hadid

Question Number : 74 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Who was the architect of the glass pyramid at the Louvre Paris ?

Options :

1. Frank Lloyd Wright

2. Walter Gropius

3. I.M. Pei

4. Charles Correa

Question Number : 75 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Who amongst the following is an architect?

Options :

1. Geoffery Bawa

2. Sharmila Tagore

3. Louis Armstrong

4. Donald Trump

Drawing

Section Number : 3
Number of Questions : 2
Number of Questions to be attempted : 2
Section Marks : 100

Question Number : 76 Question Type : SUBJECTIVE Correct Marks : 50 Wrong Marks : 0

In the space provided for the answer of this question, draw an aesthetic composition appropriate to this space using only equilateral triangles. There is no restriction to numbers, sizes, placement and directions of these shapes. Color this composition so that it becomes visually exciting.

Question Number : 77 Question Type : SUBJECTIVE Correct Marks : 50 Wrong Marks : 0

Draw from imagination a mother cooking in the kitchen.

OR

Draw from imagination a beautiful building.

OR

Draw from memory the face of one of your parent.