National Testing Agency

Question Paper Name :	JEE Main 2025 Paper 2B (B.Planning) Jan 30 Shift 2
Subject Name :	Paper 2B (B.Planning)
Duration :	180
Total Marks :	400

Paper 2B (B.Planning)

Mathematics Section A

Section Number :	1
Number of Questions :	20
Number of Questions to be attempted :	20
Section Marks :	80

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

Let A = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12}. Let R be a relation on A defined by xRy if and only if $2x = 3y$. Let l and m be the minimum number of elements required to be added in R to make it reflexive and symmetric relations, respectively. Then l + m is equal to :

Options :

1. 13

2. 14

3. 15

4. 16

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

If the domain of the function $f(x)=\frac{1}{\log_{10}(1-2x)}+\sqrt{2x+1}$ is $[\alpha, \beta)-\{0\}$, then $20\,(\alpha^2+\beta^2)$ equals :

Options :

1. 8

2. 10

3. 12

4. 13

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

If $\sqrt{-24-10i}=\alpha+i\beta$, $i=\sqrt{-1}$, $\alpha, \beta \in \mathbf{R}$, then $\alpha^2+\beta^2$ is equal to :

Options :

1. 22

2. 24

3. 26

4. 29

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

The product of all real solutions of the equation $\left(3+2\sqrt{2}\right)^{x^4-15}+\left(3-2\sqrt{2}\right)^{x^4-15}=6$ is :

Options :

1. $4\sqrt{14}$

2. 14

3. $2\sqrt{14}$

4. 18

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

If the system of equations $x+2y+3az=4$, $2x+3y+4z=1$, $3x+7y+2z=b$ has infinitely many solutions, then $b-40a$ is equals to :

Options :

1. 4

2. 1

3. 2

4. 3

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

Let a, b, c be positive real numbers such that a, 7, c, b are in an arithmetic progression. If $ab=3(a+b)$, then the largest value of b is :

Options :

1. $9-\sqrt{2}$

2. $9-3\sqrt{2}$

3. $9+3\sqrt{2}$

4. $9+6\sqrt{2}$

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

If there are 19 and 16 points on two distinct parallel lines L_1 and L_2, respectively, then the total number of triangles that can be formed using these points as vertices, is :

Options :

1. 4983

2. 4997

3. 5016

4. 5049

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

If the mean of the frequency distribution

Variable (x_i)	1	3	4	7	9	Total
Frequency (f_i)	1	a	b	3	1	10

is 5, then its variance is :

Options :

1. 5

2. 5.1

3. 5.2

4. 5.3

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

In a question paper containing 10 quesions, A can solve 70% of the questions and B can solve 50% of the questions. The probability, that none of A and B will be able to solve the question, selected at random from the paper, is :

Options :

1. $\frac{3}{10}$

2. $\frac{3}{20}$

3. $\frac{1}{5}$

4. $\frac{2}{5}$

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

Let the line $y=x+3$ intersect the parabola $x^2=4y$ at the points A and B. If F is the focus of the parabola, then the area of triangle AFB is :

Options :

1. 4

2. 6

3. 8

4. 12

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

Let A $(3, 3\sqrt{3})$, B (6, 0) and C (α, β) be the vertices of an equilateral triangle. Let its incentre be D, and P and Q be the feet of perpendiculars drawn from the point D on AC and BC, respectively. Then the area of quadrilateral CPDQ is :

Options :

1. $2\sqrt{3}$

2. $3\sqrt{3}$

3. $6\sqrt{3}$

4. $8\sqrt{3}$

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

Let $E : \frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$, a > b be an ellipse of eccentricity $\frac{1}{\sqrt{3}}$. If the distance between the foci of E is 4, then the length of its latus rectum is :

Options :

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

2. $\frac{6\sqrt{3}}{3}$

3. $\frac{8\sqrt{3}}{3}$

4. $\frac{10\sqrt{3}}{3}$

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

Let a circle of radius 3 pass through the origin O and meet the coordinate axes at the points A and B. Then the locus of the centroid of the triangle AOB is :

Options :

1. $x^2 + y^2 = 1$

2. $x^2 + y^2 = 4$

3. $3x^2+3y^2=4$

4. $x^2+y^2=12$

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

The length of the perpendicular from the point (1, 2, 3) on the line $\frac{x-6}{3}=\frac{y-7}{2}=\frac{z-7}{-2}$ is :

Options :

1. 5

2. 6

3. 4

4. 7

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

Let L_1 be the line that passes through the point (1, 2, -4) and be perpendicular to the two lines $\frac{x-8}{3}=\frac{y+19}{-16}=\frac{z-10}{7}$ and $\frac{x-15}{3}=\frac{y-29}{8}=\frac{z-5}{-5}$. If L_2 is the line $\vec{r}=7\hat{i}-6\hat{k}+\lambda\left(\hat{i}+2\hat{j}+2\hat{k}\right)$, $\lambda\in\mathbf{R}$, then an angle between L_1 and L_2 is equal to :

Options :

1. $\frac{\pi}{6}$

2. $\frac{\pi}{12}$

3. $\cos^{-1}\left(\frac{4}{5}\right)$

4. $\cos^{-1}\left(\frac{20}{21}\right)$

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

Let f be a differentiable non-zero function and $3\int_0^x f(t)\,dt=2\left(f(x)\right)^3$. Then $\int_0^1 \frac{3\left(f(x)\right)^4}{\sqrt{1+\left(f(x)\right)^{12}}}\,dx$ is equal to :

Options :

1. $\log_e\left(\sqrt{2}+2\right)$

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

3. $\log_e\left(1+\sqrt{2}\right)$

4. $\log_e\left(3-\sqrt{2}\right)$

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

Let $f(x)=\sum_{r=1}^{10}\cot^{-1}\left(1-(x+r)+(x+r)^2\right), x\geq 0$. Then $\lim_{x\to\infty}\left(\tan\left(f(x)\right)+\sec^2\left(f(x)\right)\right)$ is :

Options :

1. 0

2. 1

3. 2

4. not defined

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

The area of the region, enclosed between the curves $y=\cos x$ and $y=|\cos x|$ for $0 \leq x \leq 3\pi$, is :

Options :

1. 3

2. 5

3. 6

4. 12

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

If $\int_4^9 \frac{x-\sqrt{x}}{x(x-1)}\,dx=\alpha$, then e^{α} is equal to :

Options :

1. 9/4

2. 16/9

3. 4/9

4. 4/3

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

If the function $f(x)$ defined by $f(x)=\begin{cases}\dfrac{\log_e(1+5x)-\log_e(1-2x)}{x}, & x\neq 0\\ l, & x=0\end{cases}$

is continuous at $x=0$, then the value of l is :

Options :

1. 3

2. 2

3. 5

4. 7

Mathematics Section B

Section Number : 2
Number of Questions : 5
Number of Questions to be attempted : 5
Section Marks : 20

Question Number : 21 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let $A=\begin{bmatrix}1&2&3\\0&2&3\\0&0&1\end{bmatrix}$ and let P be a 3×3 matrix. If $AP=\begin{bmatrix}1&0&1\\1&1&0\\0&1&1\end{bmatrix}$ and $\begin{bmatrix}1&0&2\end{bmatrix}P\begin{bmatrix}1\\0\\2\end{bmatrix}=[k]_{1\times 1}$,

then k is equal to _____.

Question Number : 22 Question Type : SA Correct Marks : 4 Wrong Marks : 1

If $\left({}^{10}C_1\right)^2+2\left({}^{10}C_2\right)^2+\ldots+10\left({}^{10}C_{10}\right)^2=m\left({}^{n}C_m\right)$, then $m+n$ equals _____.

Question Number : 23 Question Type : SA Correct Marks : 4 Wrong Marks : 1

If $\sum_{x=1}^{n^2}\sqrt{\left(\left(x\cos\left(\cot^{-1}x\right)+\sin\left(\cot^{-1}x\right)\right)^2-1\right)}=An^4+Bn^2$, then 2 (A + B) equals _____.

Question Number : 24 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let $\vec{a}=2\hat{i}+\hat{j}-\hat{k}$ and $\vec{b}=3\hat{i}+2\hat{j}+4\hat{k}$. Let for some $\lambda,\ \mu\in\mathbf{R}$, a vector $\vec{c}=\lambda\vec{a}+\mu\vec{b}$. If $\vec{a}\cdot\vec{c}=16$ and

$\vec{b}\times\vec{c}=-12\hat{i}+22\hat{j}-2\hat{k}$, then $|\vec{c}|^2$ equals _____.

Question Number : 25 Question Type : SA Correct Marks : 4 Wrong Marks : 1

If the differential equation for the family of circles passing through the points (19, 0) and (−19, 0) is $2xy\,dx+(\alpha x^2+\beta y^2+\gamma)dy=0$, then $\alpha+\beta+\gamma$ is equal to _____.

Aptitude Test

Section Number : 3
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

Structure which is designed to look impressive and wonderful from a far distance, has a :

Options :

1. Micro scale

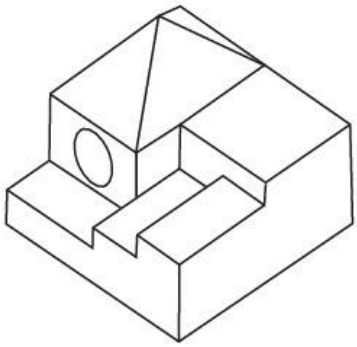
2. Human scale

3. Monumental scale

4. Nano scale

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

The question fig. shows the 3D view of an object. Identify the correct number of visible surfaces.



Options :

1. 11

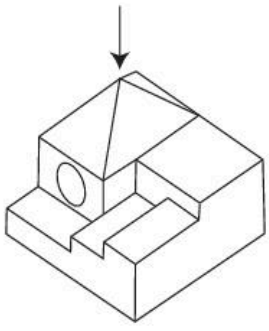
2. 14

3. 12

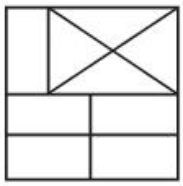
4. 13

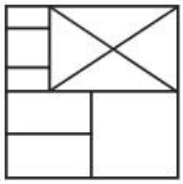
Question Number : 28 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

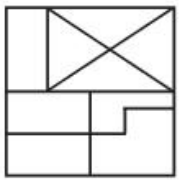
The question figure shows the 3D view of an object. Identify the correct view looking in the direction of arrow.

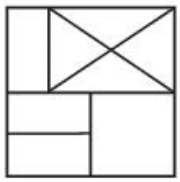


Options :

1. 

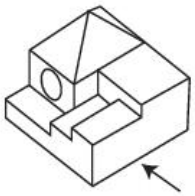
2. 

3. 

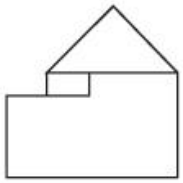
4. 

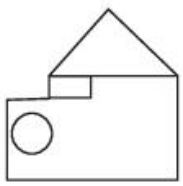
Question Number : 29 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

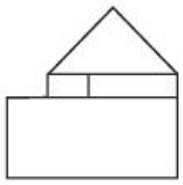
The question figure shows the 3D view of an object. Identify the correct view looking in the direction of arrow.

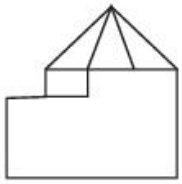


Options :

1. 

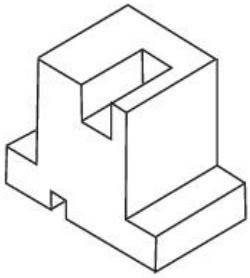
2. 

3. 

4. 

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

The question figure shows the 3D view of an object. Identify the correct Number of visible surfaces.



Options :

1. 9

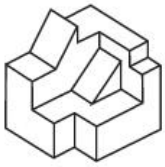
2. 10

3. 11

4. 12

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

The question figure shows the 3D view of an object. Identify the correct number of visible surfaces.



Options :

1. 13

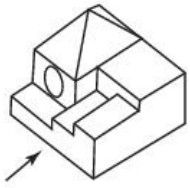
2. 14

3. 15

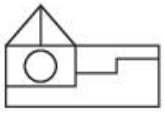
4. 18

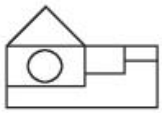
Question Number : 32 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

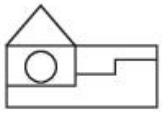
The question figure shows the 3D view of an object. Looking in the direction of arrow identify the correct view.

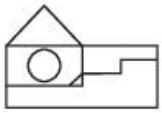


Options :

1. 

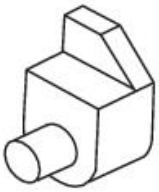
2. 

3. 

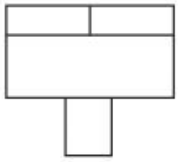
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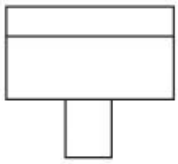
Question Number : 33 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

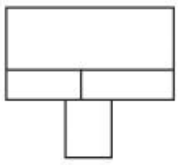
The question figure shows the 3D view of an object. Identify the correct top view.

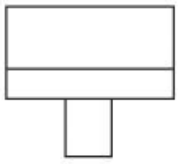


Options :

1. 

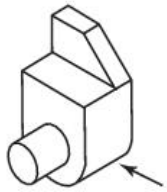
2. 

3. 

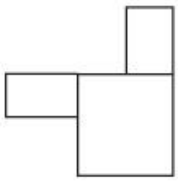
4. 

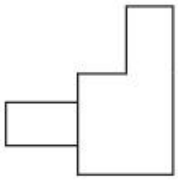
Question Number : 34 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

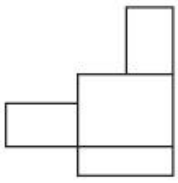
The question figure shows the 3D view of an object. Identify the correct view looking in the direction of arrow.

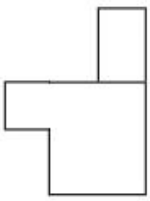


Options :

1. 

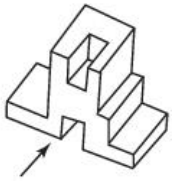
2. 

3. 

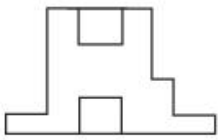
4. 

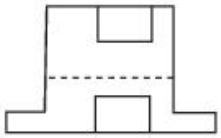
Question Number : 35 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

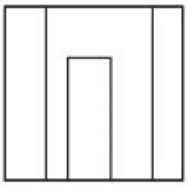
The question figure shows the 3D view of an object. Identify the correct view of the object looking in the direction of arrow.

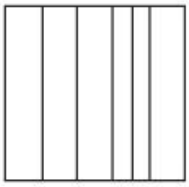


Options :

1. 

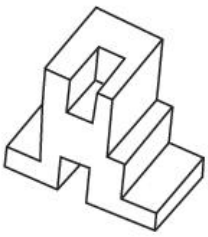
2. 

3. 

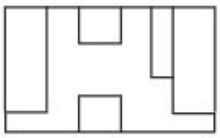
4. 

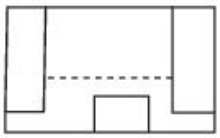
Question Number : 36 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

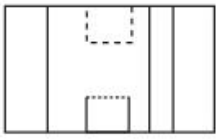
In a question figure a 3D object is given. Identify the correct top view of the object amongst the answer figures.

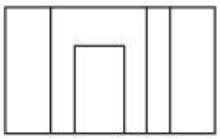


Options :

1. 

2. 

3. 

4. 

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

How many edges does a cube have ?

Options :

1. 8

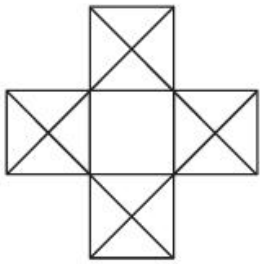
2. 10

3. 6

4. 12

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

How many squares are there in the given figure ?



Options :

1. 5

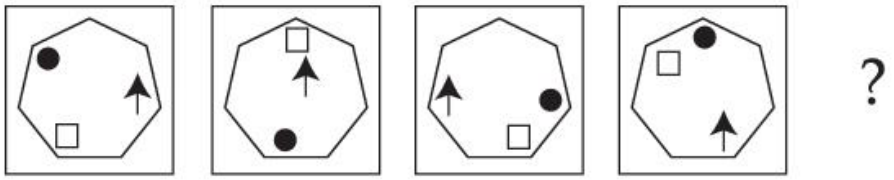
2. 8

3. 6

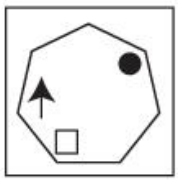
4. 7

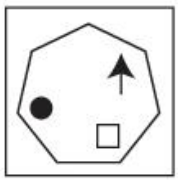
Question Number : 39 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

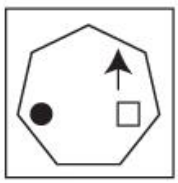
Which of the given shapes would complete the sequence ?

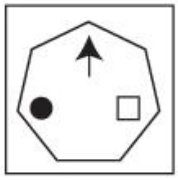


Options :

1. 

2. 

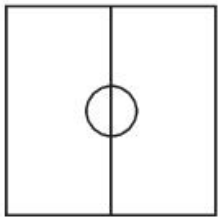
3. 

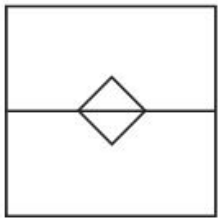
4. 

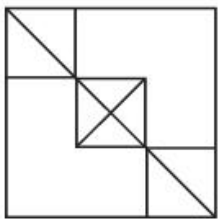
Question Number : 40 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

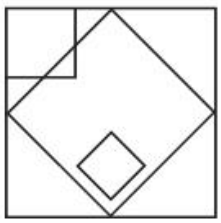
Identify the figure which is odd from rest :

Options :

1. 

2. 

3. 

4. 

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

Identify the mirror image of the given word along X-X' axis :



Options :

1. 

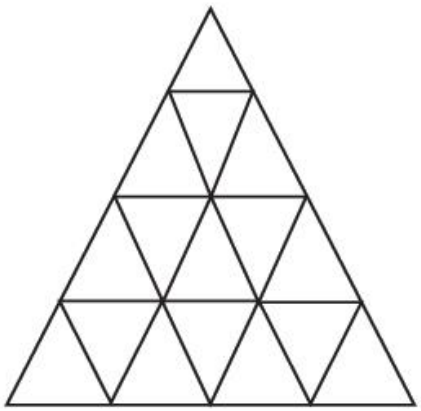
2. 

3. GNILHGILYAD

4. GNILHGILYAD

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

What is the total number of triangles in the given diagram ?



Options :

1. 27

2. 26

3. 23

4. 22

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

Choose the appropriate option which most closely resembles the water image of the given word 'FROG' :

Options :

1. GORF

2. ꟻꓤOꓒ

3. ꟻꓤOꓒ

4. ꓒOꓤꟻ

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

Identify the mirror image of the given word along X-X' axis :



Options :

1. ENTABLATURE

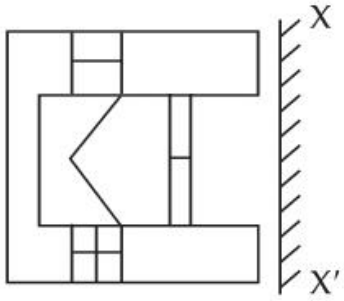
2. ƎЯUTAJBATNƎ

3. EЯUTALBATNƎ

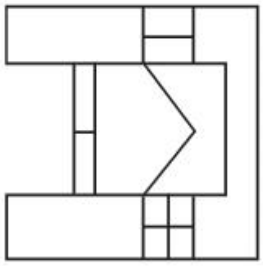
4. ƎЯUTALBATNƎ

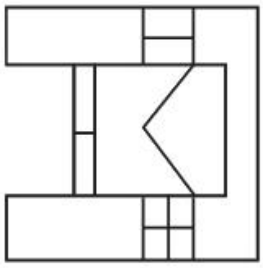
Question Number : 45 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

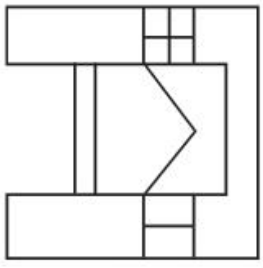
Identify the correct mirror image of the given figure along X-X′ axis :

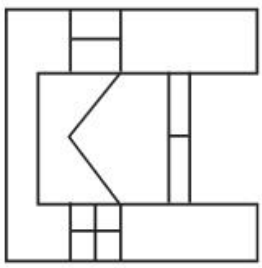


Options :

1. 

2. 

3. 

4. 

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

Which among the following is an excellent hardwood (timber) for furniture ?

Options :

1. Royal Palm

2. Rose

3. Shisham

4. Accacia

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

Which colour scheme is typically considered to be calming and is often used in bedrooms and bathrooms ?

Options :

1. Warm colours (red, orange)

2. Cool colours (blue, green)

3. Triadic colours (green, orange and purple)

4. Primary colour (red, blue, yellow)

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

Bharat Mandapam is designed by which architecture firm ?

Options :

1. Archohm

2. Arcop

3. C.P. Kukreja

4. Hafeez Contractor

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

Gable : Roof : : Pier : _____.

Options :

1. Door

2. Column

3. Railing

4. Floor

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

In which architectural style are you most likely to find "chhatris" as decorative elements ?

Options :

1. Gothic

2. Baroque

3. Mughal

4. Renaissance

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

Which of these is a well known proportion that is aesthetically pleasing and used in architecture ?

Options :

1. Golden ratio

2. Newton's constant

3. Moore's law

4. Symmetry ratio

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

The primary function of a 'roof truss' is _____.

Choose the appropriate answer from the following :

Options :

1. To increase the interior space

2. To act as a wind breaker

3. To provide thermal comfort

4. To support the weight of the roof

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

Hawa Mahal located at Jaipur was built by :

Options :

1. Maharaja Jai Singh - II

2. Ushtad Ahmad Lahouri

3. Maharaja Sawai Pratap Singh

4. Ustad Khalil

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

The textural appearance of "exposed aggregate" concrete is created by :

Options :

1. Polishing the surface

2. Adding artificial pigments

3. Using high grade cement

4. Using stones in the mix

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

The term 'International style' is used to describe architecture that :

Options :

1. Is derived from ancient Greek architecture

2. Focuses on decoration and ornamentation

3. Focuses on functionality and simple geometric forms

4. Uses traditional building materials

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

Which of the following finishing materials is known for its textured surface and is commonly used in facades ?

Options :

1. Glass

2. Stucco

3. Steel

4. Timber

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

Central Vista Redevelopment Project was designed by which architect ?

Options :

1. B.V. Doshi

2. Bimal Patel

3. Charles Correa

4. U.C. Jain

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

Guggenheim Museum located in Manhattam, New York city was designed by :

Options :

1. Gustave Eiffel

2. Frank Llyod Wright

3. John Russel Pope

4. Tom Wright

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

Which organisation maintains the registration of Architects in India ?

Options :

1. Indian Institute of Architects

2. Council of Architecture

3. Council of Indian Architects

4. Institute of Architect of India

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

'Fenestration' in architecture refers to :

Options :

1. The layout of columns

2. Materials used for roofing

3. Windows and openings

4. Construction of walls

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

National Gallery of Art was designed by whom ?

Options :

1. I.M. Pie

2. Louis XII

3. F.L. Wright

4. Le Corbusier

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

What does 'ISI' stands for ?

Options :

1. International Standard of Instruments

2. Indian Standards of Isometrics

3. International Standards of Isometrics

4. Indian Standards Institute

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

The famous 'Parthenon' is located in which city ?

Options :

1. Cairo

2. Athens

3. Paris

4. Rome

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

'PRASAD' scheme stands for :

Options :

1. Perception and Rejuvenation And Spiritual Association Drive

2. Pilgrimage Rejuvenation and Spiritual Augmented Drive

3. Pilgimage Regeneration and Social Association Drive

4. Perception and Reform Analysis in social and Demography

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

Match **List - I** with **List - II**.

	List - I		**List - II**
(A)	B.V. Doshi, India	(I)	Pritzker Award in 2004
(B)	Philip Johnson, United States	(II)	Pritzker Award in 1995
(C)	Tadao Ando, Japan	(III)	Pritzker Award in 2018
(D)	Zaha Hadid, Iraq	(IV)	Pritzker Award in 1979

Choose the **correct** answer from the options given below :

Options :

1. (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

2. (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

3. (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

4. (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

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

Match **List - I** with **List - II**.

	List - I		**List - II**
(A)	Colosseum	(I)	Temple dedicated to the Goddess Athena
(B)	Parthenon	(II)	Church, Italy
(C)	Milan Cathedral	(III)	Roman goddess of freedom
(D)	Statue of Liberty	(IV)	Roman Amphitheatre

Choose the **correct** answer from the options given below :

Options :

1. (A)-(III), (B)-(I), (C)-(II), (D)-(IV)

2. (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

3. (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

4. (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

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

Match **List - I** with **List - II**.

	List - I		**List - II**
(A)	Abacus	(I)	Vertical member of railing
(B)	Bollard	(II)	Top part of column
(C)	Baluster	(III)	Tapered upright structure rising from roof
(D)	Pinnacle	(IV)	Short free standing column

Choose the **correct** answer from the options given below :

Options :

1. (A)-(III), (B)-(I), (C)-(II), (D)-(IV)

2. (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

3. (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

4. (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

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

Match **List - I** with **List - II**.

	List - I		**List - II**
(A)	Matt	(I)	Silk like gloss
(B)	Satin	(II)	Highest level of gloss
(C)	Semi-gloss	(III)	More gloss than a satin finish
(D)	Glossy	(IV)	Lowest level of gloss

Choose the **correct** answer from the options given below :

Options :

1. (A)-(II), (B)-(I), (C)-(IV), (D)-(III)

2. (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

3. (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

4. (A)-(IV), (B)-(I), (C)-(III), (D)-(II)

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

Given below are two statements :

Statement (I) : Human scale in architecture refers to the design dimensions that are comfortable for human interaction.

Statement (II) : Monumental scale is most suitable for intimate and cozy spaces.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

Options :

1. Both **Statement I** and **Statement II** are correct

2. Both **Statement I** and **Statement II** are incorrect

3. **Statement I** is correct but **Statement II** is incorrect

4. **Statement I** is incorrect but **Statement II** is correct

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

Given below are two statements :

Statement (I) : A colour triangle is basically an arrangement of colors within a triangle, based on the additive combination of three primary colours at its corners. Where primary colours are yellow, red and blue.

Statement (II) : Secondary colours on the other hand are created when equal amounts of any two primary colours are mixed together.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

Options :

1. Both **Statement I** and **Statement II** are correct

2. Both **Statement I** and **Statement II** are incorrect

3. **Statement I** is correct but **Statement II** is incorrect

4. **Statement I** is incorrect but **Statement II** is correct

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

Given below are two statements :

Statement (I) : Due to sun, we have day and night, seasons, rains, winds, plants and human life.

Statement (II) : The lattitude of a place is an angle of the place with reference to the plane passing through the equator on earth.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

Options :

1. Both **Statement I** and **Statement II** are correct

2. Both **Statement I** and **Statement II** are incorrect

3. **Statement I** is correct but **Statement II** is incorrect

4. **Statement I** is incorrect but **Statement II** is correct

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

Given below are two statements :

Statement (I) : Precipitation is the collective term that indicates the prevailing humidity conditions.

Statement (II) : Precipitation is measured by rain gauges and expressed in millimetres per time unit.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

Options :

1. Both **Statement I** and **Statement II** are correct

2. Both **Statement I** and **Statement II** are incorrect

3. **Statement I** is correct but **Statement II** is incorrect

4. **Statement I** is incorrect but **Statement II** is correct

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

Identify the temple style of India represented in the given figure :



Options :

1. Nagara style

2. Dravidian style

3. Orissan style

4. Vesara style

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

Identify the famous building in the given picture :



Options :

1. Qutub Minar

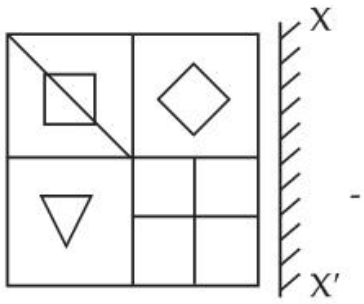
2. Jama Masjid

3. Taj Mahal

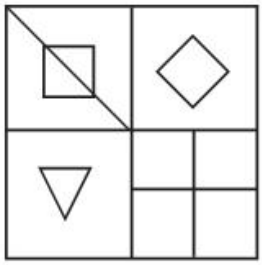
4. Hagia Sophia

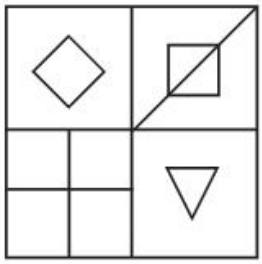
Question Number : 75 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

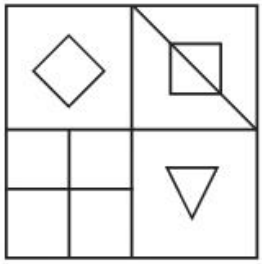
Identify the correct mirror image of the given figure along X-X′ axis :

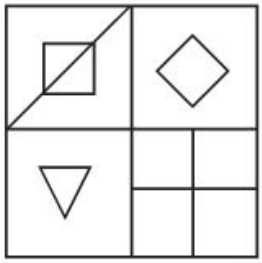


Options :

1. 

2. 

3. 

4. 

Planning

Section Number : 4
Number of Questions : 25
Number of Questions to be attempted : 25
Section Marks : 100

Question Number : 76 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The main focus/goal of “Sustainable Urban Planning” is :

Options :

1. Reducing the density of population

2. Maximizing land use for development

3. Increasing automobile dependency

4. Reducing environmental impact and promoting green spaces

Question Number : 77 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

“_____” is used to visualize and plan land use patterns in the city.

Options :

1. Building code

2. Master plan

3. Figure Ground Plan

4. Site Analysis diagram

Question Number : 78 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

‘H.I.G’ stands for :

Options :

1. Hierarchy Income Group

2. Housing Income Group

3. High Income Group

4. Homogeneous Income Group

Question Number : 79 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Following are the population density of 03-different sectors of a city :
Sector-A = 150 persons/Ha.
Sector-B = 230 persons/Ha.
Sector-C = 400 persons/Ha.
Find out the 'Avg. population density' of the city.

Options :

1. 226.66 persons/Ha.

2. 260 persons/Ha.

3. 326.66 persons/Ha.

4. 390 persons/Ha.

Question Number : 80 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Document published by government for the development of a 'city' for next 20 years is called :

Options :

1. Future Plan

2. Growth Plan

3. Master Plan

4. Site Plan

Question Number : 81 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement (I) : Agora was a part of the towns of 'Indus Valley Civilisation'.

Statement (II) : Towns of 'Indus Valley Civilisation' are laid with road network and sewer lines.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

Options :

1. Both **Statement I** and **Statement II** are true

2. Both **Statement I** and **Statement II** are false

3. **Statement I** is true but **Statement II** is false

4. **Statement I** is false but **Statement II** is true

Question Number : 82 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement (I) : Without control over development and use of land and building, no planning will be successful.

Statement (II) : Development controls are statutory in nature and the planning/development authority has the power to punish the defaulters.

In the light of the above statements, choose the **correct** answer from the options given below :

Options :

1. Both **Statement I** and **Statement II** are true

2. Both **Statement I** and **Statement II** are false

3. **Statement I** is true but **Statement II** is false

4. **Statement I** is false but **Statement II** is true

Question Number : 83 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement (I) : The urban climate will have deviations from the regional macro climate.

Statement (II) : The manmade environment impacts the micro climate of a particular area which deviates from the macro climate of the region.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

Options :

1. Both **Statement I** and **Statement II** are true

2. Both **Statement I** and **Statement II** are false

3. **Statement I** is true but **Statement II** is false

4. **Statement I** is false but **Statement II** is true

Question Number : 84 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Name the 'Administrative Capital' of Punjab and Haryana :

Options :

1. New Delhi

2. Chandigarh

3. Amritsar

4. Gurugram

Question Number : 85 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The “green belt” in urban planning is _____.

Options :

1. An area of urban sprawl

2. A highway running through the city

3. An area of protected green space to prevent urban sprawl

4. A zone of industrial development

Question Number : 86 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Name the person responsible for ‘Green Revolution’ in India :

Options :

1. Lal Bahadur Shastri

2. A.P.J. Abdul Kalam

3. M.S. Swaminathan

4. Subramaniyam Swamy

Question Number : 87 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Who stated “Man needs his difficulties because they are necessary to enjoy success.”

Options :

1. Swami Vivekananda

2. Mother Teresa

3. A.P.J. Abdul kalam

4. Mahatma Gandhi

Question Number : 88 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match the correct term for ‘Sthapati’ :

Options :

1. Geographer

2. Engineer

3. Doctor

4. Planner

Question Number : 89 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the full form of ‘WHO’ :

Options :

1. World Health Organisation

2. World Health Opinion

3. World Human Organisation

4. World Human Orientation

Question Number : 90 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

A person starts moving from point ‘A’ towards ‘East’ direction for 100 meters. Then he moves in ‘South’ direction for 50 meters. Again he changes the direction and moves 100 meters towards ‘West’ direction. At last he moves 50 meters further in ‘North’ direction. Identify the 2D shape he has formed after finishing this journey :

Options :

1. A triangle

2. A square

3. A rectangle

4. A circle

Question Number : 91 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match **List - I** with **List - II**.

List - I		**List - II**	
(A)	Radial City	(I)	Chandigarh
(B)	Linear City	(II)	Kolkata
(C)	Organic City	(III)	New Delhi
(D)	Grid Iron Pattern City	(IV)	Varanasi

Choose the **correct** answer from the options given below :

Options :

1. (A)-(I), (B)-(III), (C)-(IV), (D)-(II)

2. (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

3. (A)-(II), (B)-(IV), (C)-(III), (D)-(I)

4. (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

Question Number : 92 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match **List - I** with **List - II**.

List - I (States)		**List - II (Reserve forest)**	
(A)	Kerala	(I)	Kaziranga
(B)	Assam	(II)	Pench
(C)	Rajasthan	(III)	Periyar
(D)	Madhya Pradesh	(IV)	RanthamBor

Choose the **correct** answer from the options given below :

Options :

1. (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

2. (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

3. (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

4. (A)-(IV), (B)-(II), (C)-(I), (D)-(III)

Question Number : 93 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match **List - I** with **List - II**.

List - I		**List - II**	
(A)	Jordan	(I)	Burj-Al-Arab
(B)	Cairo	(II)	Hanging Gardens
(C)	Babylon	(III)	Pyramids
(D)	UAE	(IV)	Dead Sea

Choose the **correct** answer from the options given below :

Options :

1. (A)-(III), (B)-(I), (C)-(II), (D)-(IV)

2. (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

3. (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

4. (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

Question Number : 94 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match **List - I** with **List - II**.

List - I		**List - II**	
(A)	Housing area	(I)	Ecological zone
(B)	Shopping mall/area	(II)	Industrial zone
(C)	Urban forest	(III)	Residential zone
(D)	Factory/workshop	(IV)	Commercial zone

Choose the **correct** answer from the options given below :

Options :

1. (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

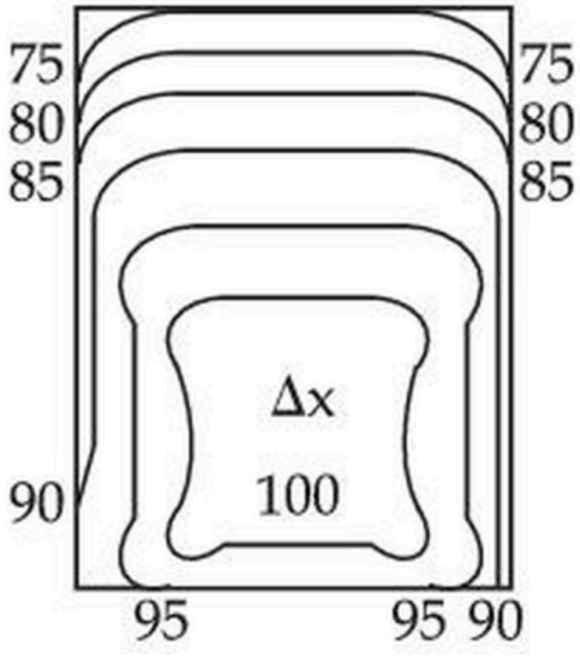
2. (A)-(II), (B)-(I), (C)-(IV), (D)-(III)

3. (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

4. (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

Question Number : 95 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

In the given diagram the 'Δx' is located in a _____.



Options :

1. Plain land

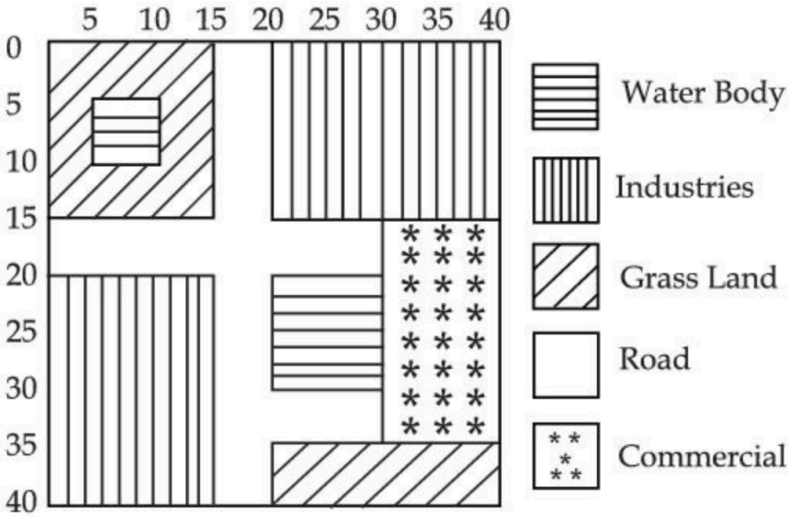
2. Ridge

3. River Valley

4. Steep slope

Question Number : 96 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What is the percentage area covered by water bodies in the given plan ?



Options :

1. 7.81%

2. 7.25%

3. 5.10%

4. 9.15%

Question Number : 97 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What is the full form of 'D.R.D.O.' ?

Options :

1. Defence Redevelopment Design Office

2. Defence Research & Development Organisation

3. Development of Research of Defence Objects

4. Defence Research Design Organisation

Question Number : 98 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which of the following cities started as a port during the colonial period and is presently the financial capital of India ?

Options :

1. Kolkata

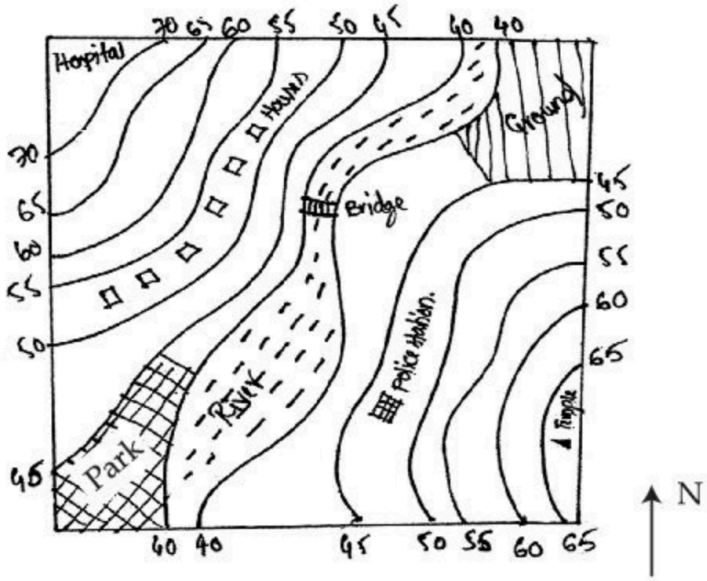
2. Chennai

3. Mumbai

4. Goa

Question Number : 99 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

In the given diagram hospital was planned to be built on the contour level 65 and the ground was proposed at the contour level 45, houses were planned on the eastern part of the river on the contour level 40, where the existing ground is located. If a person plans to travel from ground to temple and return to the house, what is the level of the existing park ?



Options :

1. 40-45

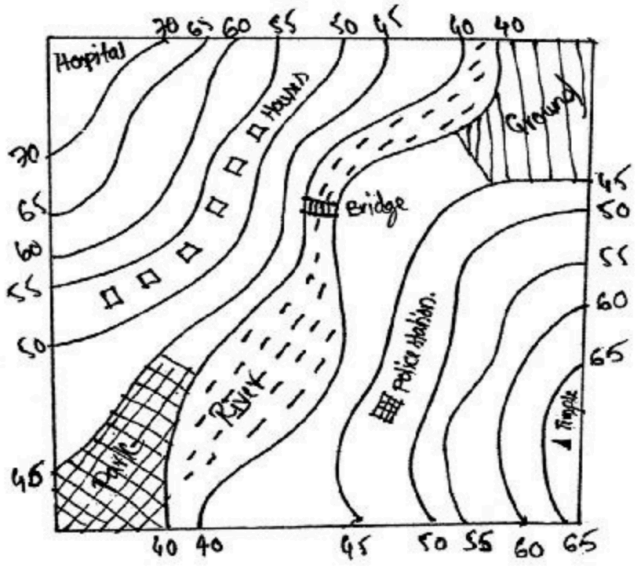
2. 50-55

3. 65-70

4. 45-50

Question Number : 100 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

In the given diagram if a person has to travel from hospital to ground crossing the bridge how many contour intervals have to be crossed ?



Options :

1. 7

2. 8

3. 9

4. 6