National Testing Agency

Question Paper Name :	JEE Main 2025 Paper 2B (B.Planning) Apr 9 Single sitting
Subject Name :	Paper 2B (B.Planning)
Creation Date :	2025-04-09 19:41:37
Duration :	180
Total Marks :	400

Paper 2B (B.Planning)

Group Id :	34757736

Mathematics Section A

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

Question Number : 1 Question Id : 3475772817 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let R be a relation on the set $A = \{1, 2, 3, 4, \ldots, 10\}$ given by xRy if and only if x divides y. Let m be the number of elements in R and n be the number of minimum elements required to be added in R to make it a symmetric relation. Then $m + n$ is equal to

Options :

3475779956. 16

3475779957. 32

3475779958. 36

3475779959. 44

Question Number : 2 Question Id : 3475772818 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If the range of the function $f(x) = \sqrt{3-x} + \sqrt{5+x}$ is $[\alpha, \beta]$, then $\alpha^2 + \beta^2$ is equal to

Options :

3475779960. 18

3475779961. 20

3475779962. 24

3475779963. 25

Question Number : 3 Question Id : 3475772819 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If the line $\arg(z) = \frac{\pi}{3}$ intersects the curve $\left|z - 2\sqrt{3}i\right| = 2$, $z \in \mathbb{C}$, at two distinct points A and B, then AB equals

Options :

3475779964. 1

3475779965. 2

3475779966. 4

3475779967. 6

Question Number : 4 Question Id : 3475772820 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If the system of linear equations : $x+y+z=4, x+2y+3z=6, 4x+5y+\lambda z=\mu$ has more than one solution, then the value of $\lambda+\mu$ is equal to

Options :

3475779968. 18

3475779969. 9

3475779970. 12

3475779971. 24

Question Number : 5 Question Id : 3475772821 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let $b_1 = 3, b_2, b_3, \ldots$ be a geometric progression of increasing positive numbers. Let $\sum_{n=1}^{20} b_{3n} = 4\sum_{n=1}^{20} b_{3n-2}$. Then, the sum of the first ten terms of the G. P. is

Options :

3475779972. 1023

3475779973. 2046

3475779974. 3069

3475779975. 3149

Question Number : 6 Question Id : 3475772822 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If all the words, with or without meaning, made using all the letters of the word "RANCHI" are arranged as in a dictionary, then the word at 560^{th} position is :

Options :

3475779976. NICHRA

3475779977. NICAHR

3475779978. NICARH

3475779979. NICHAR

Question Number : 7 Question Id : 3475772823 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The number of integral terms in the binomial expansion of $\left(11^{\frac{1}{2}}+17^{\frac{1}{8}}\right)^{1024}$ is

Options :

3475779980. 129

3475779981. 131

3475779982. 133

3475779983. 137

Question Number : 8 Question Id : 3475772824 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Two persons A and B alternately throw a pair of dice. A wins if he throws a sum of 4 before B throws a sum of 9 and B wins if he throws a sum of 9 before A throws a sum of 4. The probability, that A wins if B makes the first throw, is

Options :

3475779984. $\frac{1}{5}$

3475779985. $\frac{2}{5}$

3475779986. $\frac{3}{5}$

3475779987. $\frac{4}{5}$

Question Number : 9 Question Id : 3475772825 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The mean and standard deviation of four numbers are given by 10 and $\frac{5\sqrt{2}}{2}$, respectively. If a fifth number 15 is added to the data set, then the variance of the new data set is

Options :

3475779988. 13.5

3475779989. 13

3475779990. 14.5

3475779991. 14

Question Number : 10 Question Id : 3475772826 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let the distance between the foci of an ellipse $\frac{x^2}{a^2}+\frac{y^2}{b^2}=1\,(a>b)$ be 4 and the distance between its directrices be 10. Then the length of its latus rectum is :

Options :

3475779992. $\frac{12}{\sqrt{10}}$

3475779993. $\frac{6}{\sqrt{10}}$

3475779994. $\frac{8}{\sqrt{5}}$

3475779995. $\sqrt{10}$

Question Number : 11 Question Id : 3475772827 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let e_1 and e_2 be the eccentricities of the ellipse $2x^2 + 9y^2 = 36$ and the hyperbola $4x^2 - 9y^2 = 36$, respectively. Then the distance between the point of intersection of the lines $5x - 7y = 3$ and $3x + y = 7$, and the point $\left(9e_1^2, 9e_2^2\right)$ is

Options :

3475779996. 11

3475779997. 12

3475779998. 13

3475779999. 15

Question Number : 12 Question Id : 3475772828 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let $A(3, 4)$, $B(5, -2)$ and $P(\alpha, \beta)$, $\alpha\beta \neq 0$, be three point such that $PA = PB$ and the area of ΔPAB is 10. Then the distance of the point $Q(2\alpha - 5\beta, \alpha - \beta^2)$, from the line having intercepts 3 and 1 on x- and y- axis respectively, is

Options :

34757710000. 10

34757710001. $\sqrt{10}$

34757710002. 15

34757710003. 2

Question Number : 13 Question Id : 3475772829 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The number of integral values of n, for which the equation $3\cos x + 5\sin x = 2n + 1$ has a solution, is

Options :

34757710004. 4

34757710005. 6

34757710006. 8

34757710007. 10

Question Number : 14 Question Id : 3475772830 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let the points A$(a, -1, 2)$, B$(1, b, -4)$, C$(-1, 1, c)$ and D$(1, -2, 8)$ be the vertices of a parallelogram ABCD. Then its area is equal to

Options :

34757710008. $2\sqrt{73}$

34757710009. $2\sqrt{51}$

34757710010. 28

34757710011. 14

Question Number : 15 Question Id : 3475772831 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let (α, β, γ) be the foot of the perpendicular from the point $(25, 2, 41)$ on the line $\frac{x-4}{3}=\frac{y+1}{7}=\frac{z-2}{3}$. Then $\alpha+\beta+\gamma$ is equal to

Options :

34757710012. 41

34757710013. 42

34757710014. 44

34757710015. 45

Question Number : 16 Question Id : 3475772832 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Consider a sphere of volume 36π. Then the height, of the cone of maximum volume that can be inscribed in the sphere, is

Options :

34757710016. 1

34757710017. 4

34757710018. $\sqrt{3}$

34757710019. $2\sqrt{3}$

Question Number : 17 Question Id : 3475772833 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If $f(x)=\begin{vmatrix} -\cos x & \tan x & 3\sin x \\ 1 & -3x & 2x^2 \\ x^3 & x & x^2 \end{vmatrix}$, then the value of $\lim\limits_{x\to 0}\frac{(1+x)f(x)-3x\sin x}{x^3}$ is

Options :

34757710020. 3

34757710021. 5

34757710022. 7

34757710023. 8

Question Number : 18 Question Id : 3475772834 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The area of the region

$\left\{(x, y): \sin x \le y \le \sqrt{\pi^2 - x^2}\right\}$ is:

Options :

34757710024. π^3

34757710025. $\frac{\pi^3}{2}$

34757710026. $\frac{\pi^3}{4}$

34757710027. $\frac{\pi^3}{8}$

Question Number : 19 Question Id : 3475772835 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let $f(x)=\begin{cases} 3x, & x<0 \\ 1+x+[x], & 0 \le x \le 2 \\ 5, & x>2 \end{cases}$, where $[x]$ denotes the greatest integer function. If α and β are the number of points in $\mathbb{R}$, where f is not continuous and is not differentiable, then α + β equals

Options :

34757710028. 3

34757710029. 4

34757710030. 5

34757710031. 6

Question Number : 20 Question Id : 3475772836 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let $f(x)=\int\left(\frac{1}{\log_e x}-\frac{2}{(\log_e x)^3}\right)dx$. If $f(e) = 2e$, then $f(e^2)$ is equal to

Options :

34757710032. $\frac{e^2}{4}$

34757710033. $\frac{e^2}{2}$

34757710034. $\frac{3e^2}{4}$

34757710035. $\frac{4e^2}{3}$

Mathematics Section B

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

Question Number : 21 Question Id : 3475772837 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let the value of p, such that the sum of the squares of the roots of the quadratic equation $x^2 + (7 - p)x + 4 = p$ has least value, be α and the corresponding roots be β and γ. Then $\alpha^3 + \beta^3 + \gamma^3$ equals _____.

Question Number : 22 Question Id : 3475772838 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let $25^x + 25^{-x}, \frac{\alpha}{3}, 20^{1+x} + 20^{1-x}, x, \alpha \in \mathbb{R}$ be the first three terms of an A.P. of increasing terms. For the least value of α, the sum of its first 10 terms is _____.

Question Number : 23 Question Id : 3475772839 Question Type : SA Correct Marks : 4 Wrong Marks : 1

If the circles $x^2 + y^2 - 2x - 8y + 17 = r$ and $x^2 + y^2 - 26x - 18y + 234 = 0$ intersect at exactly one point, then the sum of all possible values of r is _____.

Question Number : 24 Question Id : 3475772840 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let $\vec{a} = 2\hat{i} + 3\hat{j} + 5\hat{k}, \vec{b} = \hat{i} - \hat{j} + 3\hat{k}$ and $\vec{c}$ be a vector such that $\vec{a} \cdot \vec{c} = 104$ and $\vec{a} \times \vec{c} = \vec{c} \times \vec{b}$. Then $\vec{b} \cdot \vec{c}$ is equal to _____.

Question Number : 25 Question Id : 3475772841 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let $y = y(x)$ be the solution of the differential equation $x\frac{dy}{dx} + y + xy\cot x = x, \frac{\pi}{4} \le x \le \frac{3\pi}{4}$, $y\left(\frac{\pi}{4}\right) = 0$. Then $6y\left(\frac{3\pi}{4}\right)$ equals _____.

Aptitude Test

Section Number : 3
Number of Questions : 50
Number of Questions to be attempted : 50
Section Marks : 200

Question Number : 26 Question Id : 3475772842 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The concept of scale in architecture is more clearly associated with:

Options :

34757710041. The durability of materials

34757710042. The relative size of elements compared to human dimensions.

34757710043. The energy efficiency of the building.

34757710044. The colour scheme of the façade

Question Number : 27 Question Id : 3475772843 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

BRICK :MASONRY : : TILES : _____

Options :

34757710045. Carpentry

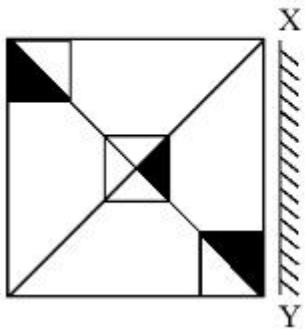
34757710046. Wiring

34757710047. Plumbing

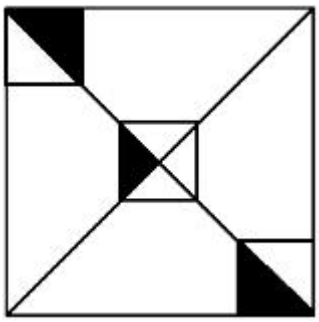
34757710048. Flooring

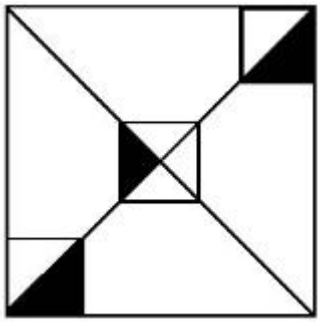
Question Number : 28 Question Id : 3475772844 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

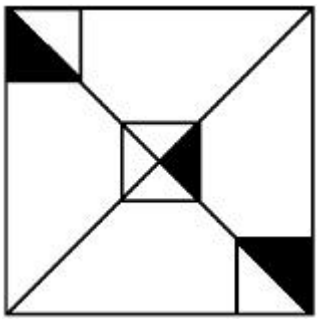
Identify the correct mirror image of the given figure along XY-axis.

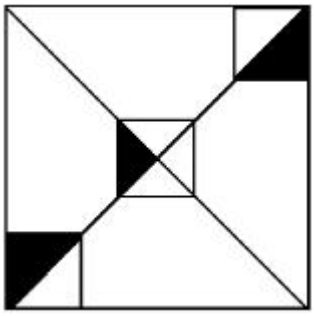


Options :

34757710049. 

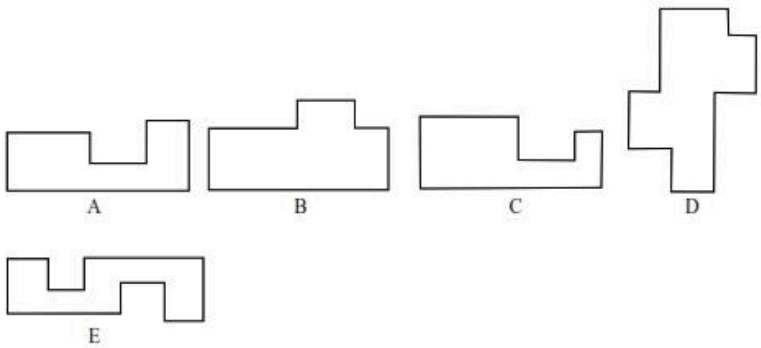
34757710050. 

34757710051. 

34757710052. 

Question Number : 29 Question Id : 3475772845 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Five diagrams A, B, C, D, E are given. Three out of these when put together form a square. Find out the diagrams.



Choose the correct answer from the options given below:

Options :

34757710053. A, C, D

34757710054. B, C, D

34757710055. A, B, C

34757710056. C, D, E

Question Number : 30 Question Id : 3475772846 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

A man is looking at a photograph of a woman and his friend asked him “Who is she?” Then the man replied "I have no brother and sister, but the father of the woman in the photograph is my father's son”. Who is the woman in the photograph?

Options :

34757710057. His daughter

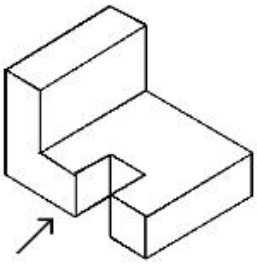
34757710058. His wife

34757710059. His sister

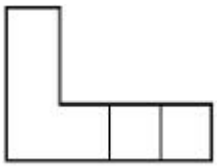
34757710060. His mother

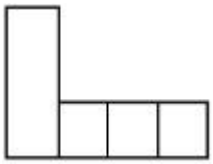
Question Number : 31 Question Id : 3475772847 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

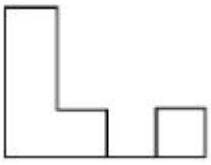
The question figure shows the 3D view of an object. Identify the correct view looking in the direction of the arrow.

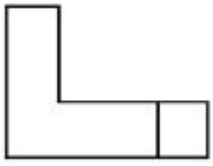


Options :

34757710061. 

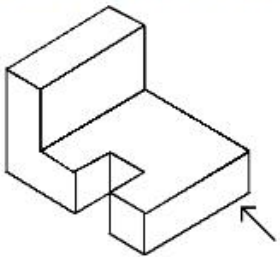
34757710062. 

34757710063. 

34757710064. 

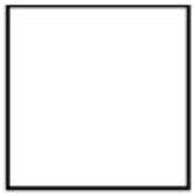
Question Number : 32 Question Id : 3475772848 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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



Options :

34757710065. 

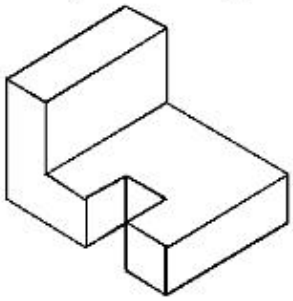
34757710066. 

34757710067. 

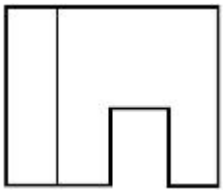
34757710068. 

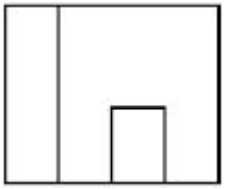
Question Number : 33 Question Id : 3475772849 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

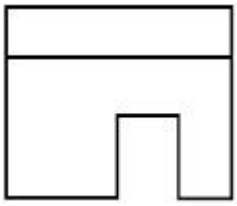
The question figure shows the 3D view of an object. Identify the correct top view .

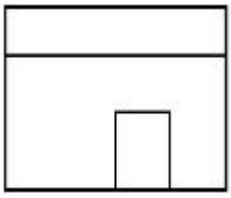


Options :

34757710069. 

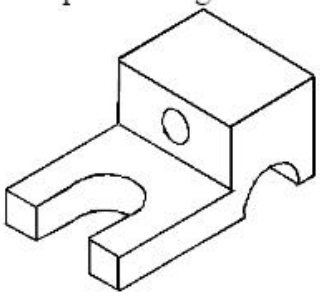
34757710070. 

34757710071. 

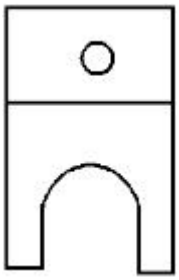
34757710072. 

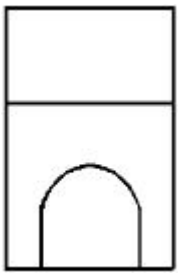
Question Number : 34 Question Id : 3475772850 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

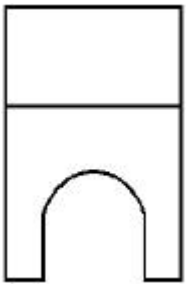
The question figure shows the 3D view of an object. Identify the correct top view of the object.

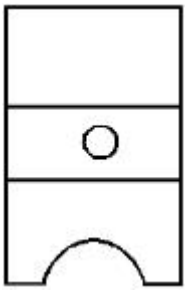


Options :

34757710073. 

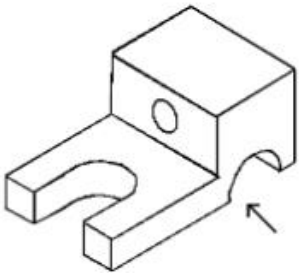
34757710074. 

34757710075. 

34757710076. 

Question Number : 35 Question Id : 3475772851 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

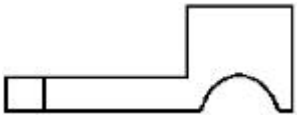
The question figure shows the 3D view of an object. Identify the correct view looking in the direction of the arrow.



Options :

34757710077. 

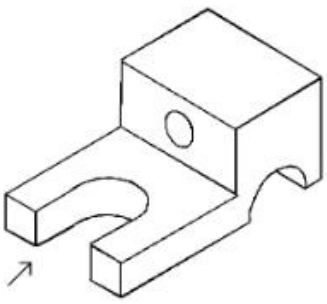
34757710078. 

34757710079. 

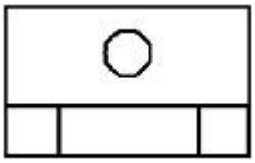
34757710080. 

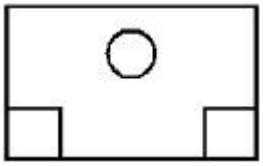
Question Number : 36 Question Id : 3475772852 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

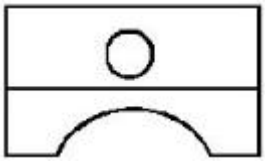
The question figure shows the 3D view of an object. Identify the correct view looking in the direction of arrow.

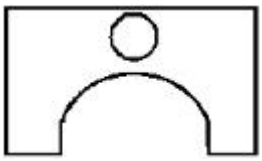


Options :

34757710081. 

34757710082. 

34757710083. 

34757710084. 

Question Number : 37 Question Id : 3475772853 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

A man walks 10 km north, then turns to his left and walks 5 km, then turns to his left again and walks 10 km. How far is he from his starting point?

Options :

34757710085. 10 km

34757710086. 20 km

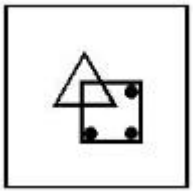
34757710087. 15 km

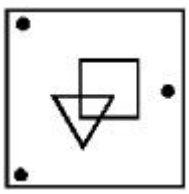
34757710088. 5 km

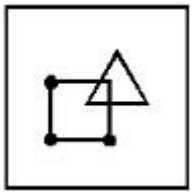
Question Number : 38 Question Id : 3475772854 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

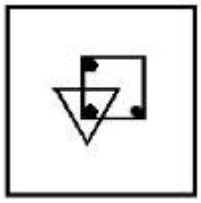
Identify the figure which is odd from rest of the figures.

Options :

34757710089. 

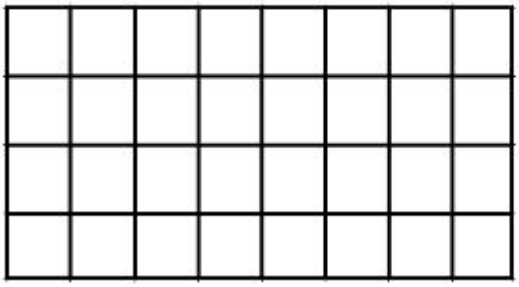
34757710090. 

34757710091. 

34757710092. 

Question Number : 39 Question Id : 3475772855 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

How many squares are there in the given figure?



Options :

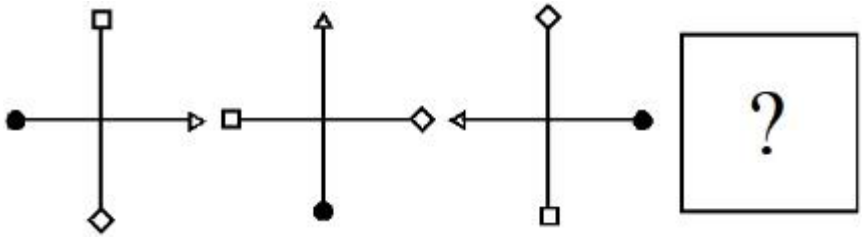
34757710093. 32

34757710094. 48

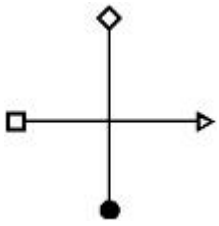
34757710095. 78

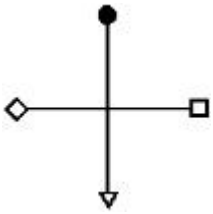
34757710096. 70

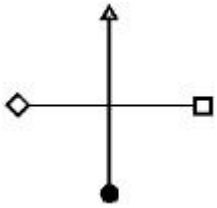
Question Number : 40 Question Id : 3475772856 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

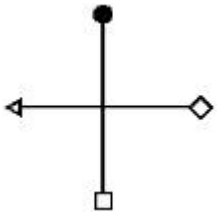


Options :

34757710097. 

34757710098. 

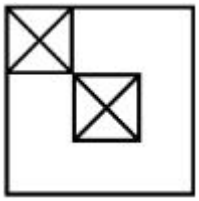
34757710099. 

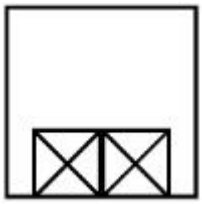
34757710100. 

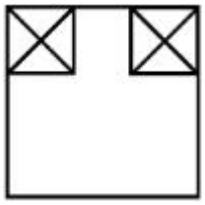
Question Number : 41 Question Id : 3475772857 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

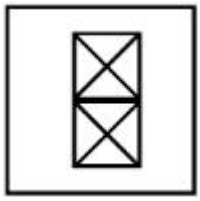
Find the odd one when the object is divided vertically through the centre.

Options :

34757710101. 

34757710102. 

34757710103. 

34757710104. 

Question Number : 42 Question Id : 3475772858 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

A man is facing East, turns 90° clockwise, then 180° anti clockwise, and then another 90° clockwise. In which direction is he facing?

Options :

34757710105. West

34757710106. East

34757710107. North

34757710108. South

Question Number : 43 Question Id : 3475772859 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What is the mirror image of PRODUCTION along X-X' axis.



Options :

34757710109. 

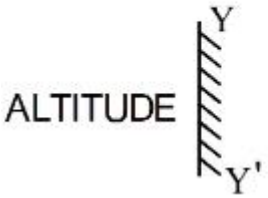
34757710110. 

34757710111. 

34757710112. 

Question Number : 44 Question Id : 3475772860 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the mirror image of given word ALTITUDE along Y-Y' axis.



Options :

34757710113. 

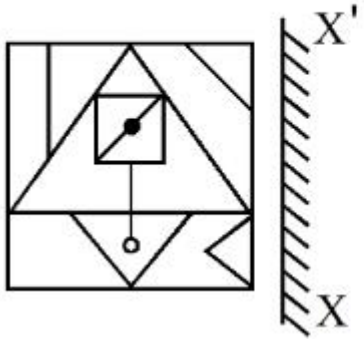
34757710114. 

34757710115. 

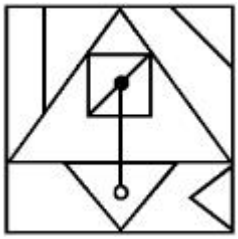
34757710116. 

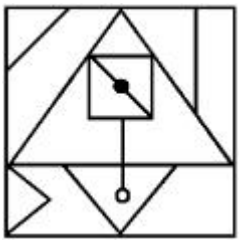
Question Number : 45 Question Id : 3475772861 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

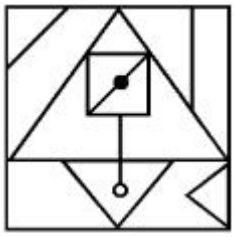
Identify the correct mirror image of given figure along XX'-axis.

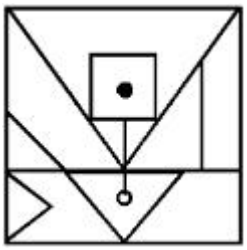


Options :

34757710117. 

34757710118. 

34757710119. 

34757710120. 

Question Number : 46 Question Id : 3475772862 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the most used building material seen in the facade of the building.



Options :

34757710121. Sand Stone

34757710122. Granite

34757710123. Marble

34757710124. Slate

Question Number : 47 Question Id : 3475772863 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the name of the monument.



Options :

34757710125. Tower of Victory

34757710126. Connaught Place

34757710127. The Pantheon

34757710128. The Parthenon

Question Number : 48 Question Id : 3475772864 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which book by Robert Venturi is considered as pivoted text in the development of post modern architecture?

Options :

34757710129. The timeless way of building

34757710130. The poetics of space

34757710131. Complexity and contradiction in architecture

34757710132. Architecture : Form, Space and Order

Question Number : 49 Question Id : 3475772865 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which material is used traditionally to make Sandpaper?

Options :

34757710133. Brick

34757710134. Silica

34757710135. Iron

34757710136. Rubber

Question Number : 50 Question Id : 3475772866 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The 'Sagrada Familia' in Barcelona, a masterpiece of unique design and organic forms, was designed by:

Options :

34757710137. Antoni Gaudi

34757710138. Santiago Calatrava

34757710139. Renzo Piano

34757710140. Zaha Hadid

Question Number : 51 Question Id : 3475772867 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Pointed arches and flying buttresses were the prominent architectural style introduced in:

Options :

34757710141. Romanesque

34757710142. Renaissance

34757710143. Gothic

34757710144. Baroque

Question Number : 52 Question Id : 3475772868 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

"Acoustical Design" deals with:

Options :

34757710145. Structure of building

34757710146. Sound in the building

34757710147. Ventilation of the building

34757710148. Facade design

Question Number : 53 Question Id : 3475772869 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What is the primary purpose of using a 'mullion' in window design?

Options :

34757710149. For decoration

34757710150. To enhance ventilation

34757710151. To support the glass within the window frame

34757710152. To block sunlight

Question Number : 54 Question Id : 3475772870 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The usable area of floor is called:

Options :

34757710153. Carpet area

34757710154. Plinth area

34757710155. Surface area

34757710156. Built-up area

Question Number : 55 Question Id : 3475772871 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Name the place where 'Statue of Unity' is situated.

Options :

34757710157. Gandhinagar, Gujarat

34757710158. Kadi, Gujarat

34757710159. Anand, Guajarat

34757710160. Kewadia, Gujarat

Question Number : 56 Question Id : 3475772872 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What is the proportional relationship in classical architecture, represented as 1.628?

Options :

34757710161. Fibonacci sequence

34757710162. Symmetry ratio

34757710163. Golden ratio

34757710164. Modular scale

Question Number : 57 Question Id : 3475772873 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Rings of the wooden log represents:

Options :

34757710165. Strength of wood

34757710166. Age of the wood

34757710167. Colour of wood

34757710168. Defects of wood

Question Number : 58 Question Id : 3475772874 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which ancient civilization is credited with inventing the arch, a fundamental structural element in architecture?

Options :

34757710169. Greek

34757710170. Roman

34757710171. Egyptian

34757710172. Mesopotamian

Question Number : 59 Question Id : 3475772875 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which architectural structure in Paris is known for its iconic wrought iron lattice work and was completed in 1889?

Options :

34757710173. Notre Dame Cathedral

34757710174. Louvre Museum

34757710175. Eiffel Tower

34757710176. Arc de Triumph

Question Number : 60 Question Id : 3475772876 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

'Char bagh' concept is an important characteristic of which Garden style?

Options :

34757710177. Chinese Garden

34757710178. Mughal Garden

34757710179. Japanese Garden

34757710180. French Garden

Question Number : 61 Question Id : 3475772877 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If a room is painted with dark colour, what will be the appearence of the room?

Options :

34757710181. Room will appear smaller than the original room size

34757710182. Room will appear larger then the original room size

34757710183. Room will look brighter and appear larger than the original size.

34757710184. Room will look brighter

Question Number : 62 Question Id : 3475772878 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The ground floor plan of a building has 3 entrances. If each entrance can be connected by stairs or an elevator externally, in how many ways can a person enters the building through the entrance?

Options :

34757710185. 03

34757710186. 06

34757710187. 09

34757710188. 12

Question Number : 63 Question Id : 3475772879 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: The concept of "form follows function" suggest that a building's design should primarily consider its use.

Statement II: The concept of "form follows functions" means that aesthetics should take precedence over functionality.

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

Options :

34757710189. Both Statement I and Statement II are true

34757710190. Both Statement I and Statement II are false

34757710191. Statement I is true but Statement II is false

34757710192. Statement I is false but Statement II is true

Question Number : 64 Question Id : 3475772880 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: The sun has a maximum altitude of 90° on Tropic of Capricorn on 22nd June at 12 noon and gradually decreases thereafter till 22nd December.

Statement II: The tilt of earth on axis of 23.5° has no role to play in the change of altitude of sun on Tropic of Capricorn.

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

Options :

34757710193. Both Statement I and Statement II are true

34757710194. Both Statement I and Statement II are false

34757710195. Statement I is true but Statement II is false

34757710196. Statement I is false but Statement II is true

Question Number : 65 Question Id : 3475772881 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: 'Granite' is the hardest stone.

Statement II: 'Marble' is a soft stone.

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

Options :

34757710197. Both Statement I and Statement II are true

34757710198. Both Statement I and Statement II are false

34757710199. Statement I is true but Statement II is false

34757710200. Statement I is false but Statement II is true

Question Number : 66 Question Id : 3475772882 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I : "Wind speed" should be considered while designing tall buildings.

Statement II : "Buildings" should be rigid in an earthquake high risk zone.

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

Options :

34757710201. Both Statement I and Statement II are true

34757710202. Both Statement I and Statement II are false

34757710203. Statement I is true but Statement II is false

34757710204. Statement I is false but Statement II is true

Question Number : 67 Question Id : 3475772883 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**

	LIST-I (Building)		**LIST-II (Shape)**
A.	Sanchi Stupa	I.	Cylinder
B.	Circular Column	II.	Triangular Surfaces
C.	Pyramid	III.	Dome
D.	Palaces	IV.	Cuboids

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

Options :

34757710205. A-IV, B-III, C-I, D-II

34757710206. A-III, B-I, C-II, D-IV

34757710207. A-I, B-IV, C-III, D-II

34757710208. A-II, B-III, C-IV, D-I

Question Number : 68 Question Id : 3475772884 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**

LIST-I		LIST-II	
A.	Column and Beam	I.	Aesthetics
B.	Trees and Plants	II.	Services
C.	Building form	III.	Landscape
D.	Water supply	IV.	Structures

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

Options :

34757710209. A-II, B-IV, C-III, D-I

34757710210. A-IV, B-III, C-I, D-II

34757710211. A-III, B-IV, C-I, D-II

34757710212. A-I, B-III, C-II, D-IV

Question Number : 69 Question Id : 3475772885 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**

LIST-I		LIST-II	
A.	Sun Temple	I.	Tirupati
B.	Shiva Temple	II.	Pushkar
C.	Balaji Temple	III.	Modhera
D.	Brahma Temple	IV.	Ujjain

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

Options :

34757710213. A-III, B-IV, C-I, D-II

34757710214. A-IV, B-I, C-III, D-II

34757710215. A-II, B-IV, C-I, D-III

34757710216. A-I, B-III, C-IV, D-II

Question Number : 70 Question Id : 3475772886 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**

LIST-I (Construction equipments)		**LIST-II (Functions)**	
A.	Buldozer	I.	Used for transporting smaller loads over short distances at site.
B.	Crane	II.	Mixes cement, sand and aggregate with water to produce concrete.
C.	Concrete Mixer	III.	Used to transport concrete to different location at site.
D.	Wheel Barrow	IV.	Used to level and move debris from the site.

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

Options :

34757710217. A-II, B-III, C-I, D-IV

34757710218. A-III, B-II, C-I, D-IV

34757710219. A-I, B-III, C-IV, D-II

34757710220. A-IV, B-III, C-II, D-I

Question Number : 71 Question Id : 3475772887 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

'SDG' stands for:

Options :

34757710221. Sequential Design Goals

34757710222. Systematic Development Goals

34757710223. Strategic Development Goals

34757710224. Sustainable Development Goals

Question Number : 72 Question Id : 3475772888 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

GRIHA stands for:

Options :

1. Green Rating for Integrated Habitat Assessment

2. Glare Rating for Integrated Heat Assessment

3. Green Rating for Insulation Heat Assessment

4. Glare Rating for Insulation Heat Assessment

Question Number : 73 Question Id : 3475772889 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

ECBC stands for:

Options :

34757710229. Electricity Conservation Building Code

34757710230. Electricity Consumption Building Code

34757710231. Energy Conversion Building Code

34757710232. Energy Conservation Building Code

Question Number : 74 Question Id : 3475772890 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

'HRIDAY' stands for:

Options :

34757710233. Heritage City in Developed Association Yojana

34757710234. High Residential in Densified Augmented Yojana

34757710235. Heritage City Development and Augmentation Yojana

34757710236. Hermitage Centre of Development and Association Yojana

Question Number : 75 Question Id : 3475772891 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What is the architectural term for a semi circular or polygonal recess, often found at the end of a church nave?

Options :

34757710237. Atrium

34757710238. Apse

34757710239. Cloister

34757710240. Ambulatory

Planning

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

Question Number : 76 Question Id : 3475772892 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which of the following city is facing 'water crisis' and approaching towards 'Zero Day'?

Options :

34757710241. Hyderabad

34757710242. Bengaluru

34757710243. Indore

34757710244. Pune

Question Number : 77 Question Id : 3475772893 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the aspect that deals with the 'Demography' of a town.

Options :

34757710245. Per capita income

34757710246. Crime rate

34757710247. Sex ratio

34757710248. Social security

Question Number : 78 Question Id : 3475772894 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Bharatiya Sakshya Adhiniyam 2023 has replaced:

Options :

34757710249. Indian Eviction Act, 1870

34757710250. Indian Education Act, 1872

34757710251. Indian Emergency Act, 1870

34757710252. Indian Evidence Act, 1872

Question Number : 79 Question Id : 3475772895 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which famous ranges are located on the coastline along Arabian Sea?

Options :

34757710253. Eastern Ghat

34757710254. Western Ghat

34757710255. Aravalli Ranges

34757710256. Vindhya Ranges

Question Number : 80 Question Id : 3475772896 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: Urban green spaces can help to reduce air pollution and improve public health.

Statement II: Urban green spaces are solely for aesthetic purposes and have no functional benefits.

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

Options :

34757710257. Both Statement I and Statement II are true

34757710258. Both Statement I and Statement II are false

34757710259. Statement I is true but Statement II is false

34757710260. Statement I is false but Statement II is true

Question Number : 81 Question Id : 3475772897 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: In general, city of Delhi is considered to be planned in radial concentric design.

Statement II: City of Mumbai is planned in linear design.

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

Options :

34757710261. Both Statement I and Statement II are true

34757710262. Both Statement I and Statement II are false

34757710263. Statement I is true but Statement II is false

34757710264. Statement I is false but Statement II is true

Question Number : 82 Question Id : 3475772898 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: Constitutional amendments empowers village panchayat.

Statement II: Village panchayats were formed under 73rd Amendment Act.

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

Options :

34757710265. Both Statement I and Statement II are true

34757710266. Both Statement I and Statement II are false

34757710267. Statement I is true but Statement II is false

34757710268. Statement I is false but Statement II is true

Question Number : 83 Question Id : 3475772899 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What was the name of Sri Lanka in ancient India?

Options :

34757710269. Java

34757710270. Ceylon

34757710271. Burma

34757710272. Kampuchea

Question Number : 84 Question Id : 3475772900 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which of the followings is not correct land use as per the master plan?

Options :

34757710273. Residential

34757710274. Transport

34757710275. Commercial

34757710276. Recreational

Question Number : 85 Question Id : 3475772901 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Name the person responsible for 'White Revolution' in India.

Options :

34757710277. Verghese Kurien

34757710278. Jawahar Lal Nehru

34757710279. Indira Gandhi

34757710280. Mother Terresa

Question Number : 86 Question Id : 3475772902 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What is the full form of HUDCO?

Options :

34757710281. Housing and Urban Development Center

34757710282. Heritage and Urban Development Corporation Limited

34757710283. Housing and Urban Development Corporation Limited

34757710284. Health and Urban Development Center

Question Number : 87 Question Id : 3475772903 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Select which of the followings does not represent the 'Vedic Town Plan'.

Options :

34757710285. Varataka

34757710286. Padmaka

34757710287. Prastara

34757710288. Dandaka

Question Number : 88 Question Id : 3475772904 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

A person starts moving from a point 'A' towards south direction for 200 mts, then he returns back to point 'A' by taking 180° turn. Identify the primary design element he made after completing his journey.

Options :

34757710289. A point

34757710290. A vertical line

34757710291. A horizontal line

34757710292. A diagonal line

Question Number : 89 Question Id : 3475772905 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

When was the Planning Commission of India launched ?

Options :

34757710293. 1948

34757710294. 2015

34757710295. 1994

34757710296. 1952

Question Number : 90 Question Id : 3475772906 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**

LIST-I		LIST-II	
A.	Mangrove	I.	Jaisalmer, Rajasthan
B.	Backwaters	II.	Dholavira, Gujarat
C.	Thar Desert	III.	Alapuzha, Kerala
D.	Rann of Kutch	IV.	Sundarban, West Bengal

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

Options :

34757710297. A-III, B-II, C-IV, D-I

34757710298. A-IV, B-II, C-I, D-III

34757710299. A-IV, B-III, C-I, D-II

34757710300. A-II, B-I, C-III, D-IV

Question Number : 91 Question Id : 3475772907 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**

LIST-I		LIST-II	
A.	Population	I.	Fertility
B.	Communication	II.	Demand
C.	Agriculture	III.	Accessibility
D.	Housing	IV.	Density

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

Options :

34757710301. A-I, B-III, C-II, D-IV

34757710302. A-IV, B-III, C-I, D-II

34757710303. A-III, B-IV, C-I, D-II

34757710304. A-II, B-IV, C-I, D-III

Question Number : 92 Question Id : 3475772908 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**

LIST-I		LIST-II	
A.	Mawlynnong	I.	Port city
B.	Vishakhapatnam	II.	Steel city
C.	Ladakh	III.	Cleanest village in Asia
D.	Jamshedpur	IV.	Frozen desert

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

Options :

34757710305. A-III, B-I, C-IV, D-II

34757710306. A-IV, B-II, C-I, D-III

34757710307. A-I, B-II, C-III, D-IV

34757710308. A-II, B-I, C-IV, D-III

Question Number : 93 Question Id : 3475772909 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**

	LIST-I (Schemes)		**LIST-II (Objectives)**
A.	Smart city	I.	Affordable housing
B.	P.M. Jandhan Yojana	II.	Primary education
C.	PMAY	III.	IoT
D.	Sarvshiksha Abhiyan	IV.	Bank account opening

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

Options :

34757710309. A-III, B-IV, C-I, D-II

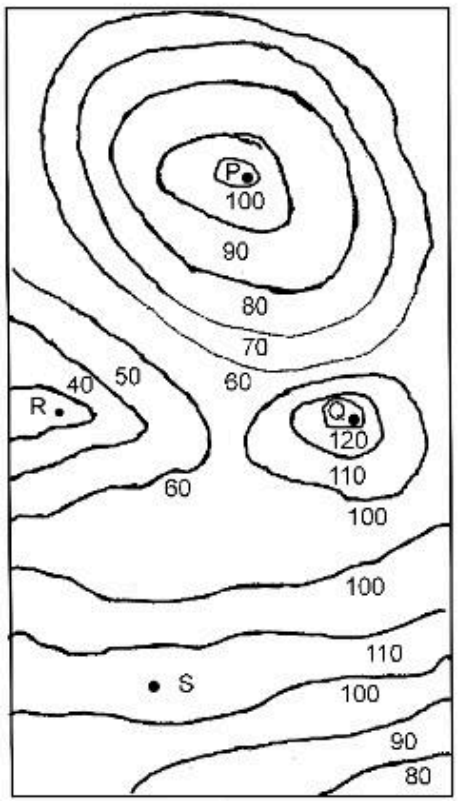
34757710310. A-I, B-III, C-II, D-IV

34757710311. A-IV, B-II, C-I, D-III

34757710312. A-II, B-I, C-IV, D-III

Question Number : 94 Question Id : 3475772910 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

In reference to the given diagram, find out that which is placed at the highest level.



Options :

34757710313. R

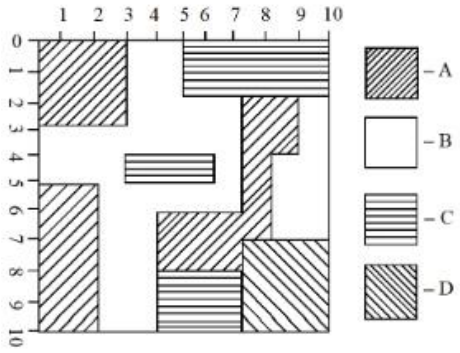
34757710314. Q

34757710315. S

34757710316. P

Question Number : 95 Question Id : 3475772911 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The figure shows an area of 10 km × 10 km with different land uses. Which land use covers the second largest area?



Options :

34757710317. C

34757710318. A

34757710319. B

34757710320. D

Question Number : 96 Question Id : 3475772912 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What is the full form of UNICEF?

Options :

34757710321. United Nations Iconic Childcare Economic Federation

34757710322. United Nations International Children's Fellowship

34757710323. United Nations International Children's Education Fund

34757710324. United Nations Children's Fund

Question Number : 97 Question Id : 3475772913 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the city ruled by 'Begums-the Queens.'

Options :

34757710325. Hyderabad

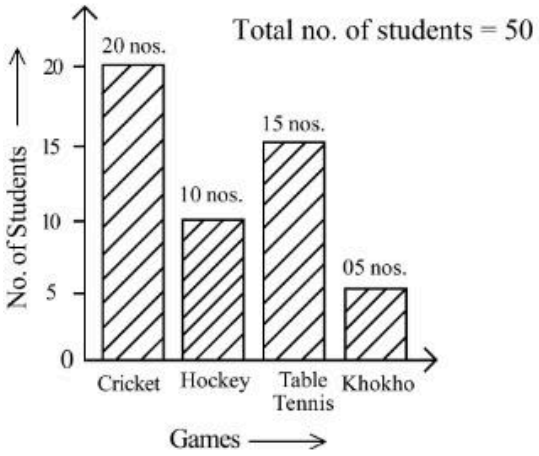
34757710326. Murshidabad

34757710327. Bhopal

34757710328. Aligarh

Question Number : 98 Question Id : 3475772914 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

As per the given bar chart, what is the total percentage of students who prefer to play cricket?



Options :

34757710329. 15%

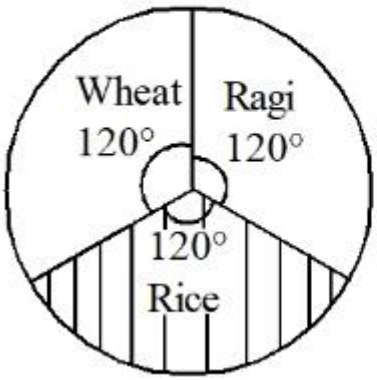
34757710330. 20%

34757710331. 30%

34757710332. 40%

Question Number : 99 Question Id : 3475772915 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

As per pie chart, identify the percentage (%) of shaded portion.



Options :

34757710333. 22.22%

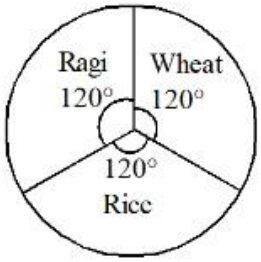
34757710334. 45.55%

34757710335. 33.33%

34757710336. 11.11%

Question Number : 100 Question Id : 3475772916 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

As per the pie chart, what would be the total percentage of Ragi and Wheat if 8% of rice is replaced by Ragi and 3% of Wheat is replaced by Rice and 7% of Ragi is replaced by Wheat?



Options :

34757710337. 71.66%

34757710338. 69.66%

34757710339. 62.66%

34757710340. 65.66%