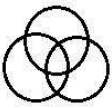
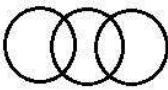
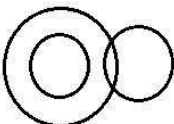
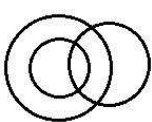


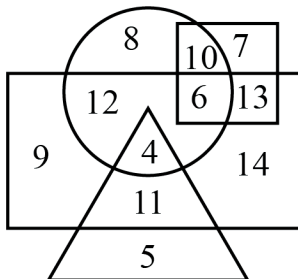
AFCAT Memory Based Paper - 11 Aug 2024

Q1 Select the Venn diagram that best illustrates the relationship between the following classes.

Uncle, Relatives, Rich

- (A) 
- (B) 
- (C) 
- (D) 

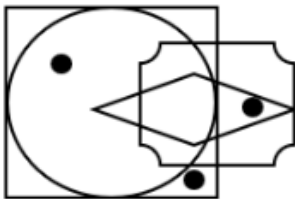
Q2 In the following diagram, Rectangle represents men, Triangle represents educated, Circle represents urban and Square represents government employees:



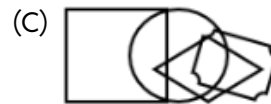
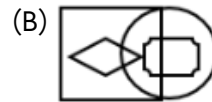
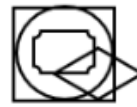
Which one of the following represents a man who is urban as well as government employee?

- (A) 6 (B) 7
(C) 10 (D) 13

Q3 Identify the figure which satisfies the same condition of placement of dots as in given figure.

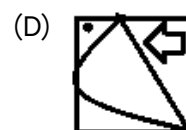
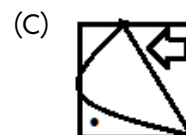
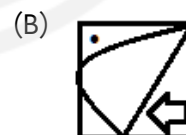
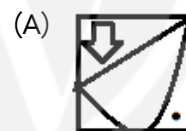


(A)



Q4 If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure?

Question figure:



Q5 Select the letter-cluster that can replace the question mark (?) in the following series.

PUK, TVJ, XWI, BXH, FYG, ?

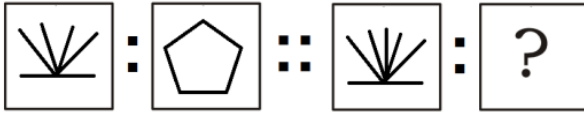


- (A) JUI (B) JZF
(C) DRT (D) JXZ
- Q6** Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.
HSI, OLO, VEU, CXA, ?
(A) KPG (B) JPF
(C) KQF (D) JQF
- Q7** Which of the following numbers will replace the question mark (?) in the given series?
11, 22, 25, ?, 105, 630
(A) 29 (B) 55
(C) 75 (D) 100
- Q8** Three of the following letter-clusters are alike in some manner and hence form a group. Which letter-cluster does not belong to that group?
(A) DGLZ (B) FINB
(C) BXCXY (D) HKPD
- Q9** Four words have been given, out of which three are alike in some manner and one is different. Select the odd one.
(A) Luminosity (B) Kelvin
(C) Candela (D) Ampere
- Q10** Select the correct combination of mathematical signs to sequentially replace the * signs and to balance the given equation.
 $289 * 121 * 154 * 307 * (34 * 3) * 2$
(A) $\div, -, +, -, \times, =$
(B) $\times, +, -, =, +, \div$
(C) $+, -, =, -, \times, \div$
(D) $\div, +, -, \times, +, =$
- Q11** Select the correct combination of mathematical signs that can sequentially replace the * signs and balance the equation.
 $18 * 12 * 4 * 5 * 6 * 53$
(A) $\times, \div, +, =, -$
(B) $\times, \div, +, -, =$
(C) $\times, \div, =, +, -$
(D) $\times, \div, -, +, =$

- Q12** Pointing to a man in photograph, Rohan said, "His daughter's brother is my mother's son's brother." How is the man related to Rohan?
(A) Father's father
(B) Father's brother
(C) Brother
(D) Father
- Q13** Manoj is the son of Eyup's father's sister. Ronaldo is the son of Rihana, who is the mother of Jorge and grandmother of Eyup. Dario is the father of Sheila and the grandfather of Manoj. Rihana is the wife of Dario. How is the wife of Jorge related to Sheila?
(A) Cousin (B) Daughter
(C) Sister (D) Sister-in-law
- Q14** Rearrange the JUMBLE letters in a meaningful word and find the odd one out.
(A) DIINA (B) PLNEA
(C) HINCA (D) ENFRAC
- Q15** Rearrange the cluttered letters to create a meaningful word and then select one which is different-
(A) RESUAQ (B) IRLCEC
(C) INTOP (D) GOHEXAN
- Q16** Six doctors E, G, I, K, M and O are standing in a line (not necessarily in the same order) facing north. M is standing to the immediate right of E. K is standing second to the right of O. There are two doctors standing between I and M. K is to the left of G. Who is standing to the immediate right of K?
(A) 1 (B) G
(C) E (D) M
- Q17** Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.
 $7 : 345 :: 5 : 127 :: 6 : ?$
(A) 228 (B) 208
(C) 238 (D) 218

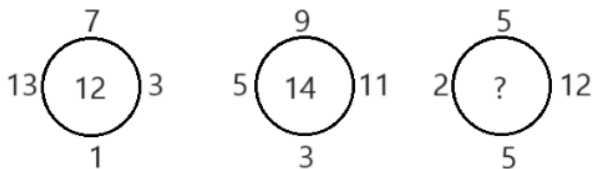


Q18 Select the option that is related to the third figure in the same way as the second figure is related to the first figure.



- (A)
- (B)
- (C)
- (D)

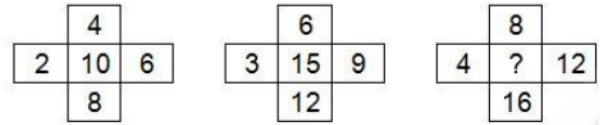
Q19 Find the missing number that can replace the question mark (?) in the given figure.



- (A) 20
(B) 12
(C) 10
(D) 15

Q20 In the following question, select the number which can be placed at the sign of question mark

(?) from the given alternatives.

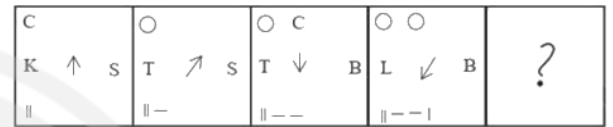


- (A) 20
(B) 24
(C) 32
(D) 28

Q21 Which of the following calendars will be the same as the calendar for the year 2003?

- (A) 2014
(B) 2013
(C) 2012
(D) 2011

Q22 Select the figure that will replace the question mark (?) in the following figure series.



- (A)
- (B)
- (C)
- (D)

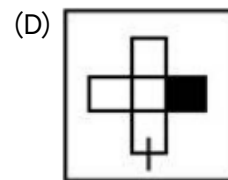
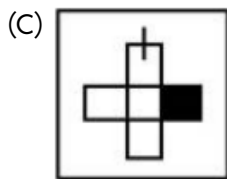
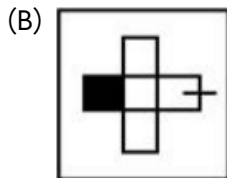
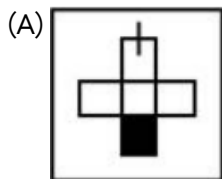
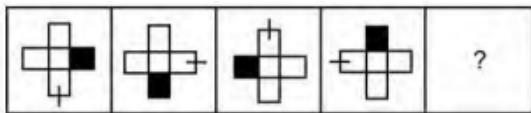
Q23 Select the figure from among the given options that can replace the question mark (?) in the following series.



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Q24 In a certain code language, “NOPE” is coded as “100”, and “EGG” is coded as “38”. How will “LAP” be coded in that language?

- (A) 27 (B) 31
(C) 29 (D) 58

Q25 In a certain code language, ‘SMART’ is written as ‘GIANH’ and ‘SMILE’ is written as ‘VOINH’. How will ‘STAND’ be written in that language?

- (A) WMAHG (B) WMAGH
(C) WMGHA (D) WMGAH



Answer Key

Q1 (D)
Q2 (A)
Q3 (C)
Q4 (B)
Q5 (B)
Q6 (D)
Q7 (D)
Q8 (C)
Q9 (A)
Q10 (C)
Q11 (B)
Q12 (D)
Q13 (D)

Q14 (D)
Q15 (C)
Q16 (C)
Q17 (D)
Q18 (B)
Q19 (B)
Q20 (A)
Q21 (A)
Q22 (D)
Q23 (D)
Q24 (D)
Q25 (B)

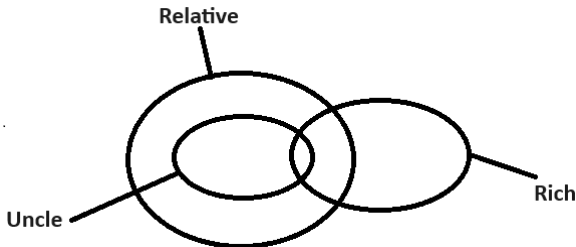


Hints & Solutions

Note: scan the QR code to watch video solution

Q1 Text Solution:

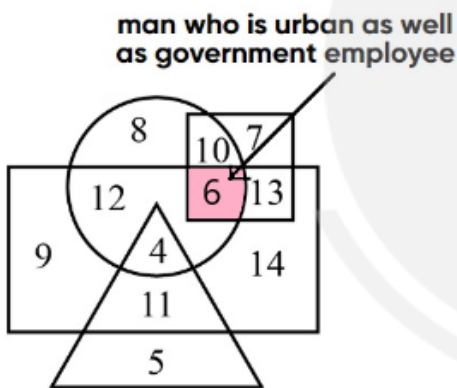
Uncle is a subset of relatives, so uncle will be inside the set of relatives, while both uncle and relative can be rich.



Hence, Option D is the correct answer.

Q2 Text Solution:

- Rectangle represents Men
- Triangle represents Educated
- Circle represents Urban
- Square represents Government Employees



We can see, from above venn diagram the number of man who is urban as well as government employee is 6.

Hence, "6" is the correct answer.

Q3 Text Solution:

Explanation: Here, in the given figure, first dot lie in the square region only, second dot lies in the region common to circle and square and the third dot lies in the region common to diamond and plaque. So, the option which consists of these

regions is the answer.



Hence the answer is

Q4 Text Solution:

According to the question :

We have been given a figure and we have to identify the correct mirror image of the figure when the mirror is placed on its left side.

We know , the mirror image will look like :

- As the mirror is placed vertically , so top and bottom of the figure will not exchange themselves in the mirror image.
- The left and right of the figure will exchange themselves in the mirror image.
- Pattern of the figure far from the mirror will appear far in the mirror image too.
- Pattern of the figure near the mirror will appear near in the image too.

So , the figure and the mirror image will look like :



Hence , " " is the correct answer.

Q5 Text Solution:

Series is -

$$P + 4 = T \Rightarrow T + 4 = X \Rightarrow X + 4 = B \Rightarrow B + 4 = F$$

Next required term is $F + 4 = J$

$$U + 1 = V \Rightarrow V + 1 = W \Rightarrow W + 1 = X \Rightarrow X + 1 = Y$$

Next required term is $Y + 1 = Z$

$$K - 1 = J \Rightarrow J - 1 = I \Rightarrow I - 1 = H \Rightarrow H - 1 = G$$

Next required term is $G - 1 = F$



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JZF is the next letter cluster.

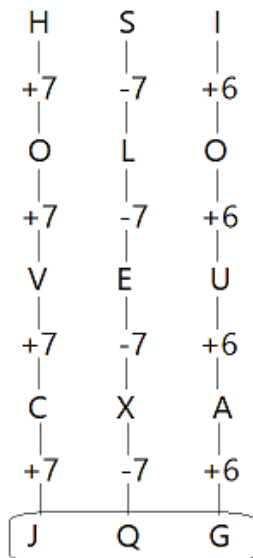
Hence, **JZF** is the correct answer.

Q6 Text Solution:

Here, in the given question we have to select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

Given series:- HSI, OLO, VEU, CXA, ?

The logic used is:- 1st letter increased by +7, 2nd letter decreased by -7, 3rd letter increased by +6 in every term.



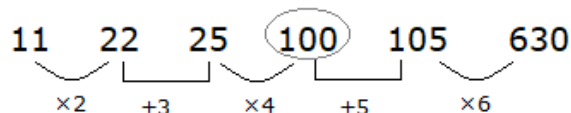
- So, JQG can replace the question mark (?) in the following series.

Hence, **JQG** is the correct answer.

Q7 Text Solution:

In this type of question, we have been given a series, in this series we have to find the missing term of this series by finding the relation.

The pattern is as follows;



Hence, **"100"** is the correct answer.

Q8 Text Solution:

The pattern is as follows:

- DGLZ = D + 3 = G ; G + 5 = L ; L + 14 = Z
- FINB = F + 3 = I ; I + 5 = N ; N + 14 = B

- BXC Y = B + 22 = X ; X + 5 = C ; C + 22 = Y
- HKPD = H + 3 = K ; K + 5 = P ; P + 14 = D

So, BXC Y is the odd one out.

Hence, BXC Y is the correct answer.

Q9 Text Solution:

In this type of questions, three will be same and one will be different, we have to find the odd one.

- Luminosity – Luminosity is an absolute measure of radiated electromagnetic power, the radiant power emitted by a light-emitting object over time.
- Kelvin – This is the SI unit of temperature.
- Candela – It is the SI unit of light.
- Ampere – It is the SI unit of electric current.

Hence, **Luminosity** is the correct answer.

Q10 Text Solution:

Given equation is: $289 * 121 * 154 * 307 * (34 * 3) * 2$

From option(C) after substituting the mathematical signs the new equation becomes:

$$289 + 121 - 154 = 307 - (34 \times 3) \div 2$$

Now from BODMAS rule,

$$\rightarrow 289 + 121 - 154 = 307 - 102 \div 2$$

$$\rightarrow 289 + 121 - 154 = 307 - 51$$

$$\rightarrow 410 - 154 = 256$$

$$\rightarrow 256 = 256$$

$$\text{L.H.S} = \text{R.H.S}$$

Hence, +, -, =, ×, ÷ is the correct answer.

Q11 Text Solution:

In this question, we have to solve the equation by substituting appropriate mathematical signs in place of * in the given equation.

Given equation:-

$$18 * 12 * 4 * 5 * 6 * 53$$

When we place the signs given in option (×, ÷, +, -, =) we get the equation as;

$$18 \times 12 \div 4 + 5 - 6 = 53$$

On solving L.H.S

$$\rightarrow 18 \times 12 \div 4 + 5 - 6$$

$$\rightarrow 18 \times 3 + 5 - 6$$



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$$\rightarrow 54 + 5 - 6$$

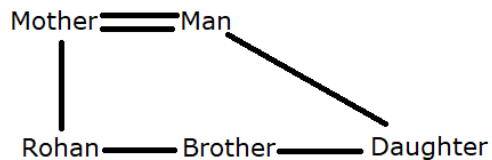
$$\rightarrow 53 = \text{R.H.S}$$

Hence, " $(\times, \div, +, -, =)$ " is the correct answer

Q12 Text Solution:

We have been given some relation between the persons in the given question, according to the given question, we have to make a family tree and find the answer of the given question.

The family tree is as follow:-



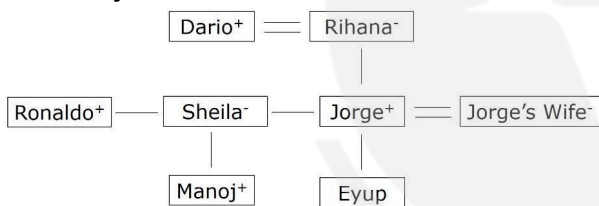
Man is the Father of Rohan.

Hence, Father is the correct answer.

Q13 Text Solution:

We have been given some relation between the persons in the given question, according to the given question, we have to make a family tree and find the answer of the given question.

The family tree is as follows –



We can clearly see that Jorge's Wife is Sheila's Sister-in-law.

Hence, Sister-in-law is the correct answer.

Q14 Text Solution:

Solution:-

Rearranging the Jumbled words to form meaningful word

i- DIINA-INDIA

ii- PLNEA-NEPAL

iii- HINCA-CHINA

iv- ENFRAC-FRANCE

From above, it is clear that Option a, b, and c are the countries that lie in Asia whereas Option d which is FRANCE, lies in Europe and is the odd one.

Hence, the correct answer is **Option d** i.e., ENFRAC

Q15 Text Solution:

RESUAQ → SQUARE

IRLCEC → CIRCLE

INTOP → POINT

GOHEXAN → HEXAGON

∴ INTOP (POINT) is different from these..

Video Solution:



Q16 Text Solution:

Given :-

- M is standing to the immediate right of E.
- K is standing second to the right of O.
- There are two doctors standing between I and M.
- K is to the left of G.

As per the given information:



Clearly, E is standing to the immediate right of K. Hence, E is the correct answer.

Q17 Text Solution:

Here in this question, a number analogy is given, in which the first term is related to the second term in the same way as the third term is related to the fourth term. We have to find out the next term based on the same pattern.

Given- 7 : 345 :: 5 : 127 :: 6 : ?

Logic : (First number)³ + 2 = Second number

$$\bullet \quad 7 : 345$$

$$(7)^3 + 2 = 345$$

$$\bullet \quad 5 : 127$$

$$(5)^3 + 2 = 127$$



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Similarly,

- $6 : ?$

$$(6)^3 + 2 = 218$$

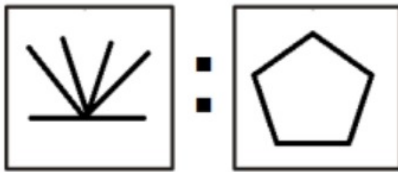
So there should be 218 at the place of a question mark.

Hence, 218 is the correct answer.

Q18 Text Solution:

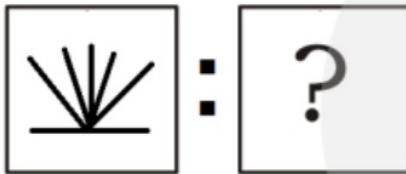
Here the pattern followed is:

Number of lines in the 1st image = Number of sides of the polygon in the 2nd image.



Here we can see, there are five lines in the 1st image = Number of sides of the polygon in the 2nd image are also five.

Similarly,



Here we can see, there are six lines in the 1st image = Number of sides of the polygon in the 2nd image are also six.

Answer figure is given in option(B)



Hence, **Option(B)** is the correct answer.

Q19 Text Solution:

Here, in the given question we have to find out the correct number that can replace the question mark (?) in the figure.

The logic used is:- In a figure, add the numbers, outside of the circle and divide it with 2 to get the middle number.

- In 1st circle,

$$= 7 + 3 + 1 + 13 = 24$$

$$= 24 \div 2 = 12$$

- In 2nd circle,

$$= 9 + 11 + 3 + 5 = 28$$

$$= 28 \div 2 = 14$$

Similarly,

- In 3rd circle,

$$= 5 + 12 + 5 + 2 = 24$$

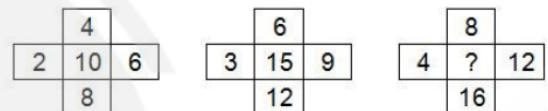
$$= 24 \div 2 = 12$$

So, 12 is the correct number that will replace the question mark (?) in the figure.

Hence, 12 is the correct answer.

Q20 Text Solution:

Here we have to select the number which can be placed at the sign of question mark (?) from the given alternatives.



Logic : (Addition of the outer numbers) $\div 2$ = Middle Number

- Figure I: $(4+6+8+2) = 20$; $20 \div 2 = 10$
- Figure II: $(6+9+12+3) = 30$; $30 \div 2 = 15$
- Figure III: $(8+12+16+4) = 40$; $40 \div 2 = 20$

Hence, 20 is the correct answer.

Q21 Text Solution:

As we know that,

- The year 2003 is a common year, meaning that it has 365 days.
- It also starts on a Wednesday.

Now,

- The year 2011 is a common year that starts on a Saturday.
- The year 2012 is a leap year that starts on a Sunday.
- The year 2013 is a common year that starts on a Tuesday.
- The year 2014 is a common year that starts on a Wednesday.



Therefore, the calendar for the year 2003 will be the same as the calendar for the year **2014**.

Hence, 2014 is the correct answer.

Q22 Text Solution:

In this type of question, we have been given a series. In this series we have to find the missing figure of this series by finding the relation.

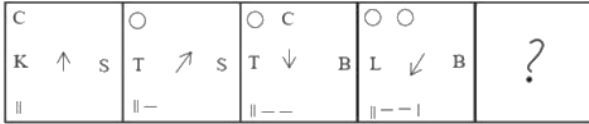


Figure 1 to Figure 2

- C change into circle.
- K change into T.
- Arrow symbol rotate 45 degree in clockwise direction.
- S is at its own place.
- After this symbol (||) one dash symbol (-) will add.

Figure 2 to Figure 3

- C was added after circle.
- T is at its own place.
- Arrow symbol rotate 135 degree in clockwise direction.
- S change into B
- After this symbol (||-) one dash symbol (-) will add.

Figure 3 to Figure 4

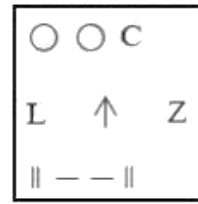
- C change into circle.
- T change into L.
- Arrow symbol rotate 45 degree in clockwise direction.
- B is at its own place.
- After this symbol (||-) one (l) symbol will add.

Figure 4 to Figure 5

- C was added after circle.
- L is at its own place.
- Arrow symbol rotate 135 degree in clockwise direction.
- B change into Z.

- After this symbol (||-) one (l) symbol will add.

So the next image is:-

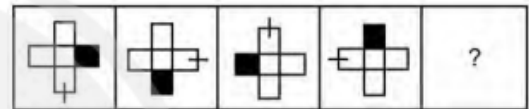


Hence, "Option D" is the correct answer.

Q23 Text Solution:

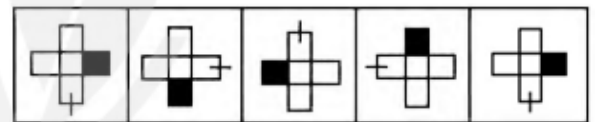
Here, in the given question we have to find out the correct figure that can replace the question mark (?) in the following series.

Given series:-



The logic used is:- Black box rotates in clockwise direction and the box with a line rotates in anti-clockwise direction.

- After analyzing this point, we get the 5th figure according to the 4th figure.



Hence, **Option D** is the correct answer.

Q24 Text Solution:

"NOPE" is coded as "100":

$$N(14) + O(15) + P(16) + E(5) = 50 \times 2 = 100$$

and "EGG" is coded as "38":

$$E(5) + G(7) + G(7) = 19 \times 2 = 38$$

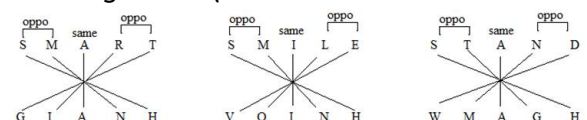
"LAP" be coded in that language:

$$L(12) + A(1) + P(16) = 29 \times 2 = 58$$

Hence, the correct answer is 58.

Q25 Text Solution:

According to the question:-



Hence, WMAGH is the correct answer.





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