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# **JEE 2 - 2023**

## **SESSION 1**

### **QUESTION PAPER**



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Section : Mathematics Section A

Q.1 The sum of the first eleven terms of the series is  $\frac{1}{1+1^2+1^4} + \frac{2}{1+2^2+2^4} + \frac{3}{1+3^2+3^4} + \dots$

- Options
1.  $\frac{61}{133}$
  2.  $\frac{16}{33}$
  3.  $\frac{66}{133}$
  4.  $\frac{33}{67}$

Q.2 Let  $\alpha$  and  $\beta$  be the roots of  $x^2 - 3x + 9 = 0$ . Then  $\left(\frac{\beta^{30}}{(9\alpha)^{10}} + \frac{\alpha^{30}}{(9\beta)^{10}}\right)^2$  is equal to

- Options
1. 1
  2. 9
  3.  $\frac{1}{9}$
  4. 3



**Q.3** A box contains 7 red and 9 white balls. The number of ways of drawing 8 balls such that there are at least three balls of each colour, is :

- Options**
1. 8820
  2. 1764
  3. 10584
  4. 3515

**Q.4** The probability that a randomly selected root of the equation  $1 + x + x^2 + \dots + x^{118} = 0$  satisfies the equation  $x^7 = 1$ , is

- Options**
1. 0
  2.  $\frac{1}{59}$
  3.  $\frac{3}{59}$
  4.  $\frac{7}{118}$

**Q.5** For  $z = 2 + 5i$ , the modulus of  $2z^3 + 21z^2 - 58z + 4$  is :

- Options**
1. 1153
  2. 947
  3. 537
  4. 837



Q.6 The remainder when  $7^{89}$  is divided by 15 is

- Options
1. 7
  2. 9
  3. 5
  4. 11

Q.7 For  $\alpha, \beta \in \mathbb{R}$ , if the matrices  $A = \begin{pmatrix} \alpha & 0 \\ 0 & \beta \end{pmatrix}$ ,  $B = \begin{pmatrix} \alpha & 0 \\ 0 & \alpha \end{pmatrix}$  and  $I = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$  satisfy the equation

$(A*B)*2I = 20I$ , where  $*$  is defined as  $A*B = A^2 + B^2$ , then  $|\alpha\beta|$  is equal to :

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



Q.8 If the system of equations

$$Kx - \sqrt{2}y + \sqrt{5}z = \sqrt{7}$$

$$\sqrt{5}x + \sqrt{3}y - \sqrt{2}z = \sqrt{11}$$

$$30x + (3\sqrt{15} - 5\sqrt{6})y + (5\sqrt{15} - 3\sqrt{10})z = 5\sqrt{21} + 3\sqrt{55}$$

has infinitely many solutions, then  $K^2$  is

Options

1. 9
2. 27
3. 3
4.  $\frac{1}{3}$

Q.9 Let X have the binomial distribution  $B(n, p)$ . If its mean is 3 and variance is 2, then  $P(X < \frac{n}{4})$  is equal to :

Options

1.  $\frac{25 \times 2^9}{3^9}$
2.  $\frac{835}{3^9}$
3.  $\frac{163}{3^9}$
4.  $\frac{29 \times 2^8}{3^9}$



**Q.10** Let  $P(\alpha, \beta, \lambda)$  be the image of the point  $Q(1, 2, 0)$  in the line  $\frac{x-5}{3} = \frac{y-12}{1} = \frac{z-10}{2}$ , then  $(PQ)^2$  is equal to

- Options**
1. 270
  2. 360
  3. 90
  4. 180

**Q.11**  $\lim_{x \rightarrow 0} (1 + 3x)^{\frac{x+2}{x}}$  is equal to

- Options**
1.  $e^9$
  2.  $e$
  3.  $e^3$
  4.  $e^6$

**Q.12** Let  $R_1$  and  $R_2$  be two relations on  $\mathbb{R}^2$  defined as

(a, b)  $R_1$  (c, d) if  $ad - bc \geq 0$

(a, b)  $R_2$  (c, d) if  $a + d \geq b + c$ . Then :

- Options**
1.  $R_1$  is transitive but  $R_2$  is not transitive
  2. Both  $R_1$  and  $R_2$  are transitive
  3.  $R_2$  is transitive but  $R_1$  is not transitive
  4. Neither  $R_1$  nor  $R_2$  is transitive



**Q.13** Let  $A_i(x_i, y_i)$ ,  $i = 1, 2, 3$  be points on the circle  $x^2 + y^2 = 10$  such that  $A_1$  lies in the 1<sup>st</sup> quadrant and it is the image of point  $A_2$  with respect to  $y$ -axis. If the distance of point  $A_1$  from each of the points  $A_2$  and  $A_3$  is 2, then twenty times the area of the  $\Delta A_1 A_2 A_3$  is

- Options**
1. 48
  2. 30
  3. 24
  4. 12

**Q.14** Let  $[t]$  denote the greatest integer function. If  $\int_0^1 [1+x^2+x^4] dx = a$ , then  $36a - 25a^2 + 8a^3 - a^4$  is equal to

- Options**
1. 19
  2. 18
  3. -19
  4. -21

**Q.15** The domain of the function  $f(x) = \cos^{-1}\left(\frac{x^2 - 3x + 2}{x^2 + 2x - 1}\right)$  is :

- Options**
1.  $\left[\frac{3}{5}, \infty\right)$
  2.  $\left(\sqrt{2} - 1, \frac{3}{5}\right]$
  3.  $(-\infty, -1 - \sqrt{2}) \cup (\sqrt{2} - 1, \infty)$
  4.  $\mathbb{R} - \{-\sqrt{2} - 1, \sqrt{2} - 1\}$



**Q.16** For some  $\alpha \in \mathbb{N}$ , let PQR be a triangle with two fixed vertices P(2, 5) and Q( $\alpha$ , -11). If the point R moves on the line  $l_1: 9x + 7y + \alpha = 0$ , then the centroid of  $\Delta PQR$  moves on the line  $l_2$ , which is parallel to  $l_1$  at a distance  $\frac{20}{3\sqrt{130}}$  units from it. If the distance of Q from  $l_2$  is  $\frac{k}{3\sqrt{130}}$ , then k is equal to :

- Options**
1. 117
  2. 131
  3. 129
  4. 133

**Q.17** Let  $\vec{a} = \hat{i} + 2\hat{j} + 3\hat{k}$ ,  $\vec{b} = \hat{i} - \hat{j} + 2\hat{k}$ ,  $\vec{c} = 2\hat{i} + \hat{j} - 4\hat{k}$  be three vectors. If  $\vec{r}$  is the vector such that  $\vec{r} \times \vec{a} = (\vec{b} + \vec{c}) \times \vec{a}$  and  $\vec{r} \cdot (\vec{b} - \vec{c}) = 0$ , then  $\vec{r} \cdot (\hat{i} + \hat{j} - \hat{k})$  is equal to :

- Options**
1. 3
  2. 4
  3. 5
  4. 6

**Q.18** If the plane  $y = \alpha x - \beta z + \gamma$  passing through the point (1, -1, 3) is perpendicular to each of the planes  $2x + y + z = 1$  and  $3x - 2y + 2z = 0$ , then  $\alpha + \beta + \gamma$  is equal to :

- Options**
1. 13
  2. 19
  3. 27
  4. 5





**Q.19** Let  $PL = 8$  units and  $QM = 2$  units be two parallel line segments such that the line segments  $PM$  and  $QL$  intersect at the point  $R$ . If  $PL$  and  $QM$  are tangents to a circle passing through points  $P, Q, R$  then radius of this circle is

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

**Q.20** Which of the following statements is a tautology ?

- Options**
1.  $((p \wedge q) \wedge (\sim q)) \Rightarrow p$
  2.  $((p \Rightarrow q) \vee p) \Rightarrow p$
  3.  $((p \wedge q) \Rightarrow p) \Rightarrow q$
  4.  $((p \Rightarrow q) \vee p) \Rightarrow q$

Section : Mathematics Section B

**Q.21** The number of ways in which 30 identical pens can be distributed among 12 students so that each student gets at least one pen and exactly two students get at least two pens each, is \_\_\_\_\_.

Given --  
Answer :

**Q.22** The curve  $y = x^2 + 1$  divides the area enclosed by the curves  $y + |x| = 3$  and  $y = |x-1|$  in the ratio  $m : n$ , where  $m$  and  $n$  are coprime, then  $m + n$  is equal to \_\_\_\_\_.

Given --  
Answer :



**Q.23** Let  $(1+x^2-x^4)^{12} = \sum_{n=0}^{48} a_n x^n$ . Then  $a_0 + a_2 + a_4 + \dots + a_{44}$  is equal to

Given --  
Answer :

**Q.24** If  $\int \frac{dx}{(3x^2+5)\sqrt{10x^2+7}} = -\frac{1}{\sqrt{580}} \log_e |f(x)| + C$  where C is an arbitrary constant, then  $f(0)$  is equal to

Given --  
Answer :

**Q.25** If the solution curve of the differential equation  $\frac{x+y-2}{x+y-1} \frac{dy}{dx} = \frac{x+y+2}{x+y+1}$ ,  $x+y > 2$  passes through the points  $(\sqrt{2}, \sqrt{2})$  and  $(2, \alpha)$ , then  $2\alpha - \log_e \left( \frac{\alpha^2 + 4\alpha + 2}{6} \right)$  is equal to \_\_\_\_\_.

Given --  
Answer :

**Q.26** If  $S_n$  denotes the sum of first n terms of the series  $7 + 10 + 16 + 25 + 37 + \dots$ , then  $S_{30} - S_{20}$  is equal to \_\_\_\_\_.

Given --  
Answer :

**Q.27** Let the equation of the hyperbola with foci  $(1, 5)$ ,  $(1, -1)$  and eccentricity  $\sqrt{3}$  be  $x^2 - 2y^2 + ax + by + c = 0$ . Then  $|a + b + c|$  is equal to \_\_\_\_\_.

Given --  
Answer :

**Q.28** If  $[t]$  denotes the greatest integer  $\leq t$ , then the number of points, at which the function  $f(x) = [x+x^3] + |x-x^3| + |x + \frac{1}{2}|$  is not differentiable in the open interval  $(-10, 10)$ , is \_\_\_\_\_.

Given --  
Answer :



**Q.29** Let  $\alpha_1, \alpha_2$  be the values of  $\alpha$  such that the distance between the point  $(2, 4, 3)$  and the plane  $3x + y + \alpha z + 10 = 0$  is  $\sqrt{35}$  units. Then the area of the triangle with vertices  $(\alpha_1, \alpha_2, 0)$ ,  $(\alpha_2, \alpha_1, 0)$  and  $(\frac{164}{13}, 5, 0)$  is \_\_\_\_\_ unit<sup>2</sup>.

Given --  
Answer :

**Q.30** Let O be the origin and let the vectors  $\vec{OA} = -3\hat{i} + 7\hat{j} + 5\hat{k}$ ,  $\vec{OB} = -5\hat{i} + 7\hat{j} - 3\hat{k}$  and  $\vec{OC} = \hat{u}$  represent three sides of a parallelepiped, where  $\hat{u}$  is a unit vector in the xy- plane. If the maximum volume of the parallelepiped is  $2\sqrt{\alpha}$ , then  $\alpha$  is equal to \_\_\_\_\_.

Given --  
Answer :

Section : Aptitude Test

**Q.31** Who is the architect of the Lotus Temple?

- Options
1. Richard Meyer
  2. Mohse Safdi
  3. Fariborz Sahba
  4. Louis I Kahn



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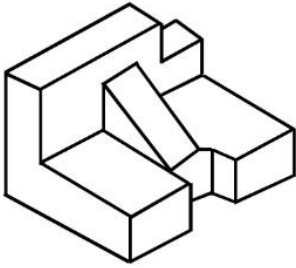


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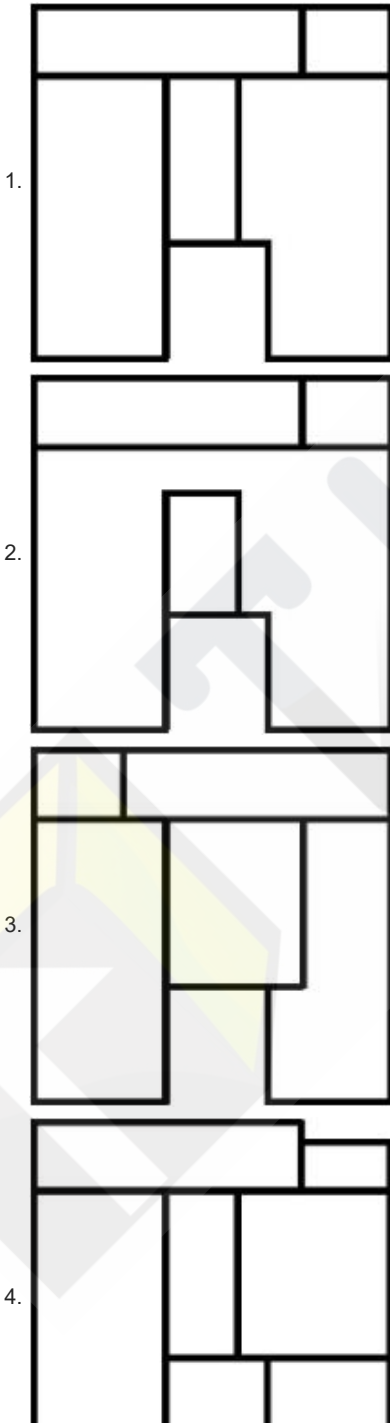


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**Q.32** The 3D problem figure shows the view of an object. Identify its appropriate top view from the answer figures.



Options



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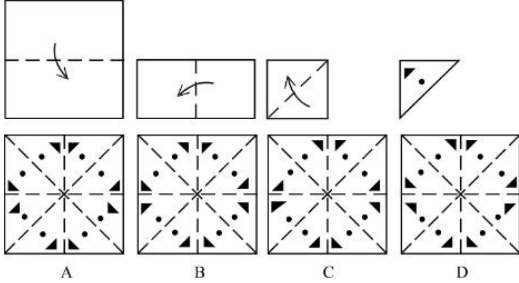


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**Q.33** Sheet is folded in marked format and cut led at last as shown. Identify from the options below, how the pattern will be made when it's fully unfold?



- Options 1. **A**  
 2. **D**  
 3. **C**  
 4. **B**

**Q.34** Which one of these is not a complimentary colour?

- Options 1. Violet-Yellow  
 2. Blue-Green  
 3. Red-Green  
 4. Blue-Orange





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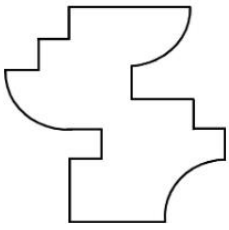
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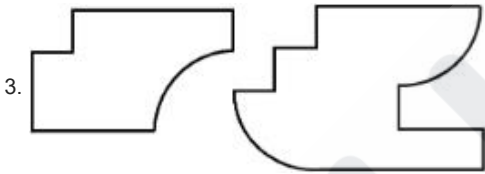
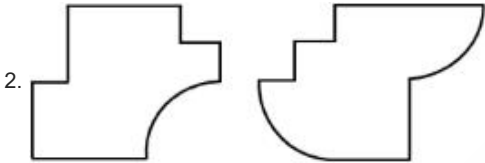
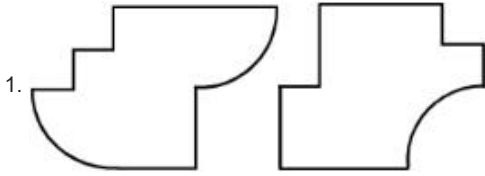
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**Q.35** If the question figure is cut into two parts, which of the answer figures complete the question figure without any overlappings?



**Options**



Q.36 Match List I with List II

	LIST I		LIST II
A.		I.	Empire state Building
B.		II.	Hagia Sophia
C.		III.	Sydney Opera House
D.		IV.	Colosseum

Choose the correct answer from the options given below:

- Options
1. A-I, B-II, C-III, D-IV
  2. A-IV, B-III, C-II, D-I
  3. A-II, B-I, C-IV, D-III
  4. A-I, B-III, C-IV, D-II



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Q.37 Qutub-Minar in Delhi was built by:

- Options
1. Shah Jahan
  2. Akbar
  3. Jahangir
  4. Qutub ud-din Aibak

Q.38 Choose the correct option among the following:

Petronas Tower is situated in:

- Options
1. Kuala Lumpur
  2. New York
  3. Dubai
  4. Paris



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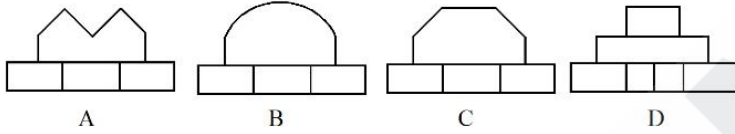
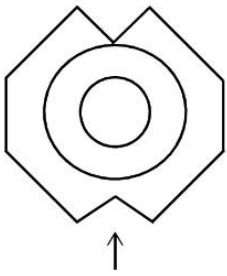


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**Q.39** Identify the correct elevation when you look into the object from the marked arrow side of the plan of the object.



- Options
1. **B**
  2. **C**
  3. **A**
  4. **D**



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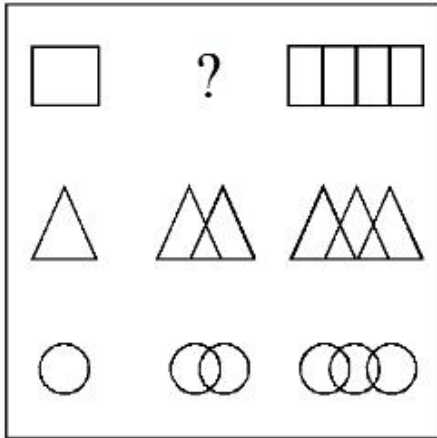


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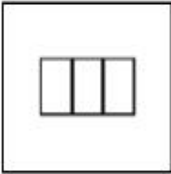
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Q.40 In the figure mentioned below find the missing series:-

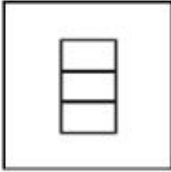


Options

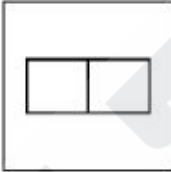
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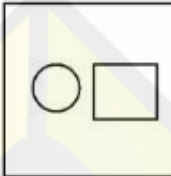
2.



3.



4.



**Q.41** "NIFT" National Institute of Fashion Technology, Delhi is designed by

- Options**
1. B.V Doshi
  2. Bimal Patel
  3. Raj Rewal
  4. C.P Kukreja

**Q.42** Adobe is a

- Options**
1. Type of floor finish
  2. Type of Brick
  3. Type of cement
  4. Type of paint

**Q.43** Dhajji-Dewari is a construction style popular predominantly in \_\_\_\_\_.

- Options**
1. Mountainous Region
  2. Coastal Areas
  3. Plains
  4. Desert Areas



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**Q.44** Which direction in the southern hemisphere would you get glare free (diffused) light throughout the year?

- Options**
1. South
  2. West
  3. East
  4. North

**Q.45** Which are often referred as 'twin cities' of Odisha?

- Options**
1. Puri-Cuttack
  2. Bhubaneswar-Puri
  3. Bhubaneswar-Rourkela
  4. Bhubaneswar-Cuttack



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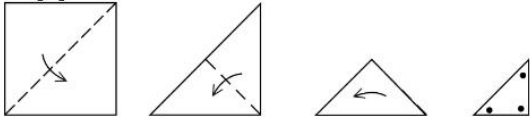


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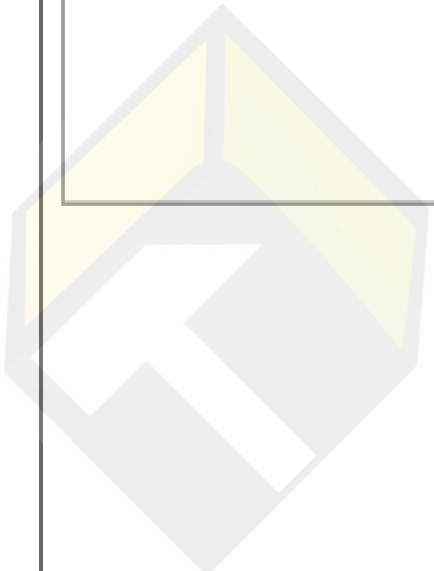
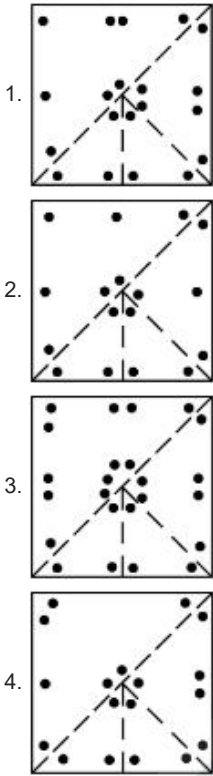


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**Q.46** A paper is folded in a given pattern and it is cut at the end. Identify which pattern is formed when the paper is unfold.



Options



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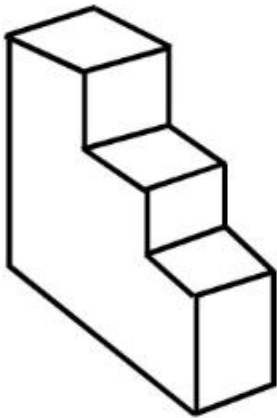


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Q.47 How many surfaces does the object have?



- Options
1. 8
  2. 10
  3. 11
  4. 9

Q.48 Find the missing number in given series.

16, 33, 65, 131, 261, (.....)

- Options
1. 521
  2. 524
  3. 520
  4. 523



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**Q.49** A small lift for carrying only a small load is known as:

- Options**
1. A Jockey Boy
  2. A push upper
  3. A Dumb Waiter
  4. A dead Bearer

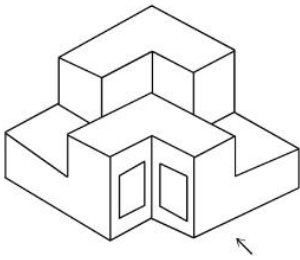
**Q.50** A residential building has 15 floors. The height of ground floor is 4.2 meter (including length and slab thickness). Rest all other floors are of 3.3 meter high (including slab thickness). What is the total height of the building (from ground to terrace) in meters?

- Options**
1. 50 meter
  2. 51.6 meter
  3. 50.4 meter
  4. 45.6 meter

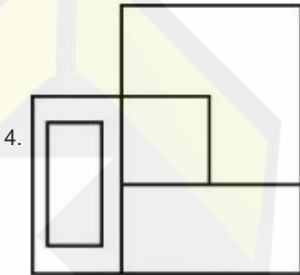
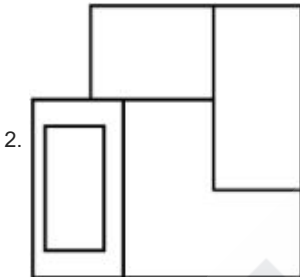
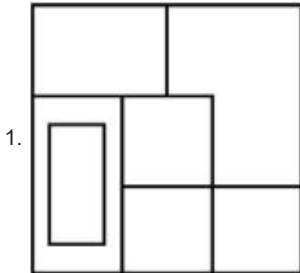




**Q.51** The question figure shows the 3-D view of an object. Identify the correct view, looking in the direction of arrow.



Options



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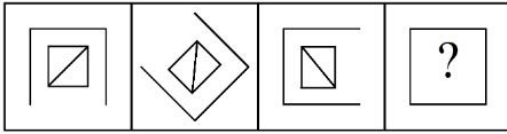
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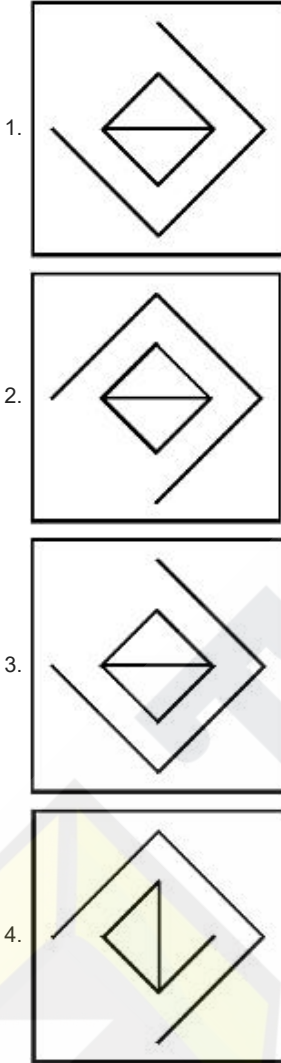
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**Q.52** Following question consists of problem figures followed by answer figures. Select a figure from amongst the answer figures which will continue the same series or pattern as established by the problem figures.

PROBLEM FIGURES



Options



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**Q.53** Which is the correct chronology of Human Civilizations in terms of their existence?

- Options**
1. Mesopotamia-Egyptian-Harappa-Chinese
  2. Mesopotamia-Chinese-Harappa-Egyptian
  3. Mesopotamia-Harappa-Egyptian-Chinese
  4. Egyptian-Mesopotamia-Harappa-Sumerian

**Q.54** Chandigarh is an example of which type of city planning.

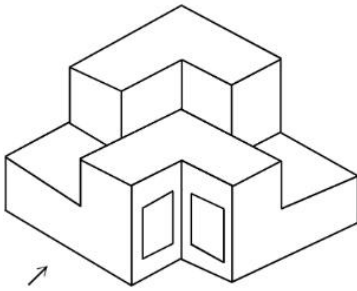
- Options**
1. Linear
  2. Grid-iron
  3. Organic
  4. Radio Centric

**Q.55** The scale of a map is 1:1000. If a car travels 7 cm from point 'A' to point 'B' on the Map. Then how much the car has travelled in original:-

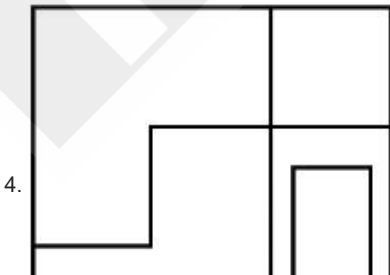
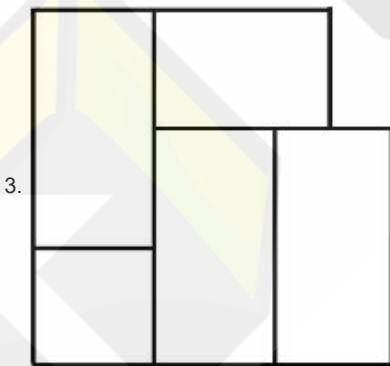
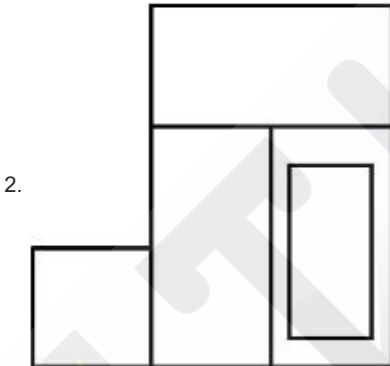
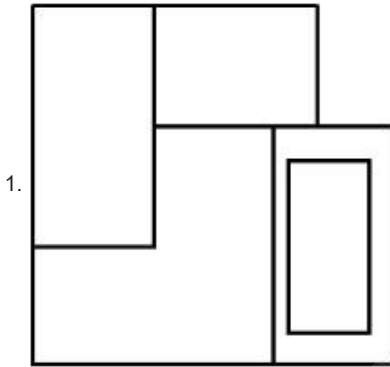
- Options**
1. 70 meter
  2. 0.7 km
  3. 7000 mm
  4. 7 km



**Q.56** The question figure shows the 3-D view of an object. Identify the correct view, looking in the direction of arrow.



Options



Q.57 Match List I with List II

LIST I		LIST II	
A.	PMUY	I.	KAUSHAL VISKAS YOJNA
B.	PMAY	II.	JAN DHAN YOJANA
C.	PMKVY	III.	UJWALA YOJANA
D.	PMJDY	IV.	AWAS YOJANA

Choose the correct answer from the options given below:

- Options
1. A-IV, B-III, C-I, D-II
  2. A-I, B-III, C-II, D-IV
  3. A-IV, B-II, C-III, D-I
  4. A-III, B-IV, C-I, D-II

Q.58 Given below are two statements:

**Statement I :** Chandigarh is the first planned city of Independent India





**Statement II :** Chandigarh city was designed by Swiss French architect Le Corbusier

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

- Options
1. Statement I is correct but statement II is incorrect
  2. Statement I is incorrect but statement II is correct
  3. Both Statement I and Statement II are incorrect
  4. Both Statement I and Statement II are correct



Q.59 Match List I with List II

LIST I		LIST II	
A.		I.	Tesla
B.		II.	Ferrari
C.		III.	Porsche
D.		IV.	Toyota

Choose the correct answer from the options given below:

- Options
1. A-III, B-II, C-I, D-IV
  2. A-II, B-III, C-I, D-IV
  3. A-IV, B-III, C-II, D-I
  4. A-IV, B-I, C-II, D-III



# JEE RESULTS

## PAPER 2 2022



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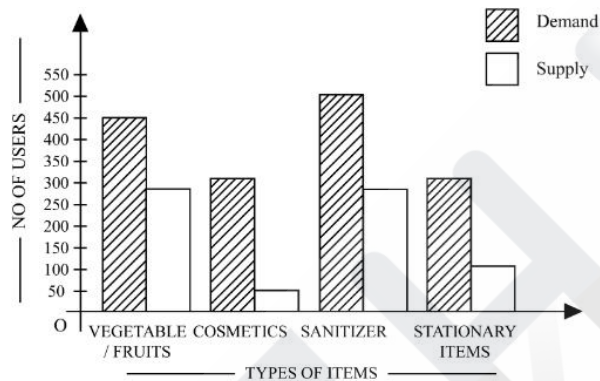


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Q.60 The Konark Temple is located in which state?

- Options
1. Rajasthan
  2. Odisha
  3. Karnataka
  4. Madhya Pradesh

Q.61



The diagram shows the supply and demand of different users for different items. Which of the following is/are correct?

- A. Sanitizer only meet 50% of the demand
- B. Cosmetics has the least supply among all.
- C. Among all, two items have equal demand but difference in supply
- D. Among all, two items have equal supply and two items have equal demand.

Choose the correct answer from the options given below:-

- Options
1. B, C and D only
  2. A and B only
  3. B and D only
  4. A and C only



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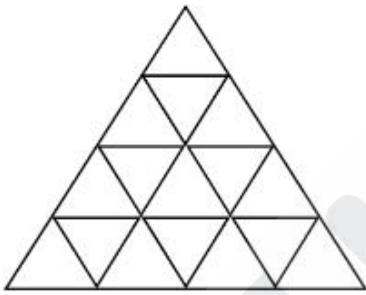
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Q.62 Which stone is used for roofing in mountainous regions?

- Options
1. Sand Stone
  2. Shale
  3. Marble
  4. Granite

Q.63 How many triangles are there in given figure:-



- Options
1. 25
  2. 24
  3. 26
  4. 27



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**Q.64** Given below are two statements:

**Statement I :** Red, Blue and Yellow are the primary colours of a colour wheel.

**Statement II :** The colours which are positioned opposite to each other in a colour wheel are known as complementary colours.

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

- Options**
1. **Statement I is correct but statement II is incorrect**
  2. **Statement I is incorrect but statement II is correct**
  3. **Both Statement I and Statement II are correct**
  4. **Both Statement I and Statement II are incorrect**

**Q.65** Given below are two statements:

**Statement I :** Glass has low thermal conductivity

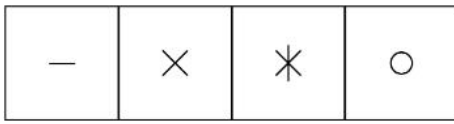
**Statement II :** Glass can absorb, refract and transmit light.

In the light of above statements, choose the most appropriate answer form the options given below

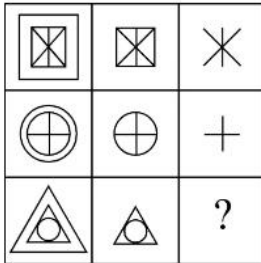
- Options**
1. **Statement I is correct but statement II is incorrect**
  2. **Both Statement I and Statement II are incorrect**
  3. **Statement I is incorrect but statement II is correct**
  4. **Both Statement I and Statement II are correct**



**Q.66** Select a suitable figure from the four alternatives which will come in the empty box.



(A)      (B)      (C)      (D)



- Options 1. A  
2. B  
3. D  
4. C

**Q.67** If you have to build on the seashore in Goa, which rooms would have the best view of the sea?

- Options 1. Those facing South  
2. Those facing North  
3. Those facing West  
4. Those facing East



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Q.68 In which State of India, Robbers cave is situated:

- Options
1. Uttar Pradesh
  2. Uttarakhand
  3. Himachal Pradesh
  4. Madhya Pradesh



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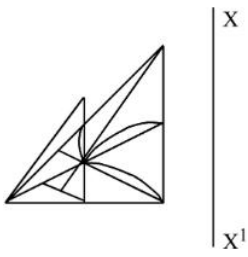


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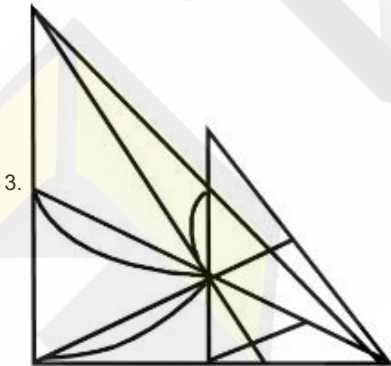
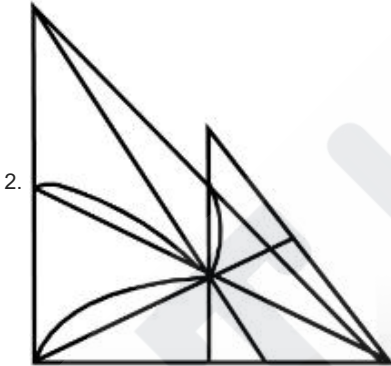
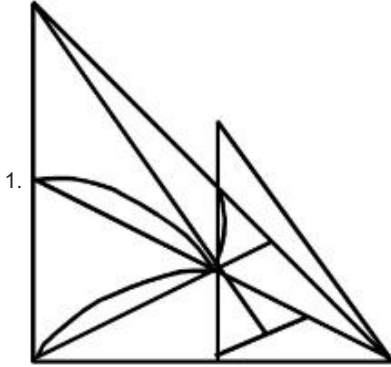


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Q.69 Identify the true mirror image of the figure amongst the answer figures with respect to X-X



Options



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**Q.70** A land size of 80 meter  $\times$  40 meter for a house design is drawn on paper at a scale of 1:100, then what size is drawn on paper to represent the land?

- Options**
1. 8 meter  $\times$  4 meter
  2. 8 centimeter  $\times$  4 centimeter
  3. 80 meter  $\times$  40 meter
  4. 4 meter  $\times$  2 meter



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# KEAM B.ARCH RESULTS 2022



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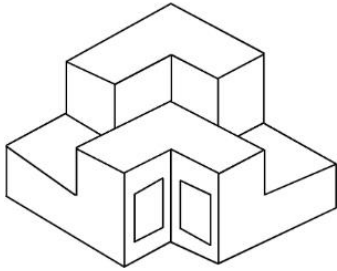


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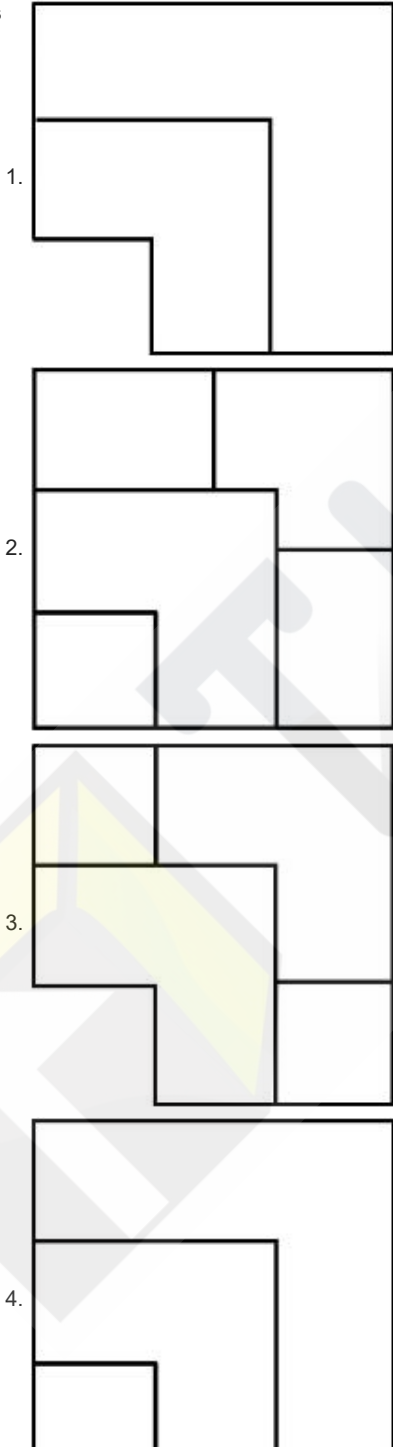


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Q.71 From the given options below, choose the correct plan of the 3-D object, when viewed from the top.



Options



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Q.72 Match List I with List II

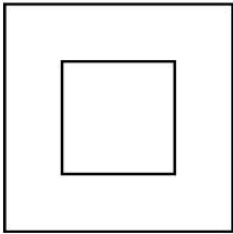
LIST I		LIST II	
A.	CP Kukreja	I.	IIM Ahmedabad
B.	Louis I Kahn	II.	Jawahar Lal Nehru University
C.	B.V Doshi	III.	IIT Kanpur
D.	Achyut Kanvinde	IV.	IIM Bengaluru

Choose the correct answer from the options given below:

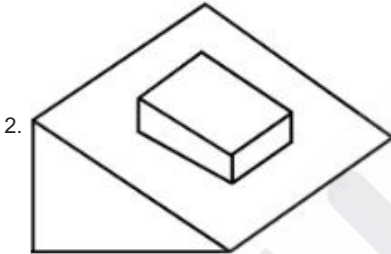
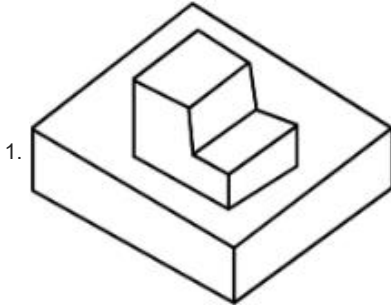
- Options
1. A-IV, B-II, C-I, D-III
  2. A-I, B-IV, C-III, D-II
  3. A-II, B-I, C-IV, D-III
  4. A-III, B-I, C-II, D-IV



**Q.73** Question figure shows top view/ plan of an object. Identify the INCORRECT 3D view from the given answers figure.



Options



Q.74 Find the odd one out:-

7, 9, 25, 32, 43, 59

- Options
1. 25
  2. 32
  3. 59
  4. 9

Q.75 Identify the mirror image of the given word:-

SUCCESS

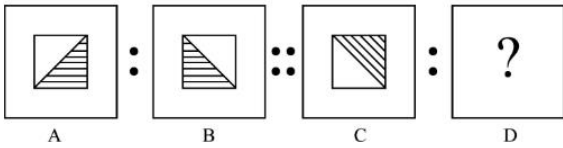
- Options
1. SUCCESS
  2. SUECCUS
  3. SSECCUS
  4. SUECC22

Q.76 Who is the architect of the famous "Jawaharlal Kala Complex" in Jaipur?

- Options
1. Hafeez Contractor
  2. Charles Correa
  3. Raj Rewal
  4. Achyut Kanvinde



**Q.77** The second figure in the first part of the problem figures bears certain relationship to the first figure. Similarly, one of the figures of answer figures bears the same relationship to the first figure of the second part. Identify the correct option from the given answer figures.



Options

- 1.
- 2.
- 3.
- 4.



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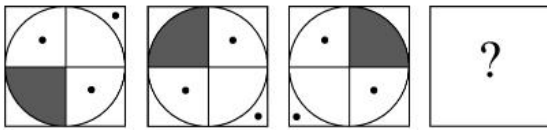


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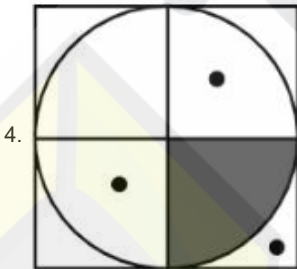
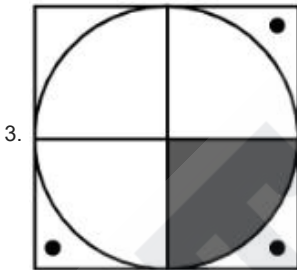
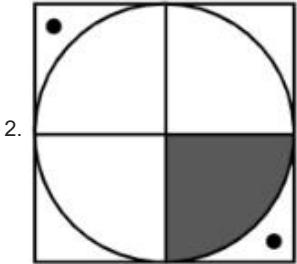
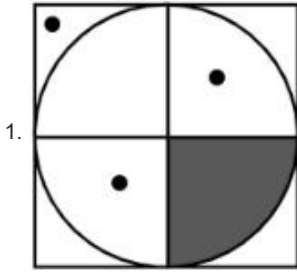


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Q.78 Choose the correct option amongst the answer figures which complete the series.



Options



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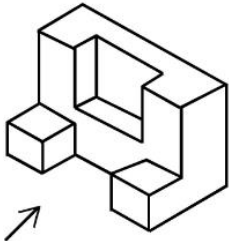


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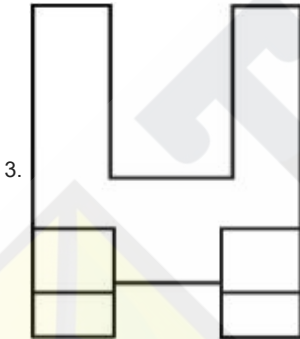
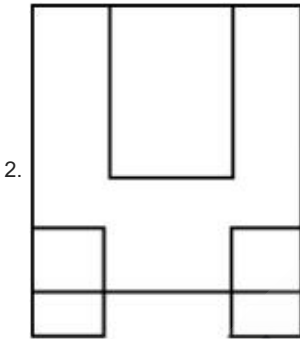
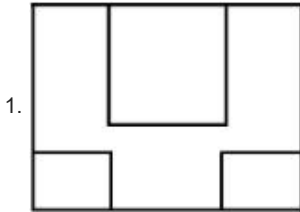


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**Q.79** The 3D figure shows the view of an object. Looking in the direction of arrow, identify the most appropriate elevation from the given answer figures.



Options



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**Q.80** In a code language if ROMAN is written as TQOCP: then ITALY is.....

- Options**
1. KVCNA
  2. KUCLA
  3. KWCNB
  4. KVCMA

Section : **Drawing**

**Q.** Draw a proportionate sketch of given reference image. Use black and white rendering techniques of your choice.

**81**



**Q.** Use the basic 2D shapes found in a motor cycle and create an interesting 2D composition of your choice, colour with any three colours of your choice.

**82**



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DEVIKA SAJITH

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SCORE  
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MEGHNA DCRUZ

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SCORE  
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NANDANA K VENU

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SCORE  
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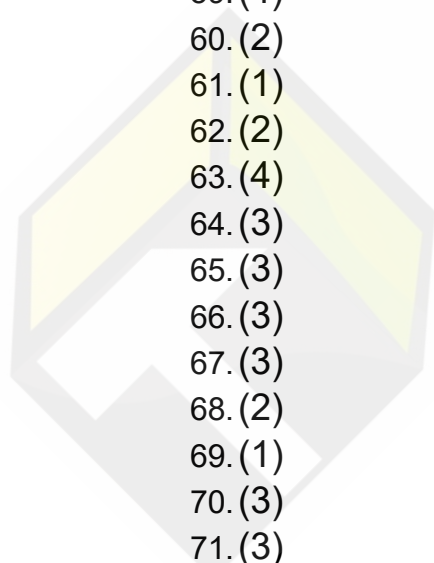


## ANSWER KEY

1. (3)
2. (1)
3. (3)
4. (3)
5. (4)
6. (1)
7. (4)
8. (3)
9. (4)
10. (2)
11. (4)
12. (2)
13. (3)
14. (1)
15. (1)
16. (2)
17. (3)
18. (3)
19. (1)
20. (1)
21. 1122
22. 24
23. 12
24. 1
25. 4
26. 9565
27. 5
28. 2020
29. 35
30. 1073
31. (3)
32. (1)
33. (1)
34. (2)
35. (3)



- 36. (3)
- 37. (4)
- 38. (1)
- 39. (2)
- 40. (1)
- 41. (1)
- 42. (2)
- 43. (1)
- 44. (1)
- 45. (4)
- 46. (3)
- 47. (2)
- 48. (4)
- 49. (3)
- 50. (3)
- 51. (2)
- 52. (2)
- 53. (1)
- 54. (2)
- 55. (1)
- 56. (1)
- 57. (4)
- 58. (4)
- 59. (4)
- 60. (2)
- 61. (1)
- 62. (2)
- 63. (4)
- 64. (3)
- 65. (3)
- 66. (3)
- 67. (3)
- 68. (2)
- 69. (1)
- 70. (3)
- 71. (3)
- 72. (3)
- 73. (1)
- 74. (2)



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75.(4)

76.(2)

77.(3)

78.(1)

79.(1)

80.(1)



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