

**CAREERS 360**

**PREPARATION** **Series**

**UCEED 2025**

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**Official Question  
Paper with Solutions**

**UCEED 2025 Solutions**

**CAREERS** 360

**PART - A**  
**Numerical Answer Type(NAT) Questions**

**Q.01** A painter mixes white and black paints to create different shades in two different buckets. He prepares 10 kg in one bucket with 20% black paint in it. He then prepares 20 kg of another shade in the second bucket with 20% black paint in it. He pours the second bucket into the first one. What is the percentage of black paint in the mixture?

**Solution :** 20%

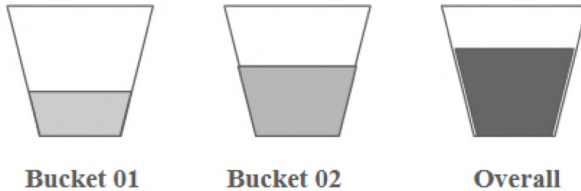
**Bucket 1:** black paint =  $10 \times 0.2 = 2$  kg

**Bucket 2 :** black paint =  $20 \times 0.2 = 4$  kg

Total weight of the mixture =  $10 + 20 = 30$  kg

Total black paint =  $2 + 4 = 6$  kg

Percentage of black paint =  $\frac{\text{total black paint}}{\text{total weight of mixture}} \times 100 = \frac{6}{30} \times 100 = 20\%$



**Q.02** *“Betty bought some butter but the butter was too bitter, so she put a little gummy to make the bitter butter yummy.”*

In the above sentence, if you replace every letter ‘t’ with letter ‘b’, what is the total number of instances in which the same letter appears at least twice in a word?

**Solution:** 14 times

Bebby bough**b** some bu**b**ber bu**b** b**b**e bu**b**ber was boo bi**b**ber, so she pu**b** a li**b**ble gummy bo make b**b**e bi**b**ber bu**b**ber yummy

Count all the words where at least one letter is repeated after the replacement.

Example: in the word bebby “bby” ( b is repeated), “boo” ( o is repeated), and so on. The number of such words is 14.

**Q.03** In the  $3 \times 3$  square on the left, the numbers from 1 to 9 have been filled so that the sum in each row / column / diagonal adds up to 15. If the same exercise is to be carried out for the  $4 \times 4$  square, using the numbers from 1 to 16, what will be the sum of the numbers in each row / column / diagonal?

8	1	6
3	5	7
4	9	2

7			14
2			11
9		15	4

**Solution: 34**

8	1	6
3	5	7
4	9	2

7	12	1	14
2	13	8	11
16	3	10	5
9	6	15	4

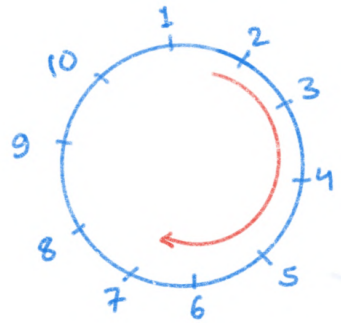
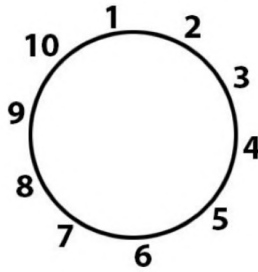
Magic constant  $M$  for an  $n \times n$  magic square can be calculated using the formula:  $M = n(n^2 + 1)/2$

For a  $4 \times 4$  magic square,  $n=4$ .

$$M = 4(4^2+1)/2 = 34$$

So the sum of the numbers in each row, column or diagonal in the  $4 \times 4$  magic square is **34**

**Q.04** 10 people are standing in a circle. Each person is assigned a number as shown in the figure below. The first person (numbered 1) is removed. Thereafter, in the clockwise direction, every third person is removed and this is repeated till only two people are left. What is the sum of the numbers assigned to the two people who are left at the end?



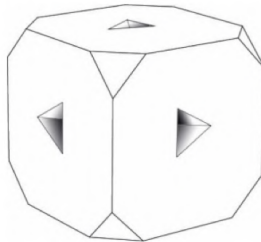
**Solution:** 10

- Step 1:** Start with people numbered 1 to 10. First, person one is removed.
- Step 2:** Keep removing the 3rd person after each step
- Step 3:** After removing 1, the subsequent removal is 4, 7, and so on.
- Step 4:** Continue this until only two people are left.

**Finally, two people left:**

The process leaves 8 and 2 as the last two people. Their sum =  $8 + 2 = 10$

**Q.05** A cube  $4\text{ cm} \times 4\text{ cm} \times 4\text{ cm}$  has all its corners chamfered as shown in the figure below. On each of its faces it has got a small tetrahedral notch having edges of  $1\text{ cm}$  each. What is the sum of the number of vertices and the number of edges in this solid?



**Solution: 120**

**1. Vertices:**

The cube has eight vertices.

Each corner is cut off, and three vertices are added per corner.

Total vertices =  $8 + (8 \times 3) = 32$

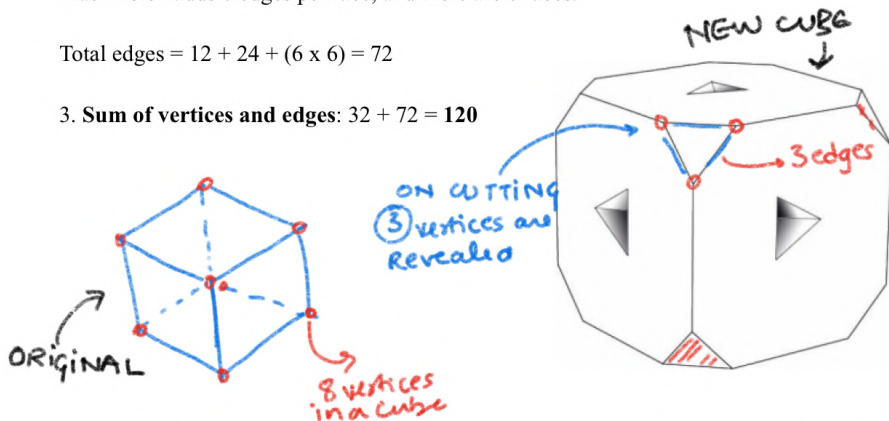
**2. Edges:**

The cube starts with 12 edges. Cutting the corners splits each edge into 2 parts, so  $12 \times 2 = 24$  edges.

Each notch adds 6 edges per face, and there are 6 faces.

Total edges =  $12 + 24 + (6 \times 6) = 72$

**3. Sum of vertices and edges:  $32 + 72 = 120$**



**Q.06** With a straight cut you can slice a circular piece of paper into two pieces. A second cut that crosses the first cut will produce a maximum of four pieces. What is the maximum number of pieces that you can get with a total of four straight cuts?

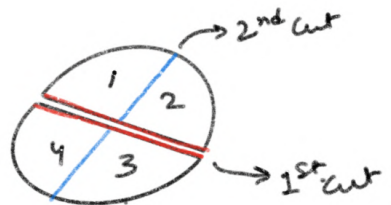
**Solution : 11 pieces**

**Note :** 1 cut gives 2 pieces

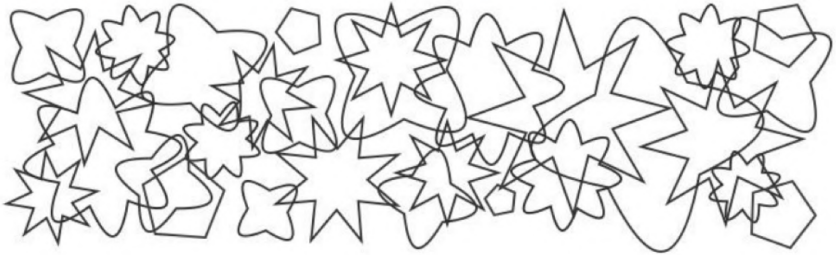
2 cuts gives 4 pieces( they cross)

3 cuts gives 7 pieces( each cuts all previous ones)

4 cuts gives 11 pieces.



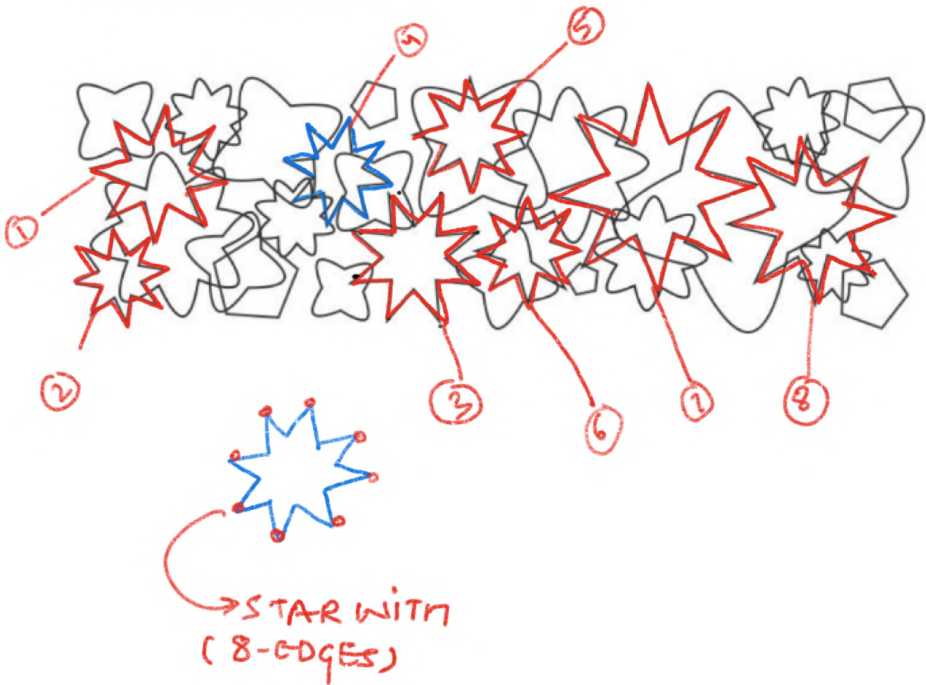
**Q.07** What is the highest number of occurrences of a shape in the figure shown?



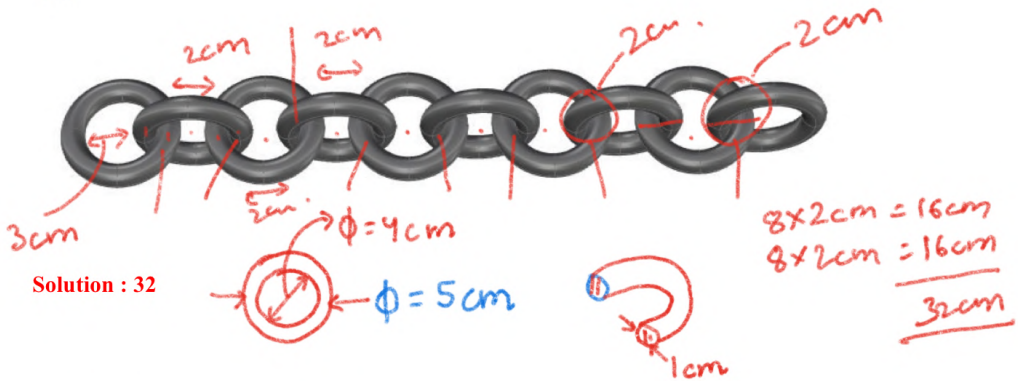
**Solution: 09 stars**

Among all, the star shape with 8 points appears the most.

There are nine stars with 8 points.



**Q.08** Each of the rings in the chain in the given figure has an outer diameter of 5 cm and a cross-sectional diameter of 1 cm. What is the maximum end to end length of the chain in cm?



**Solution :** 32

**Q.09** If 1 inch = 25 mm = 6 pica and 1 pica = 12 points = 16 pixels, what is 6 points + 2 inches + 3 picas + 8 pixels + 25 mm, represented in pixels?

Answer: 352 pixels

Convert each unit to pixels : **6 points + 2 inches + 3 picas + 8 Pixels + 25 mm**

Solving one by one

**6 points:**

Since 12 points = 16 pixels,

6 points =  $16/12 \times 6 = 8$  pixels (approximately).

**2 inches:**

1 inch = 96 pixels (because 1 inch = 6 pica and 1 pica = 16 pixels).

2 inches =  $96 \times 2 = 192$  pixels.

**3 picas:**

1 pica = 16 pixels,

3 picas =  $3 \times 16 = 48$  pixels.

**8 pixels:** No conversion is needed.

**25 mm:** 1 mm =  $96/25 = 4$  pixels (approximately).

25 mm =  $25 \times 4 = 96$  pixels

Now, sum up all the pixel values:

**$8 + 192 + 48 + 8 + 96 = 352$**

**Q.10** What number will replace the question mark?



**Answer:** 120

Looking at the numbers on the wheel: 3, 4, 5, 6, 24, 60, 210.

- Each number is the factorial of a number or a multiple of factorials
- $3! = 6$ ,  $4! = 24$ ,  $5! = 120$ ,  $6! = 720$

The missing number is 5 !

Which is  $5 \times 4 \times 3 \times 2 \times 1 = 120$

**Q.11** What three-digit number can be made from the digits 2, 3, 5, and 7, such that no two digits of the three-digit number are the same and the three-digit number is divisible by each of the digits in it?

**Solution:** 735

Let's try combinations of 7, 3 and 5

- Divisible by 7 (  $735/7 = 105$  )
- Divisible by 3 (  $7 + 3 + 5 = 15$  )
- Divisible by 5 ( ends in 5 )

So this number **735** matches all rules

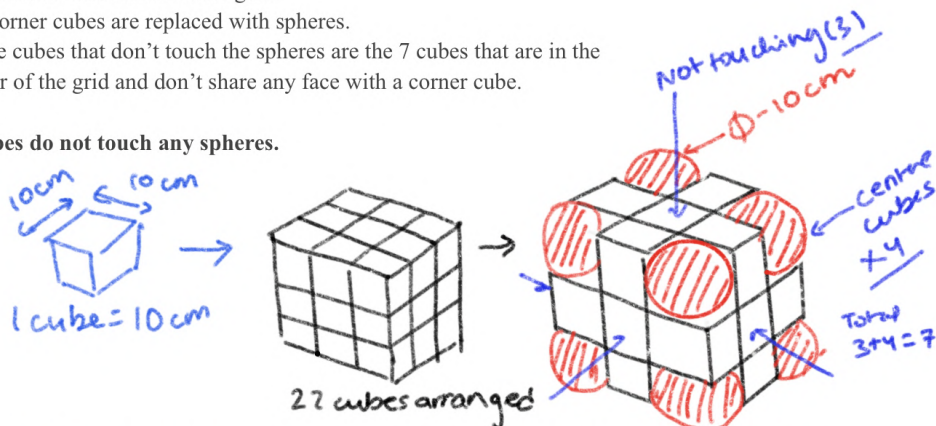
**Q.12** 27 cubes of edge 10 cm are arranged to create a larger cube. If the cubes at the eight corners are replaced with spheres of diameter 10 cm, what is the minimum number of cubes that do not touch any of the spheres?

**Answer:** 120

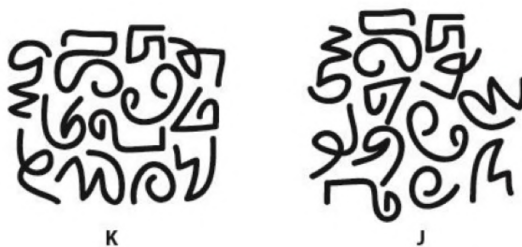
There are 27 cubes in a 3x3x3 grid.

- 8 corner cubes are replaced with spheres.
- The cubes that don't touch the spheres are the 7 cubes that are in the center of the grid and don't share any face with a corner cube.

7 cubes do not touch any spheres.

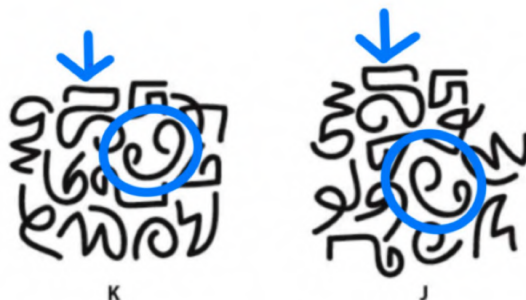


**Q.13** Some of the shapes in the image K are either flipped or rotated in the image J. What is the number of flipped shapes in image J?



**Answer :** 02

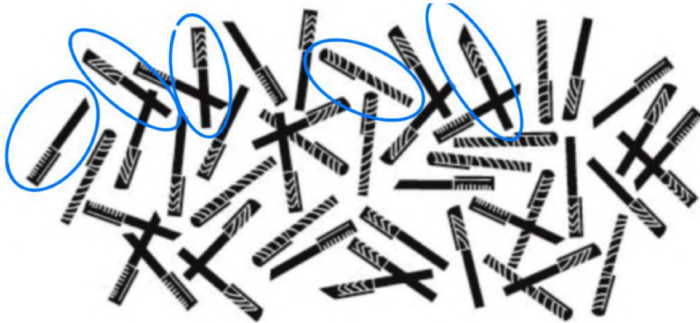
These two are the flipped letters which are shown through arrows and circles. 14. 5 different patterns of pen are present in the given figure.



Q.14 How many different patterns of pens are present in the given figure?



Answer : 05 Different Patterns



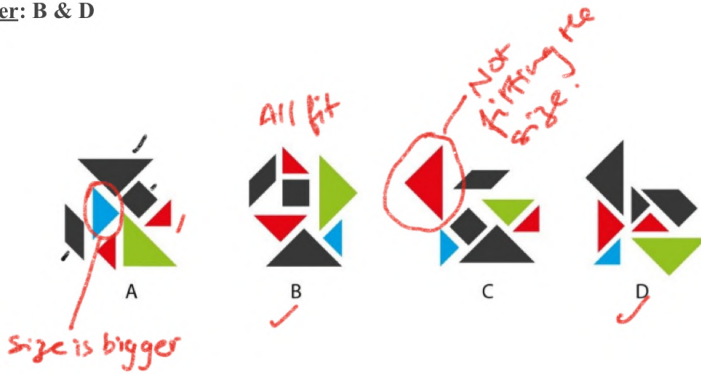
ON CLOSE OBSERVATION,  
05 DIFFERENT PATTERNS OF COMB  
ARE IDENTIFIED AS MARKED.

Multiple Select Questions (MSQ)

Q.15 Which of the options below can be rearranged to make image Q?



Answer: B & D



Q.16 The Tropic of Cancer passes through which of the states shown below?



**Answer: A, C and D**

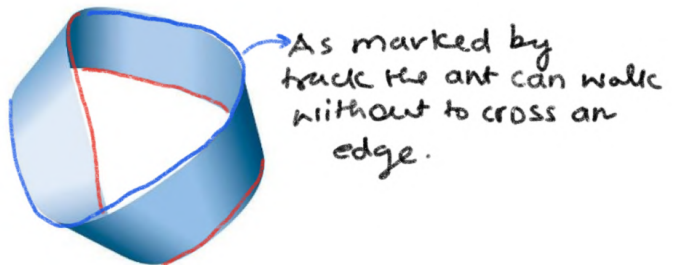


The identified states are **Gujarat, Madhya Pradesh and West Bengal** respectively

(Reference Image Source:  
<https://bharathgyanblog.wordpress.com>)

**Q.17** Which of the following is / are TRUE for the strip of paper shown in the image?

- A. It has two edges.
- B. An ant can walk all over the surface of the strip without having to cross an edge.
- C. A rotating belt that is similar to the strip of paper will have a uniform wear and tear.
- D. This is an optical illusion that can be created as a 2D image but is not possible in 3D.



As marked by  
trace the ant can walk  
without to cross an  
edge.

Answer: B & C

\* From the given option, it can be deduced that due to the continuity of the edge having no edge, options B & C stand firm in the argument.



C. For a belt like this both the top and bottom layer of the strip is wearing-

**Q.18** Which of the options is/ are CORRECT?

- A. The cap of a water bottle is tightened by rotating it in the clockwise direction (as seen from the top).
- B. To turn on a tap, the tap head is rotated clockwise; to turn it off it is rotated counter-clockwise (as seen from the top).
- C. To loosen a nut of a car wheel, a spanner is turned counter-clockwise clockwise (from the point of view of the person using the spanner).
- D. The earth as seen from the North Pole rotates clockwise about its axis.

Answer : A & C

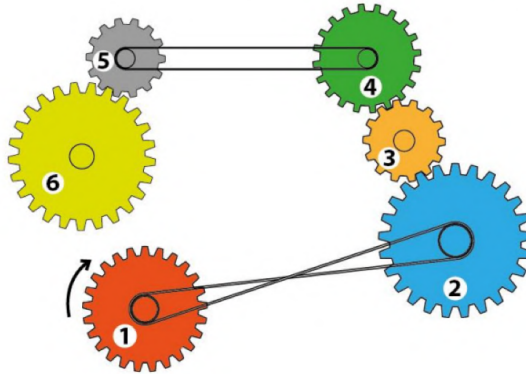
**Option A:** The cap for tightening follows a right hand thread, by tightening in clockwise direction possible only.

**Option C:** The loosening follows the left hand threading, thus turning a spanner in Counter-Clockwise direction.



To open tap-  
the head need to  
be turned counter  
clockwise.

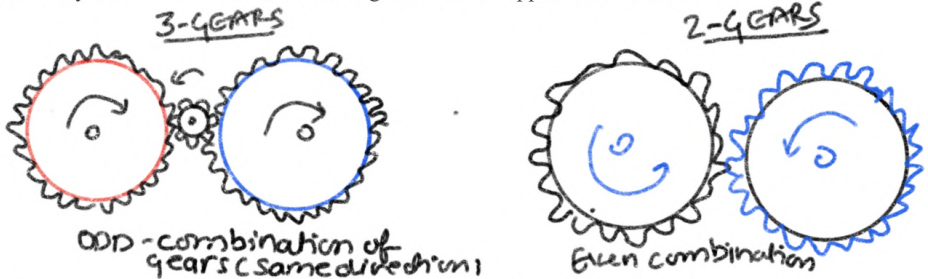
**Q.19** In the image below, gear 1 rotates in the direction of the arrow. Which of the statements is / are CORRECT?



**Answer :** A & C

**\*Gears Logic:** A combination of odd sets of gears rotate in the same direction (e.g. in a combination of 03 gears the first and third rotates in the same direction).

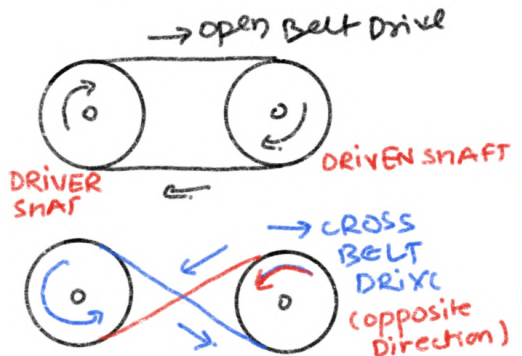
Similarly a combination of even sets of gears rotate in opposite directions.



**Belt Drive Logic:** A continuous belt drive in the same direction like gear 5 & gear 4 will rotate in the same direction, but a loop in belt like between 1 & 2 the gear 1 & 2 rotate in clockwise and anticlockwise direction.

**Option A :**

- Gear 1 rotates in one direction.
- Gear 2 rotates opposite to Gear 1.
- Gear 3 rotates opposite to Gear 2.
- Gear 4 rotates opposite to Gear 3.
- Gear 5 rotates opposite to Gear 4.
- Gear 6 rotates opposite to Gear 5.



Since there are an odd number of direction changes, Gear 1 and Gear 6 rotate in the same direction.

• **Option C**

Gear 1 rotates in one direction.

Gear 2 rotates opposite to Gear 1.

Gear 3 rotates opposite to Gear 2.

Gear 4 rotates opposite to Gear 3.

Since there are an even number of direction changes, Gear 1 and Gear 4 rotate in the opposite direction

**Q.20** Which of the options does NOT/ do NOT match the pieces in the jigsaw puzzle shown in image K?



K



A



B



C

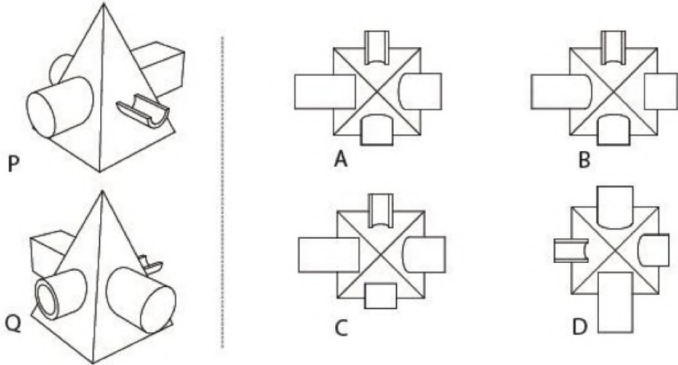


D

**Answer:** A & D (To identify that options are not matching)

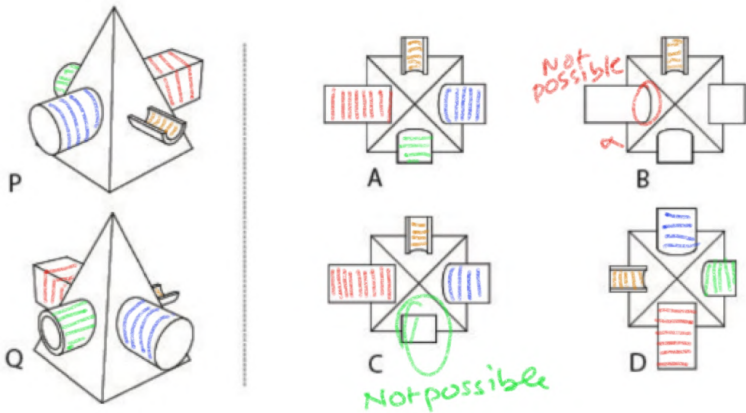
\*It is an observation-based question where the approach could be counting the corners of the given options and proportional understanding of the shapes.

**Q.21** P and Q show two different views of the same solid object. Which of the options represent(s) the top view of the solid object?



**Answer:** A & D

**\*In such questions, look for the alignments of the cross-sections through the pyramid, as well as the size and proportions of all cross-section elements.**



**Q.22** Which consultant(s) to the Government of India suggested that the metal *lota* (shown in the given figure) used by many Indians is an appropriate symbol for indigenous design traditions?



- A. Walter Gropius
- B. Charles Eames
- C. Hannes Meyer
- D. Ray Eames

**Answer:** B & D

**\*The India report: Provided by Charles and Ray Eames in 1958.**

The report emphasises conscious decision-making in a communication-driven society, highlighting India's adaptability to rapid changes. Using the *Lota* as an example, it illustrates the design process, considering factors like usability, balance, and fluid dynamics while addressing evolving societal needs like food, shelter, and population challenges. ( **Ref Image:** NID archives)

A promotional graphic for a report titled "A report to encourage design innovation in India". The graphic features a vertical sidebar on the left with a "Must read" section containing a thumbnail of the lota. The main content area has a white background with a yellow border. It includes a title, a photograph of two people in wireframe suits, a portrait of PM Jawaharlal Nehru, and a paragraph of text.

**A report to encourage design innovation in India**



After India's independence, PM **Jawaharlal Nehru** commissioned **Charles & Ray Eames** (industrial designers) to write a report on how to encourage design innovation in India.

**Q.23** Given below are the silhouettes of two iconic figures in Indian history. Which of the following statements is / are TRUE?



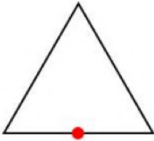
- A. Both had degrees in law
- B. Both spent time in South Africa
- C. The birthdays of both are in the same month
- D. Both dressed in a manner that expressed their ideology

Answer : A & D

Comparing the facts for each statement in a tabular format. Options A & D are the most appropriate options.

Statement	Mahatma Gandhi	Dr. B. R. Ambedkar	Similarity/Difference
A. Both had degrees in law	Studied law at Inner Temple, London (1891)	Studied law at Gray's Inn, London and earned a Doctorate in Law from Columbia University	✔ Similar – Both were trained in law and used their legal knowledge for social and political reforms.
B. Both spent time in South Africa	Lived in South Africa (1893–1915), fighting racial discrimination against Indians.	No recorded stay in South Africa.	✘ Different – Only Gandhi spent time in South Africa.
C. The birthdays of both are in the same month	Born on October 2, 1869	Born on April 14, 1891	✘ Different – Gandhi was born in October, Ambedkar in April.
D. Both dressed in a manner that expressed their ideology	Adopted a simple, traditional dhoti as a symbol of self-reliance and resistance against colonial rule.	Wore formal Western attire, emphasizing dignity and self-respect, later adopting a blue suit as a symbol of Dalit identity.	✔ Similar – Both used their attire to reflect their philosophies and social messages.

**Q.24** Centuries ago, a rich man left behind a treasure represented as a red dot, in the schematic drawing below. If the corners of the triangle represent central locations in the states of Bihar, Telangana and Rajasthan, which is / are the state(s) where one could hunt for this treasure?



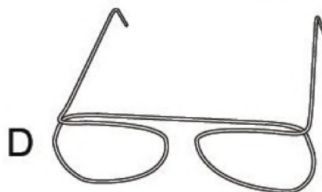
- A. West Bengal
- B. Chhattisgarh
- C. Punjab
- D. Madhya Pradesh



**Answer :** B & D

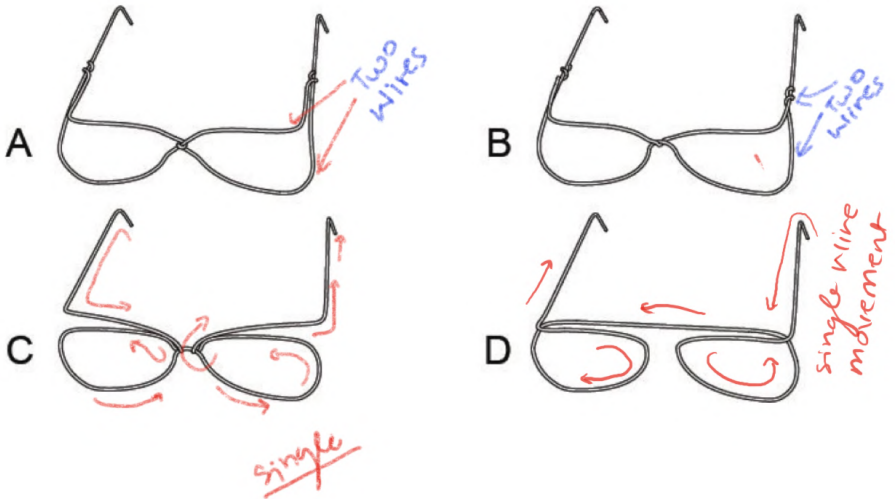
**Chhattisgarh and Madhya Pradesh** are the only states that share borders with all three of these states.

**Q.25** Which of the options has / have been created by using only a single wire?



**Answer:** C & D

This is a visualisation and spatial arrangement based question. Visually movement of eyes should define the structure of the “Glasses”



**Q.26** Which of the options will replace the question mark?

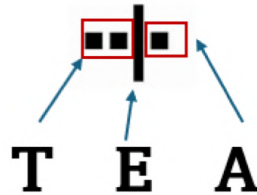


- A. TATA
- B. AAAAAA
- C. TAAT
- D. TTT

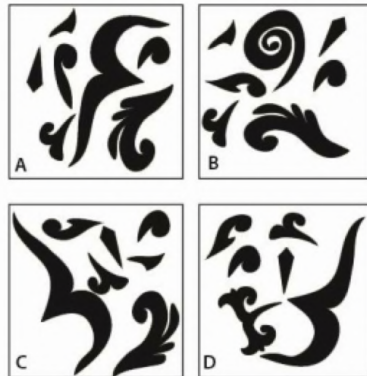
Answer: A,B,C & D

Based on the given logic, the question below could be easily solved, subject to the timely clicking of the concept in an individual's mind.

\* The first three patterns show that T represents two dots(..), A represents one dot(.), and E represents a vertical dash (|). The Fourth pattern shows all dots so E is eliminated. All options fit the pattern as they are dots. Example **TATA**—first 2 dots of T then one dot of A, again 2 dots of T and one dot of A.



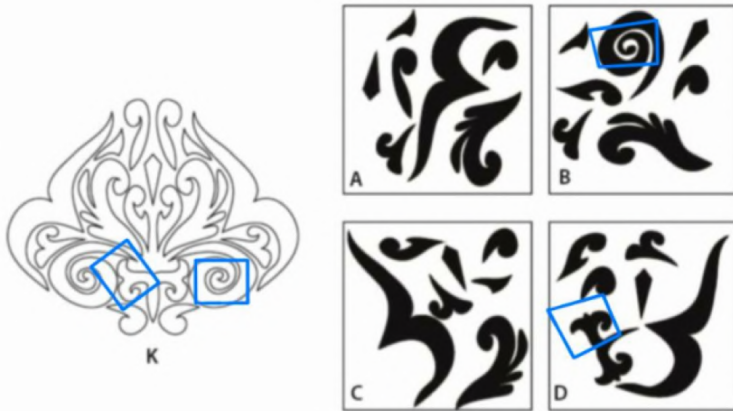
**Q.27** Which of the options has / have shapes that DO NOT match the outlines in figure K?



Answer: B & D are correct options

This is an observation exercise where the non-matching patterns in the answer solution need to be identified.

The marked patterns have blunt edges or either non-matching ends as highlighted in the given figure.



**Q.28** An object was sharply focused and a photograph was taken using a camera. The photographer wants to blur the background (change the depth of field) in the next photograph. This can be achieved by changing the

- A. size of opening of the lens (aperture).
- B. distance of the object from the camera and again focusing.
- C. shutter speed to change the duration for which light enters the camera.
- D. focal length of the lens.

**Answer:** A, B & D

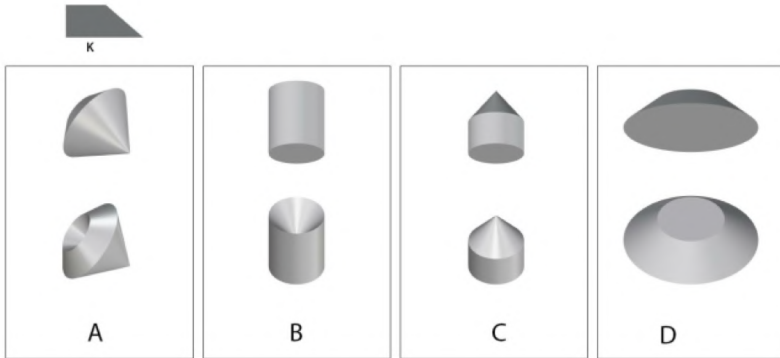
A. **Aperture:** A wider aperture (lower f-number) blurs the background more.

B. **Object distance:** Closer objects have a shallower depth of field.

D. **Focal length:** Longer lenses create a shallower depth of field

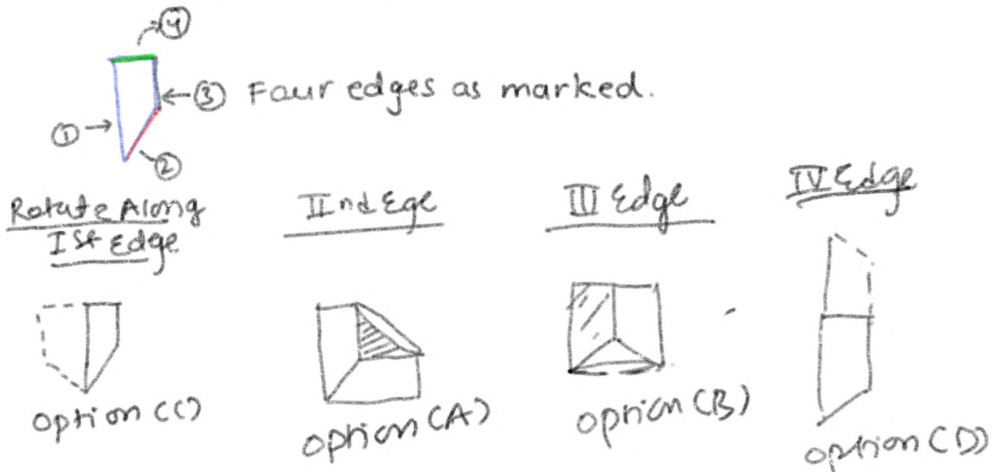
\*This is a general awareness question where the understanding of the “Optics” and “Fundamentals Of Photography” are key areas one must be familiar with to attempt the question.

**Q.29** Which of the options can be generated by revolving the quadrilateral in image K, about its edge?



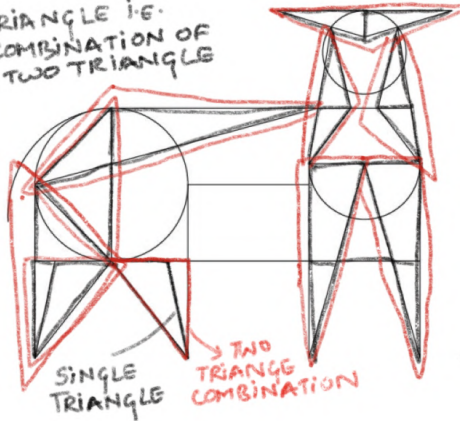
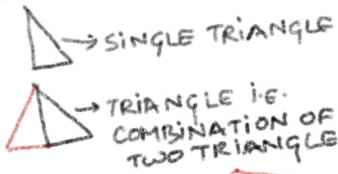
**Answer:** A, B, C & D

\*This is a core Spatial-visualisation based question where we need to imagine the final volume by revolving around each edge as shown in the figure below.

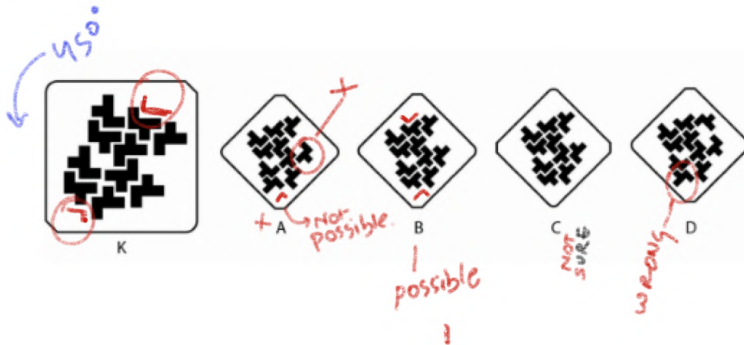




COUNT ALL POSSIBLE COMBINATIONS

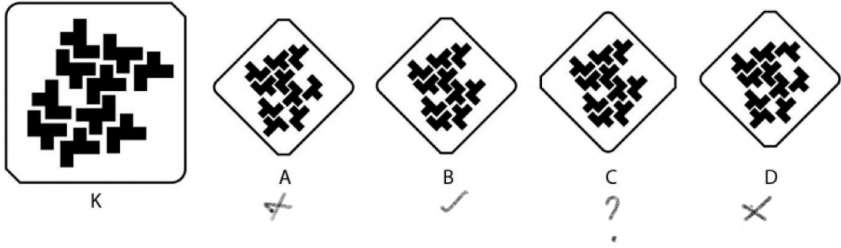


**Q.32** Image K is rotated by an angle of 45 degrees anticlockwise. Which option represents the rotated image?



**Answer:** B

\*Take any three reference points for the given master image and take these as anchor points. We visualise the rotation by initially comparing the options and later matching the identified with the master image.



**Q.33** Which of the options is the correct logo of India Post?



**Answer :** D

\*All the other options are the same on pictograms and symbols; the only difference identified is the positioning of the text (**Bhartiya Dank/ India Post**). It is the only option D, where the “text” is rightly placed at the end, and thus it is the correct option.

**Analysing the Options :**



placement of  
LOGO TEXT IS  
WRONG.

**Q.34** What is the next number in the sequence below?

341, 214, 123, 62, 25, ?

- A. 6
- B. 8
- C. 9
- D. 7

Answer : A

\*  $341 - 214 = 127$

•  $214 - 123 = 91$

•  $123 - 62 = 61$

•  $62 - 25 = 37$

Now,

•  $127 - 91 = 36$

•  $91 - 61 = 30$

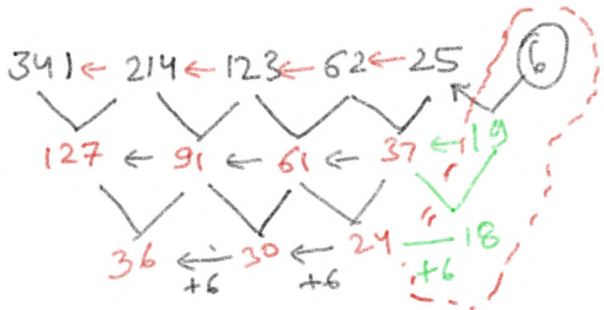
•  $61 - 37 = 24$

Next, we subtract 6 from 24:

•  $24 - 6 = 18$

Now, subtract 18 from 25:

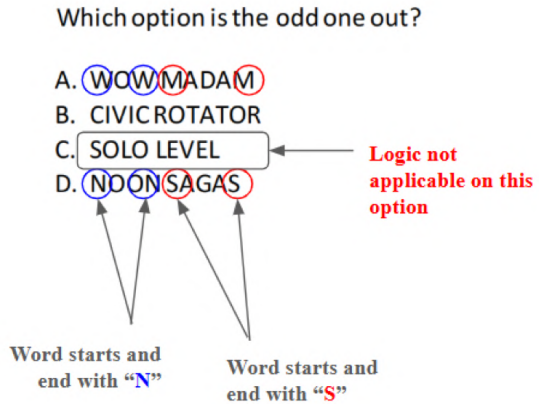
•  $25 - 18 = 7$



As per the series difference the next number is 6

**Q.35** Which option is the odd one out?

- A. WOW MADAM
- B. CIVICROTATOR
- C. SOLO LEVEL
- D. NOON SAGAS

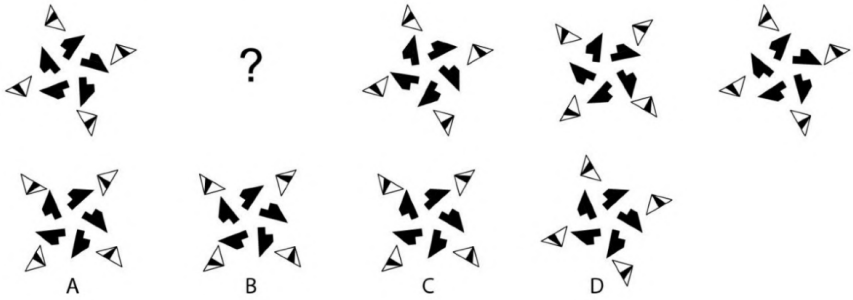


**Answer :** C (Solo Level)

- WOW: First and last letter is "W".
- MADAM: First and last letter is "M".
- CIVIC: First and last letter is "C".
- ROTATOR: First and last letter is "R".
- NOON: First and last letter is "N".
- SAGAS: First and last letter is "S".

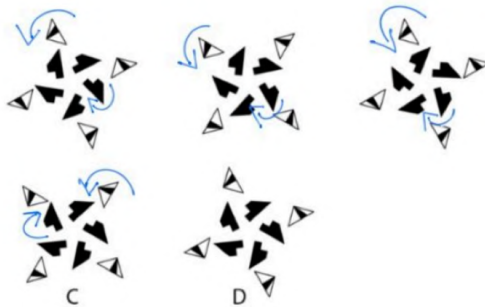
**\*In SOLO LEVEL, the first and last letters of the first word SOLO do not match, that's why it is an odd one out.**

**Q.36.** Which option will replace the question mark?



**Answer :** C

\*Outer triangles revolve in an anticlockwise direction and inner arrows revolve in clockwise direction.



**Q.37** *Phulkari, Chikankari, Sambalpuri* and *Paithani* are weaving traditions from different states of India. Which option lists them in the correct sequence?

- A. Uttar Pradesh, Maharashtra, Assam, Punjab
- B. Punjab, Uttar Pradesh, Odisha, Maharashtra
- C. Uttar Pradesh, Odisha, Punjab, Maharashtra
- D. Odisha, Uttar Pradesh, Assam, Punjab

Answer: B

**Phulkari** – A traditional embroidery style from **Punjab**, known for floral patterns on hand-spun fabric.

**Chikankari** – A delicate and intricate embroidery style from **Uttar Pradesh**, particularly Lucknow.

**Sambalpuri** – A handwoven textile from **Odisha** featuring intricate ikat dyeing techniques.

**Paithani** – A luxurious silk saree weaving tradition from **Maharashtra**, characterised by peacock and floral motifs.

\*Finally looking at the options, option (B), is the one with the most appropriate answers.

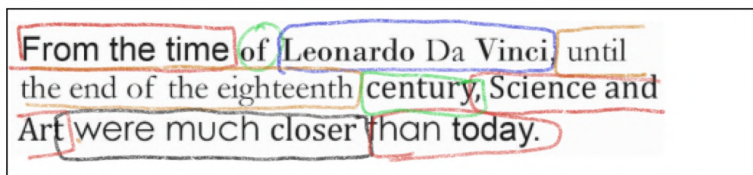
**Q.38** What is the number of fonts used in the following sentence:

From the time of Leonardo Da Vinci, until the end of the eighteenth century, Science and Art were much closer than today.

- A. 3
- B. 6
- C. 5
- D. 9

Answer: C

\*There are total 5 different fonts used in the given text as marked in the image as follows:



\* 5 different fonts as identified.

**Q.39** The \_\_\_\_\_ government organizes the Hornbill Festival each December, promoting cultural heritage and fostering interaction between tribes. The festival has been named after a \_\_\_\_\_.

- A. Chhatisgarh, bird
- B. Nagaland, bird
- C. Manipur, flower
- D. Shillong, tribal musical instrument

**Answer:** B



Image Ref: <https://siaphotography.in>

\***Hornbill Festival:** The Hornbill Bird, being considered a symbol of grace is the motivation to name the festival “Hornbill Festival”. It is a 10-day cultural fest that features culture, food, and music and celebrates the “**Handicrafts**” of Nagaland.

**Q.40** The lost wax process is used for \_\_\_\_\_.

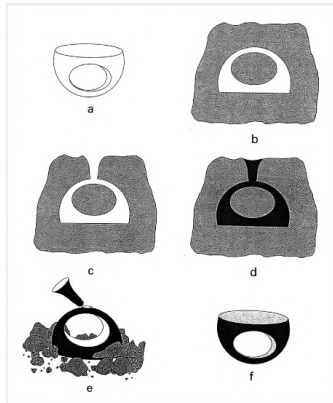
- A. Honey making
- B. Jaggery making
- C. Batik painting
- D. Metal casting

**Answer:** D (Metal Casting)

\*A casting technique that uses the wax model die cast made of wax for metal or glass casts.

**Image Reference:**

<https://www.penn.museum/sites/expedition/the-lost-wax-casting-technique/>



**Q.41** You need to hang a large rectangular picture frame on a wall in an empty room. To ensure that it is vertical (and not tilted), which of the following will help you hang the picture correctly (not tilted)? (No additional items are to be used other than the ones specified in each of the options)

- A. A wooden stick, a cutter and a pencil
- B. A pencil, a compass and a cutter
- C. A flexible and transparent pipe and a mug of water
- D. Some card paper, a steel-ruler and a pair of scissors

**Answer:** C (A Pencil, Compass and a Cutter)

\*Explanation

**Q.42** Which of the options is the odd one?

- A. Cobra
- B. Krait
- C. Rat Snake
- D. Viper

Answer : C



\*The odd one out here is the “Rat Snake” considering the non-venomous nature of the snake, the rest other all are venomous snakes.

Cobra, Krait & Viper are indigenous species of snakes with fatal bites.

**Q.43** Which of the following options is the odd one?

- A. Electroplating
- B. Anodizing
- C. Powder Coating
- D. Drilling



Answer : D (Drilling)

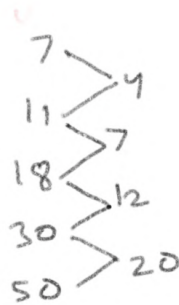
\*All other processes like **Electroplating, Anodizing & Powder Coating** are “Surface Finishing” Processes or protect materials. **While drilling is a machining process used to create holes.**

**Q.44** What is the next number in the sequence below?

7, 11, 18, 30, 50, \_\_\_

- A. 83
- B. 84
- C. 85
- D. 86

**Solution :** A (83)



\* This sequence is a 3rd Degree series( cubic sequence)

Differences between consecutive terms:

- $11 - 7 = 4$
- $18 - 11 = 7$
- $30 - 18 = 12$
- $50 - 30 = 20$

The differences are: 4, 7, 12, 20.

The pattern in differences is increasing: +3, +5, +8.

Next difference:

$$20 + 13 = 33$$

Next term:

$$50 + 33 = 83$$

Thus, the next number is 83.

**Q.45** The well-known masterpiece “Mona Lisa” was painted by Leonardo Da Vinci in the 16<sup>th</sup> Century. Nearly 500 years later another artist made a satirical reference to it; he copied the “Mona Lisa” but painted a moustache on her! Which art movement was this artist associated with?

- A. Dadaism
- B. Cubism
- C. Impressionism
- D. Pop-art

**Answer :** A (Dadaism)



\* **Marcel Duchamp, a Dada artist**, drew a moustache on the Mona Lisa challenging traditional art norms.

( **Dadaism** : It was an era of anti-art movement rejecting the **traditional aesthetics, embracing chaos, absurdity, and irrationality**. It used readymades, collage, and nonsense poetry to challenge conventions.)

**Q.46** Which of the options matches the fruit and the leaf correctly?  
(the images are not to scale)



- A. Mango-1, Chikoo-2, Guava-3, Jackfruit-4
- B. Mango-3, Chikoo-4, Guava-2, Jackfruit-1
- C. Mango-4, Chikoo-2, Guava-3, Jackfruit-1
- D. Mango-2, Chikoo-3, Guava-1, Jackfruit-4

**Answer :** B (Mango-3, Chikoo-4, Guava-2, Jackfruit-1)

\*This is a pure “Observation” & “General Awareness” based question ,where leaves shapes and patterns are part of daily life interaction.

The approach in such a question could be rejecting the wrong options from the given figures, rather trying to choose the right option.

**Q.47** Which are the rivers numbered from 1 to 4 in the map below ?



- A. Ravi, Ganga, Krishna, Cauvery
- B. Sutlej, Yamuna, Godavari, Cauvery
- C. Indus, Ganga, Godavari, Krishna
- D. Chenab, Yamuna, Godavari, Cauvery

**Answer :** B

\*India's rivers are vital for agriculture, culture, and ecology. The Sutlej, a major Indus tributary, flows through Punjab. The Yamuna, a Ganges tributary, supports northern India. The Godavari, India's second-longest river, flows through central India, enriching Maharashtra and Andhra Pradesh. The Kaveri, vital for South India, sustains Karnataka and Tamil Nadu, fostering irrigation and hydroelectric projects.



**Q.48** Which of the sequences in the options will result in the right pattern for a running man?



**A:** K Q J G Y F H

**B:** K G J Q Y F H

**C:** K F Q G Y J H

**D:** K F Q J Y G H

**Answer :** B

Based on “Persistence Of Vision”, where a static sequence of images, each slightly in continuation from the previous one, is played in rapid succession to create the illusion of motion.

In the above image, the technique uses a sequence of “**Running image Patterns**” to create an illusion of motion (Running Man). This art of illusion created using images in succession, is called “ **Frame by Frame Animation**”

**Q.49** Which of the following is the hardest wood?

- A. Teak
- B. Thorny Acacia
- C. Mango
- D. Rosewood

Answer : D (RoseWood)



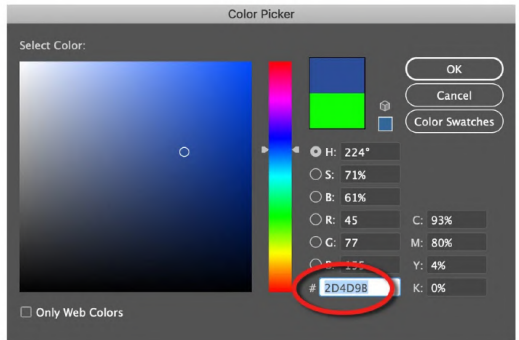
**\*Rosewood is one of the best Hardwoods**, known for its hardness, durability and resistance to damage. This property makes this most appropriate for the Furniture.

**Q.50** Hex codes are used to specify colours on the computer. What colour is the Hex Code CCCCCC?

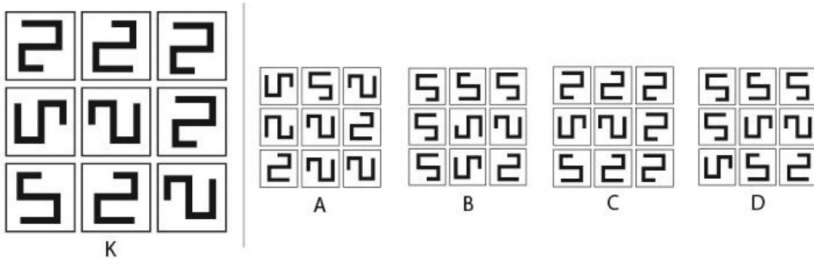
- A. White (100% white)
- B. Black (100% black)
- C. Dark Grey (80% black, 20% white)
- D. Light Grey (20% black, 80% white)

**Answer :** D (Light Grey)

\*A **hex code** is a six-digit alphanumeric code used to represent colors in digital design. It consists of three pairs of hexadecimal values (0-9, A-F), denoting red, green, and blue (RGB) intensities. For example, **#2D4D98** represents a specific blue shade. Hex codes ensure color consistency across digital platforms, making them crucial in web design, graphic design, and user interfaces, ensuring precise color communication and reproduction across different screens and devices.

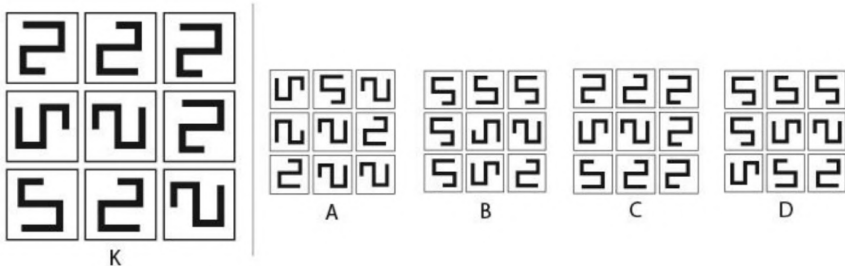


**Q.51** Which is the correct representation in the options, if the image K shown below is flipped about the vertical axis (shown on the right side of K)?

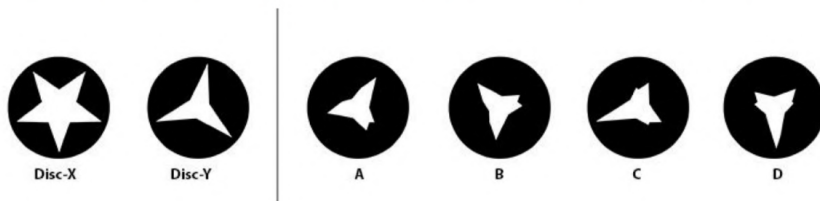


**Answer :** D

\*Solution as follows , pictorially represented below.



**Q.52** Shapes are cut out from two Black Discs, Disc-X and Disc-Y as given below. Identify the correct image, when Disc-Y is kept on top of Disc-X and rotated 60 degrees anti-clockwise.



**Answer :** B



\*On superimposing both the plates the image forged would be as follows. Which closely resembles option (B) as given.

This is purely a question of visualisation based problem solving.

**Q.53** In the cursed land of *Weirdisthan*, strength of animals was disproportionately distributed. Horse has half the strength of a Dog and four times the strength of an Elephant. Monkey has three times the strength of a Rhino. Elephant has half the strength of a Rhino. One Dog was becoming a danger for other animals and they decided to assign a team of animal soldiers to overpower him. Which team of soldiers managed to overpower the dog?

- A. One Rhino and One Monkey
- B. One Rhino, One Horse and One Elephant
- C. One Horse and One Monkey
- D. Two Horses

**Answer :** (C)

**\*Animal Strengths:As per given statements**

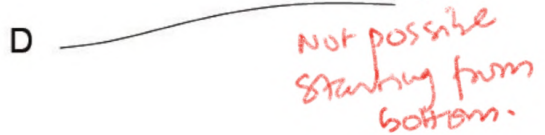
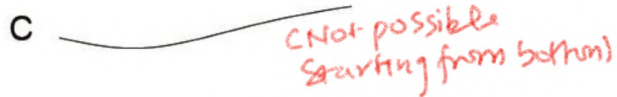
- 1.Horse (H) =  $D/2$
- 2.Monkey (M) =  $3D/4$
- 3.Rhino (R) =  $D/4$
- 4.Elephant (E) =  $D/8$

**Team Strengths :**

- 1.A: Rhino + Monkey =  $D/4 + 3D/4 = D$  (Equal to Dog)
- 2.B: Rhino + Horse + Elephant =  $D/4 + D/2 + D/8 = 7D/8$  (Weaker)
- 3.C: Horse + Monkey =  $D/2 + 3D/4 = 5D/4$  (Stronger)
- 4.D: Two Horses =  $2 \times D/2 = D$  (Equal to Dog)

Final Answer: C. **One Horse and One Monkey (Stronger than the Dog).**

**Q.54** A clock is displaced horizontally at a uniform rate along the direction shown. If the tip of the hour hand is traced from 2 AM to 9 AM, which option shows the correct tracing pattern?

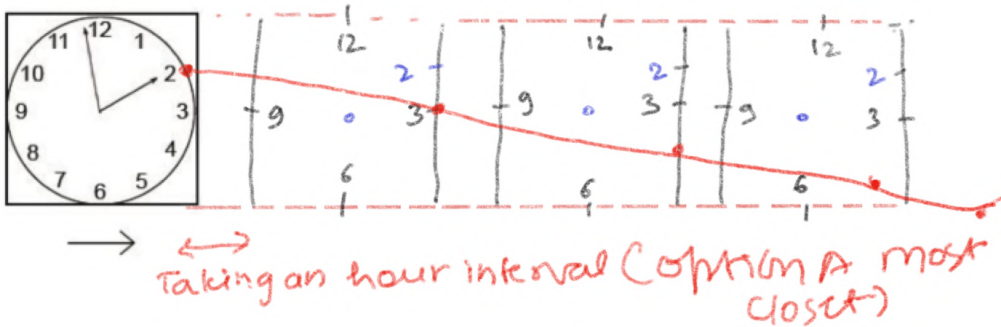


**Answer :** (A)

**Clock's Movement:** The clock is moving horizontally to the right. This means the the clock face will also be moving to the right as time progresses.

- **Hour Hand's Movement:** The hour hand rotates clockwise around the clock Face.

- **Tracing Pattern:** At 2 AM, the hour hand is pointing towards the 2. As time progresses, the hour hand moves clockwise, but the clock face itself is moving to the right.



**Q.55** Which of the options shows the word "TRANSFORM" as it would appear after it is reflected horizontally along AXIS 1 and then vertically along AXIS 2, as indicated in the figure below?

AXIS 1 TRANSFORM | AXIS 2

TRANSFORM | MROZNAFT  
**A** **B**

TRANSFORM | TRANSFORM  
**C** **D**

Answer : (B)

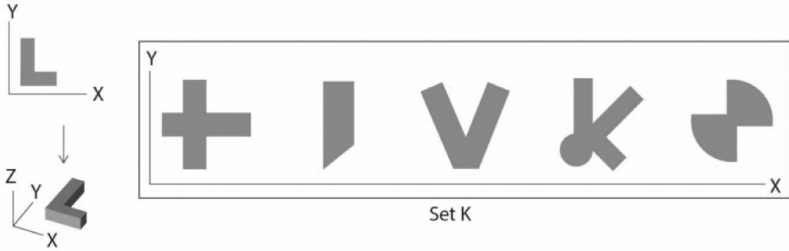
\*Logic 1: Since the word is first reflected along axis 1, the mirror image would look like this as shown below.

TRANSFORM Axis-1 (reflected)  
 MROZNAFT

\*Logic 2 : Now when this reflected image is again reflected along axis-2, the new image formed would look like this (as shown below) :

TRANSFORM | MROZNAFT  
 ↑  
 Axis-2  
 Most closet to option (B)

**Q.56** The shape L is extruded along Z-axis to form a solid as shown in the figure. How many shapes in the Set K will have more than 8 surfaces when extruded along Z-axis?

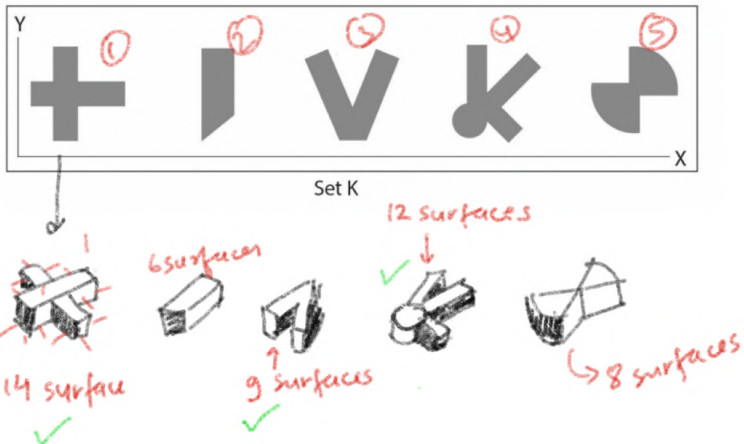


- A. 2
- B. 3
- C. 4
- D. 5

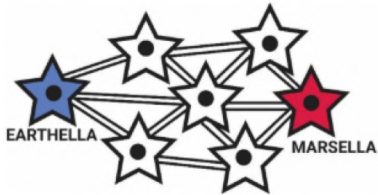
**Answer:** (B)

- 1st shape have 14 surfaces
- 2nd shape have 6 surfaces
- 3rd shape have 9 surfaces
- 4th shape have 12 surfaces
- 5th shape have 8 surfaces

Now, the shape that have more than 8 surfaces are 3. (Shape 1, 3 and 4)



**Q.57** Residents of planet Earthella are planning to abandon it and fly to planet Marsella because of an acute water crisis. They may choose any of the flight paths connecting Earthella to Marsella through a set of intermediate refuelling stations. How many unique flight paths be charted out if paths cannot retrace any segment that they have already traversed or revisit any station (including Earthella)?



- A. 18
- B. 19
- C. 20
- D. 21

**Answer :** (D)

\*This is a time consuming question , purely based on “Permutation & Combination”, of the given paths. On looking closely we can find the possible number of parth could be 21.