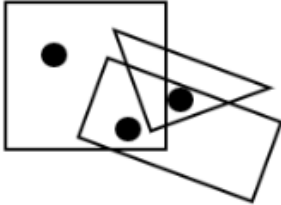


AFCAT Memory Based Paper - 9 Aug 2024 (Shift 2)

- Q1** Identify the figure which satisfies the same condition of placement of dots as in given figure.



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

- Q2** In a certain code language, 'SWISS' is written as 'HDRHH', and 'TABOO' is written as 'GZYL'. How will 'REHAB' be written in that language?

- (A) HHGAK (B) IGASH
(C) IVSZY (D) BAHRE

- Q3** In a certain code language, "ADD" is written as "8" and "SUB" is written as "41". How is "MUL" written in that code language?

- (A) 44 (B) 45
(C) 43 (D) 42

- Q4** If $23@5=56$; $6@7=26$; $5@2=14$; then what is the value of $7@5=$?

- (A) 26 (B) 24
(C) 19 (D) 52

Q5

In a certain coded language, Red is called Blue, Blue is called Black, Black is called White, White is called Yellow, Yellow is called Pink, Pink is called Brown, and Brown is called Orange. What will be the name of the movie "Sky is Pink" in the same coded language?

- (A) Sky is Yellow (B) Sky is Orange
(C) Sky is White (D) Sky is Brown

- Q6** Between 2 and 3 o'clock, at what time will the hands of the clock coincide.

- (A) $2:10\frac{10}{11}$ (B) $2:10\frac{9}{11}$
(C) $2:10\frac{8}{11}$ (D) $2:10\frac{7}{11}$

- Q7** My parents' wedding anniversary was celebrated on 4th December 2021 on Saturday, so what day will their anniversary be next year?

- (A) Sunday (B) Tuesday
(C) Thursday (D) Saturday

- Q8** Kaliya is 13th from the left side and Gabbar is 20th from the right side in a row. They decided to interchange their positions, now Kaliya becomes 18th from the left side. What will Gabbar's position from the right?

- (A) 22 (B) 24
(C) 25 (D) 26

- Q9** Showing a man, a woman said, "his brother's father is the only son of my grandfather". How is the woman related to the man?

- (A) Aunt (B) Sister
(C) Daughter (D) Mother

- Q10** Select the Venn diagram that best illustrates the relationship between the following classes.

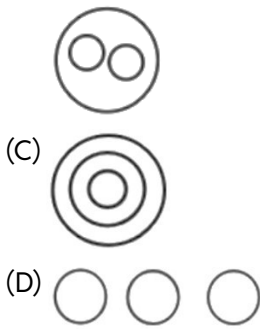
Asia, India, Pakistan



(B)

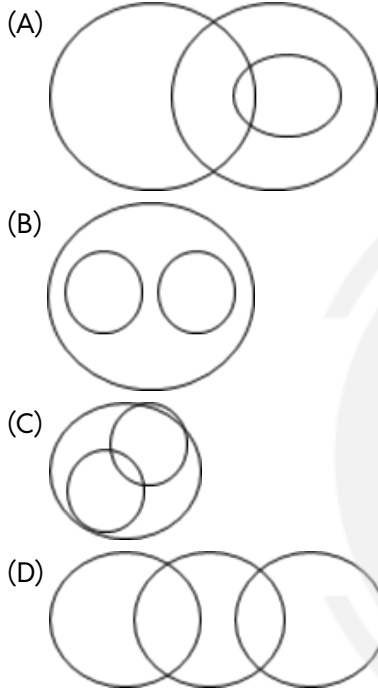


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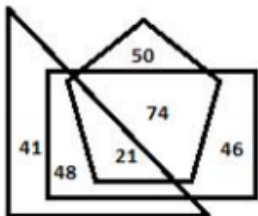


Q11 Select the Venn diagram that best illustrates the relationship between the three given classes.

Advocate, Males, Husband



Q12 In the given Venn diagram, the rectangle represents 'women', the pentagon represents 'entrepreneurs' and the triangle represents 'mothers'. The numbers given in the diagram represent the number of persons in that particular category.



How many women are entrepreneurs but NOT mothers?

- (A) 21 (B) 74

- (C) 50 (D) 46

Q13 Arrange these letters of each group to make a meaningful word and then find the odd one out.

- (A) RDQAUSNO (B) EMOMCOROD
(C) ANCEDOG (D) LARHSAM

Q14 If you will arrange the following options, it will give you a meaningful word. Select the odd word from the given alternatives.

- (A) EEWRSTA (B) KCTAEJ
(C) EECFEL (D) ENBIAE

Q15 Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the letter-cluster that is different.

- (A) MN (B) GT
(C) KP (D) QL

Q16 In the following question, select the number which can be placed at the sign of question mark (?) from the given alternatives.

8	6	15	2
96	2	60	2
?	5		
120	6		

- (A) 3 (B) 4
(C) 8 (D) 14

Q17 In the following question, select the number which can be placed at the sign of question mark (?) from the given alternatives.

2	8	6
5	4	9
7	5	4
14	17	?

- (A) 20 (B) 19



(C) 16 (D) 18

- Q18** Select the option that is related to the third number in the same way as the second number is related to the first number and the sixth number is related to the fifth number.

 $21 : 112 :: 36 : ? :: 51 : 272$

(A) 192 (B) 252
(C) 72 (D) 198

- Q19** Select the option that is related to the fifth term in the same way as the second term is related to the first term and the fourth term is related to the third term.

 $LOGO : PHPM :: MOCK : LDPN :: DEAR : ?$

(A) EFBS (B) SBFE
(C) SCFE (D) SBEF

- Q20** Select the related letter/ word/number from the given alternative.

 $CFIL : ABCD :: ? : WXYZ$

(A) YBEH (B) DCBA
(C) JHPS (D) XURO

- Q21** Vilas went from his home to his college. He started his journey facing East. First, he went 2 km straight; then he turned to his right and went 3 km: finally, he turned left and walked 4 km to reach his college. To which direction is Vilas's home located in relation to his college?

(A) South-west (B) North-east
(C) South-East (D) North-west

- Q22** Select the number from among the given options that can replace the question mark (?) in the following series.

 $1, 6, 25, 76, ?, 154$

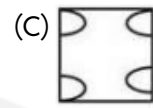
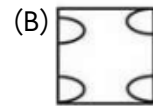
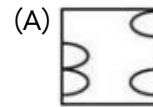
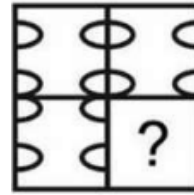
(A) 153 (B) 134
(C) 164 (D) 123

- Q23** Select the number from the given alternatives that can replace the question mark (?) in the following series.

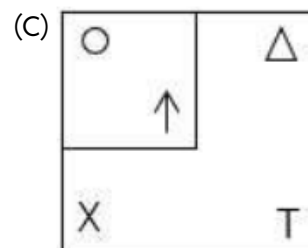
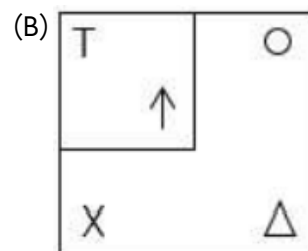
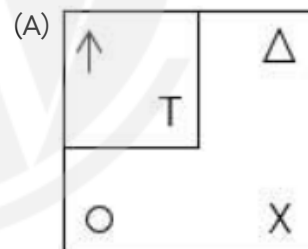
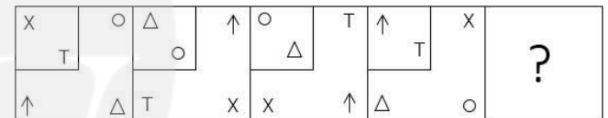
 $20, 21, 25, 34, ?, 75$

(A) 45 (B) 21
(C) 55 (D) 50

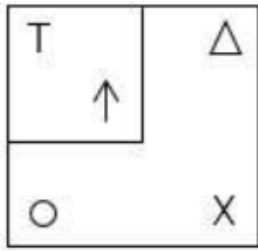
- Q24** Which answer figure will complete the pattern in the question figure?



- Q25** Which figure should replace the question mark (?) if the series were to be continued?



(D)

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Answer Key

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

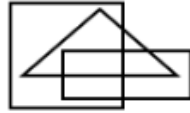
Q14 (C)
Q15 (D)
Q16 (B)
Q17 (B)
Q18 (A)
Q19 (B)
Q20 (A)
Q21 (D)
Q22 (A)
Q23 (D)
Q24 (D)
Q25 (D)

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Hints & Solutions

Q1 Text Solution:

Explanation: Here, in the given figure, first dot lies in square region only and second dot lies in rectangle and square region and the third dot lies in the region common to triangle and rectangle. So, the option which consists of these regions is the answers.



Hence the answer is

Q2 Text Solution:

The simple approach to solve this question is to find an alternative that follows the similar logic to the given letter to letter coding.

The logic used is: Here the letter in each word and the coded letters are the opposite letter as per Alphabetical order.

The pattern is as follows: The Alphabetical order is shown below:

A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N

- 'SWISS' → opposite letters ← 'HDRHH'
- 'TABOO' → opposite letters ← 'GZYL'
- Similarly, 'REHAB' → opposite letters ← 'IVSZY'.

Hence, the correct answer is 'IVSZY'.

Q3 Text Solution:

Here, in the given question we have to find out how is "MUL" written in the same code language as "ADD" is written as " 8 " and "SUB" is written as "41".

The logic used is:- (Sum of place value of letters in the word) - 1

- "ADD" is written as " 8 "

Place value of A = 1, D = 4, D = 4
 $= (1 + 4 + 4) - 1$
 $= 9 - 1 = 8$

- "SUB" is written as "41"

Place value of S = 19, U = 21, B = 2
 $= (19 + 21 + 2) - 1$
 $= 42 - 1 = 41$

Similarly,

- "MUL" is written as:

Place value of M = 13, U = 21, L = 12
 $= (13 + 21 + 12) - 1$
 $= 46 - 1 = 45$

So, MUL is written as 45 in that language.
Hence, 45 is the correct answer.

Q4 Text Solution:

Here, In the given question we have to find the value of

7 @ 5 by the same logic used in 23@5=56;

6@7=26;

5@2=14

The logic used is :-

@ denotes +

and, number $\times 2$

- 23 @ 5 = 56

$= (23 + 5) \times 2$
 $= 56$

- 6 @ 7

$= (6 + 7) \times 2$
 $= 26$

- 5 @ 2

$= (5 + 2) \times 2$
 $= 14$

- Similarly,

- 7 @ 5

$= (7 + 5) \times 2$
 $= 24$

Hence, 24 is the correct answer.

Q5 Text Solution:

Topic: Coding-Decoding



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Sub Topic: Fictitious Language Coding

As in the coded language,

Pink is called Brown.

Therefore, Sky is Pink will be written as Sky is Brown.

Option D is correct.

Q6 Text Solution:

In the event of coincidence, the angle between the two needles will be zero degree.

$$\text{Angle} = \frac{60H - 11M}{2}$$

$$0 = \frac{60 \times 2 - 11M}{2}$$

$$0 = 120 - 11M$$

$$11M = 120$$

$$M = \frac{120}{11}$$

$$M = 10 \frac{10}{11}$$

Means the hands of the clock will coincide at 2:10

$$\frac{10}{11}$$

Note: Angle for coincident = zero

Angle for opposite = 180°

Angle for right angle = 90°

Hence, 2:10 $\frac{10}{11}$ is the correct answer.

Q7 Text Solution:

We know that,

We know that in any two consecutive non-leap years, the exact date of the year will be one day ahead of the exact date of the previous year.

If 4 December 2021 is on Saturday

Then, 4 December 2022 will be on:- Saturday + 1 = Sunday.

Hence, "Sunday" is the correct answer.

Q8 Text Solution:

Given,

Kaliya position from left side = 13th

Gabbar position from right side = 20th

After interchanging position,

Kaliya becomes from left side = 18th

Now from formula,

- Total number of people = (Position from Left + Position from Right) - 1

$$(18 + 20) - 1 = 37.$$

- Gabbar's position from the right side (x) = ?

Using the formula, Total number of people = (Position from Left + Position from Right) - 1

$$37 = (13 + x) - 1$$

$$38 = 13 + x$$

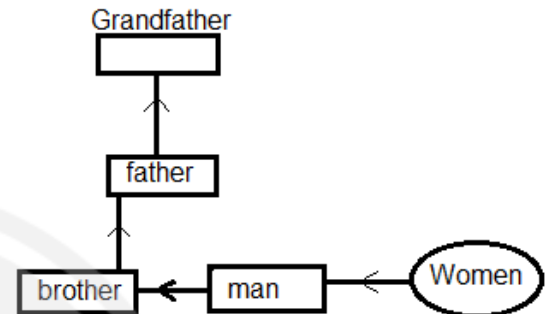
$$25 = x$$

Hence, 25 is the correct answer.

Q9 Text Solution:

According to the given instructions in the question,

The following diagram can be drawn:



We can see that,

Grandfather of that woman = Father of that man's father.

So, father of the man = father of the woman.

The woman will be the sister of the man.

Hence, " Sister " is the correct answer.

Q10 Text Solution:

We can see that India and Pakistan are independent countries in Asia.

Thus, the best representation of the scenario is –



Hence, option B is the correct answer.

Q11 Text Solution:

The relationship between Advocates, Males and Husband is :

- All husbands are male .
- Husbands may or may not be Advocates. So, some husbands are advocates.



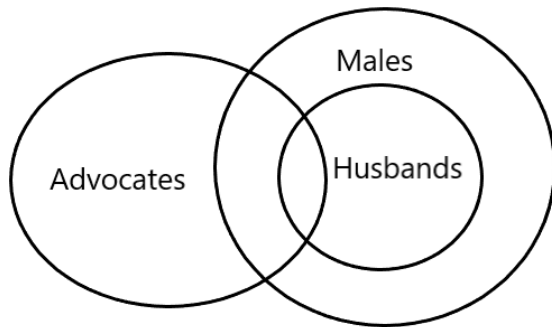
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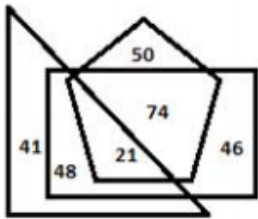
- Advocates can be male or female. So, some advocates are male.

So, the correct venn diagram illustrating their relationship is as follows:



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

Q12 Text Solution:



Rectangle = Woman

Pentagon = Entrepreneurs

Triangle = Mothers

The intersection of the rectangle and pentagon which is outside of the triangle is 74.

Hence, 74 is the correct answer.

Q13 Text Solution:

Given Words → Meaningful Words

RDQAUSNO → SQUADRON

EMOMCOROD → COMMODORE

ANCEDOG → DECAGON

LARHSAM → MARSHAL

Except Decagon, all others are related to Indian Air Force.

So, "ANCEDOG" is the odd one out.

Hence, the correct answer is "ANCEDOG".

Q14 Text Solution:

1) EEWRSTA → SWEATER

2) KCTAEJ → JACKET

3) EECFEL → FLEECE

4) ENBIAE → BEANIE

Sweater, Jacket and Beanie are woollen clothes whereas Fleece is a warm fabric.

Q15 Text Solution:

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

Logic:- The letter pairs are the opposite letters of each other.

Positional Number	1	2	3	4	5	6	7	8	9	10	11	12	13
Letter	A	B	C	D	E	F	G	H	I	J	K	L	M
Letter	Z	Y	X	W	V	U	T	S	R	Q	P	O	N
Positional Number	26	25	24	23	22	21	20	19	18	17	16	15	14

Option ⇒ MN ⇒ M is the opposite letter of N.

Option ⇒ GT ⇒ G is the opposite letter of T.

Option ⇒ KP ⇒ K is the opposite letter of P.

Option ⇒ QL ⇒ Q is the opposite letter of J and L is the opposite letter of O.

Hence, "QL" is the correct answer.

Q16 Text Solution:

Here, in this type of question we have to find the number which can be replaced the question mark by applying the logic.

- The logic used in -

a	b
c	d

$$a \times b \times d = c$$

As,

$$8 \times 6 \times 2 = 96$$

And

$$15 \times 2 \times 2 = 60$$

Similarly,

$$? \times 5 \times 6 = 120$$

$$? = 120/30$$

$$? = 4$$

Hence, 4 is the correct answer.

Q17 Text Solution:



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Here, in this question we have to find the missing number in the given matrix.

Logic: (1st number + 2nd number + 3rd number) = 4th number

- In the first column :

$$= 2 + 5 + 7 = 14$$

and,

- In the second column :

$$= 8 + 4 + 5 = 17$$

Similarly,

- In the third column :

$$= 6 + 9 + 4 = 19$$

Hence, '19' is the correct answer.

Q18 Text Solution:

The logic followed here is as follows:

As,

$$21 \times 5 + (21 \div 3)$$

$$105 + 7 = 112$$

$$51 \times 5 + (51 \div 3)$$

$$255 + 17 = 272$$

Same as,

$$36 \times 5 + (36 \div 3)$$

$$180 + 12 = 192$$

Clearly, 36 is related to 192.

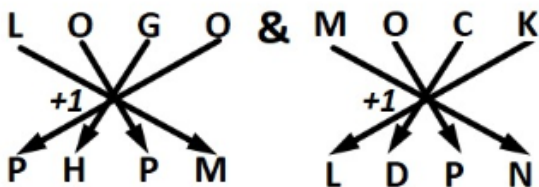
Hence **option A** is correct answer.

Q19 Text Solution:

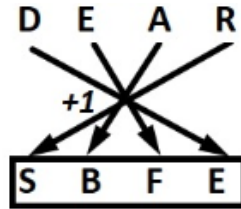
Here the logic is:

In the given question, the second letter-cluster is formed by applying (+1) and shuffling the letters of the first letter-cluster in a particular manner.

Such as,



Similarly,



Hence, "SBFE" is the correct answer.

Q20 Text Solution:

As we can see that, The pattern followed in the given pair is as follows:

The difference between the place values of the respective letters in the given pair forms a series of 2,4,6,8,...

In the given pair **CFIL : ABCD**

- C (3-1) A = 2
- F (6-2) B = 4
- I (9-3) C = 6
- L (12-4) D = 8

Similarly,

? : WXYZ

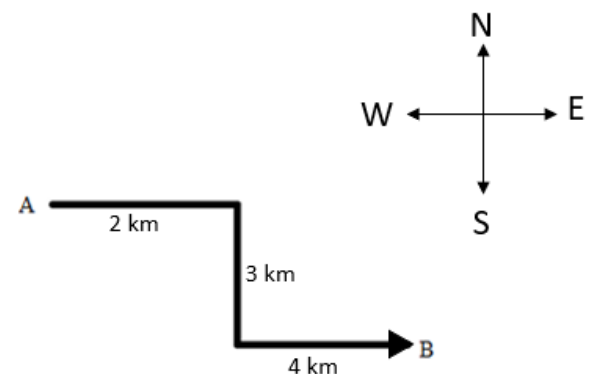
- Y (25-23) W = 2
- B (28-24) X = 4
- E (31-25) Y = 6
- H (34-26) Z = 8

Hence, "YBEH" is the correct answer.

Q21 Text Solution:

Here, in this question, we have to find which direction is Vilas's home located in relation to his college.

According to the question, the instruction given can be plotted as follows.



So it's clear that Vilas's home is in the North-West direction from the college.

Hence, " North - West " is the correct answer.

Q22 Text Solution:

The pattern followed is:

$$5 \times 1 + 1 = 6$$

$$4 \times 6 + 1 = 25$$

$$3 \times 25 + 1 = 76$$

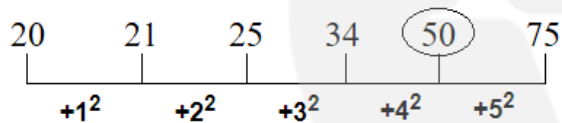
$$2 \times 76 + 1 = 153$$

$$1 \times 153 + 1 = 154$$

Hence, **153** is the correct answer.

Q23 Text Solution:

- Here we have to find out an alternative that will complete the given number series: **20, 21, 25, 34, ?, 75**
- The logic used is:** Here the number is increasing from left to right in the series following the mathematical operation of addition of squares of numbers $+1^2$, $+2^2$, $+3^2$, $+4^2$ and $+5^2$ respectively.
- The pattern is as follows:**

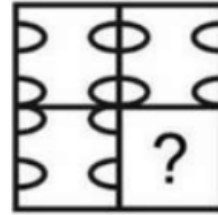


- Hence, the correct answer is 50.

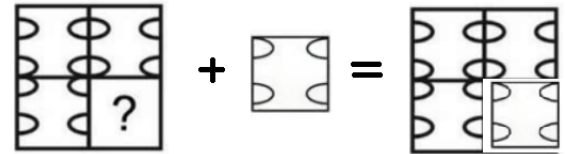
Q24 Text Solution:

Here, in this question we have to find the correct figure that complete the given question figure correctly.

Given:



Detailed Explanation:



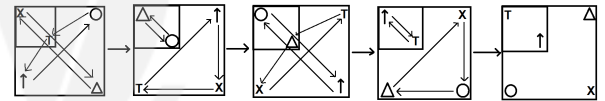
Hence, **option D** is the correct answer.

Q25 Text Solution:

According to the question :

We have been given a series of figures using some logic . we have to identify the logic and then have to find the figure that will replace the question mark .

Solution with logic :



Hence , "Option D" is the correct answer .



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