

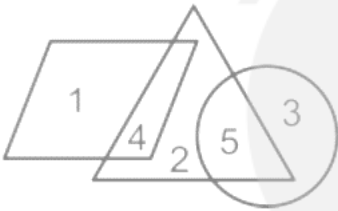
AFCAT Memory Based Paper - 26 Aug 2022 (Shift 1)

Q1 Directions: Study the following information carefully to answer the given questions:

In the morning Om started walking and walked 9m in a certain way, then turned left and walked 10m. He again turned left and walked 9m and now he is facing in the South direction. In which direction he started walking initially?

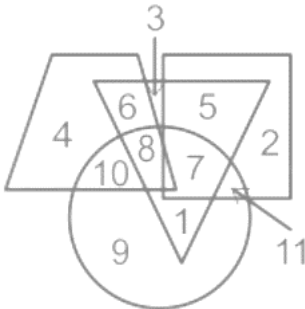
- (A) East (B) West
(C) North (D) South

Q2 In the given diagram, circle represents Females, parallelograms represent Males and triangle represent Teachers. Find the ratio of males who are not teachers and female teachers.



- (A) 4:5 (B) 5:1
(C) 1:3 (D) 1:5

Q3 Find the difference between the sum of the numbers surrounded by one figure and the sum of the numbers surrounded by two figures.



- (A) 15 (B) 18

- (C) 12 (D) 17

Q4 Choose the most appropriate answer.

In the following question, a set of figures carrying characters is given. Assuming that the characters follow a similar pattern, find the missing character.



- (A) G (B) J
(C) K (D) H

Q5 If P denotes 'Addition', Q denotes 'Division', R denotes 'Multiplication' and S denotes 'Subtraction', then which of the statements given below is/are correct.

Statement I: $44 \div 11 \times 6 \div 5 \times 2 \times 2 = 16$

Statement II: $36 \div 3 \times 3 \times 2 \times 2 \times 5 = 16$

- (A) Only Statement I
(B) Only Statement II
(C) Both Statement I and II
(D) Neither I nor II

Q6 Choose the option which is related to the third word in the same way as the second word is related to the first word.

Injury : Helmet :: Flood : ?

- (A) Cape (B) Levee
(C) Cave (D) Estuary

Q7 Rearrange the jumble letters to form a meaningful word and find the odd one out.

- (A) ARCHM (B) BMERNVOE
(C) GUASUT (D) NAJRAUY

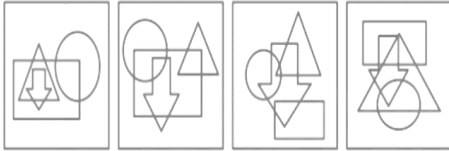
Q8



From the given options, select the options in which the dot can be placed in exactly the same way as shown in the figure(X) below:



(X)



A)

B)

C)

D)

(A) A

(B) B

(C) C

(D) D

Q9 Rearrange the jumble letters and find the odd one out.

(A) RPISM

(B) UBEC

(C) QSUAER

(D) OCNE

Q10 Choose the option which is related to the fourth word in the same way as the second word is related to the first word.

Architect: Building :: ? : Museum

(A) Manager

(B) Gardner

(C) Curator

(D) Supervisor

Q11 Ram walks 15 m towards west and turns to left, walks 5m and turns to left, walks 4m and again turns to left, walks 2m and turns to right, runs 7m and finally turns to left and runs 3m. Now in which direction is he facing and how far is he from its initial position?

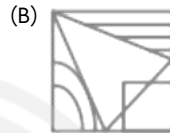
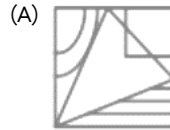
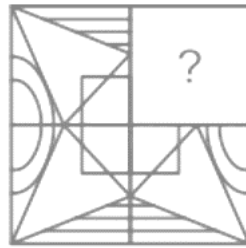
(A) North; 4 m

(B) South; 4 m

(C) North; 2 m

(D) South; 2 m

Q12 Select the option which will replace the question mark(?) in the following figure series is shown below:



Q13 Choose the most appropriate answer.

In the following question, select a figure from the given options I, II, III and IV which when placed in the blank space of figure X would complete the pattern.



X



I



II



III



IV

(A) I

(B) II

(C) III

(D) IV

Q14



Ravish Kumar starts running facing towards the south. He runs for 20 m, then takes a left turn, and then runs for another 30 m. Again, he takes a left turn and runs 70 m. He then finally turns left and walks 30 m.

What is the current position of Ravish with respect to the starting point?(All turns are 90 degrees turns only)

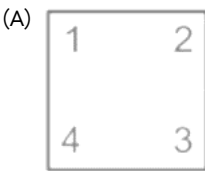
- (A) North, 50 m (B) South, 70 m
(C) West, 20 m (D) East, 30 m

Q15 If 'A' means '+', 'B' means '-', 'C' means 'x' and 'D' means '÷', then $81 \ D \ 9 \ C \ 5 \ D \ 15 \ A \ 8 \ B \ 11 = ?$

- (A) 0.15 (B) 22
(C) 12 (D) 0

Q16 In the following question, select the wrong figure from the given series.

1	2	4	1	3	4	3	@	#	@
4	3	3	@	@	#	#	%	%	K



(D)



Q17 In a certain code language, 'SAMPLE' is written as 'RYJLGY' and 'MAPLE' is written as 'LYMHZ'. How will 'PEOPLE' be written in that language?

- (A) OCLLGL (B) GCLLGY
(C) OBGLGY (D) OCLLGY

Q18 Pointing towards a woman, Reena said, "She is the only daughter of my father-in-law." How is the woman related to Reena?

- (A) Sister-in-law (B) Sister
(C) Mother (D) Daughter

Q19 Shivam is the son of the brother of Rani's mother. Anil is married to Aparna, who is Ana's mother. Ritu and Ana are the sisters of Shivam. How is Rani related to Ritu?

- (A) Sister (B) Mother
(C) Cousin (D) Sister in Law

Q20 Choose the option which is related to the third word in the same way as the second word is related to the first word.

Teak : Pine :: Lily : ?

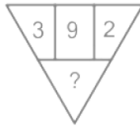
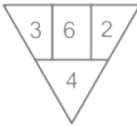
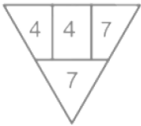
- (A) Lotus (B) Flower
(C) Tree (D) Garden

Q21 In certain code languages, 'HONEY' is written as 'XCKKC' and 'LIVER' is written as 'QCSEG'. How will 'FLOWER' be written in that language?

- (A) QCTKGZ
(B) QKTKGZ
(C) KQTZCK
(D) None of the above

Q22 Study the given pattern carefully and select the number that can replace the question mark (?) in it.





- (A) 7
(B) 8
(C) 6
(D) 5

Q23 From the given options, select the options in which the dot can be placed in exactly the same way as shown in the figure (X) below

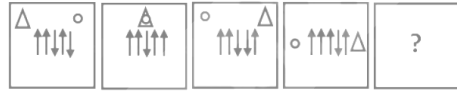


(x)

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



Q24 Select the figure that can replace the question mark (?) in the following series



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

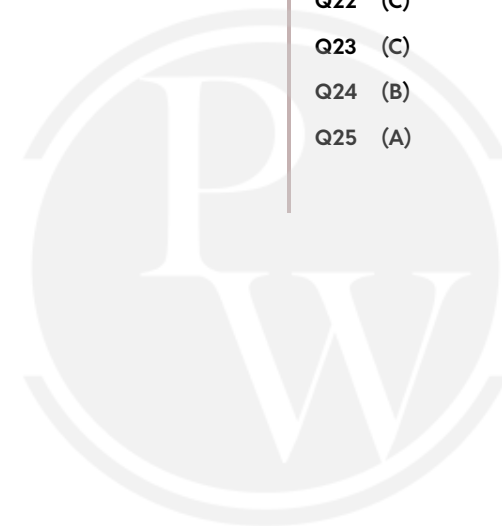
Q25 Rearrange the JUMBLE letters in a meaningful word and find the odd one out.

- (A) REABTH
(B) YALP
(C) GINS
(D) TEIRW

Answer Key

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

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

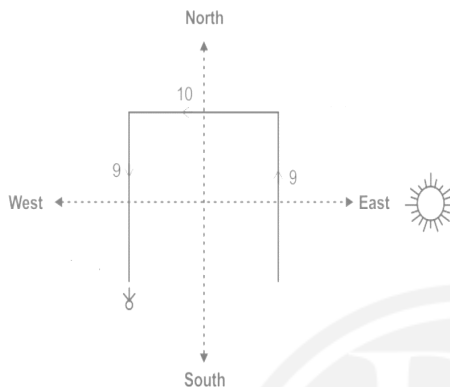


Hints & Solutions

Q1 Text Solution:

Explanation:

The sun is in the east at the time of the morning.

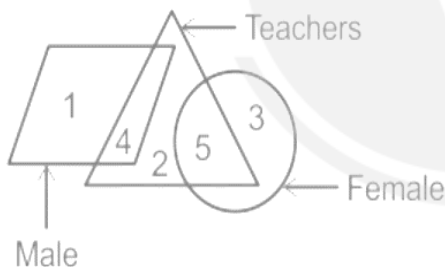


Therefore, Om started walking in North direction initially.

Q2 Text Solution:

Explanation:

The logic followed here is:



Sum of males who are not teachers = 1

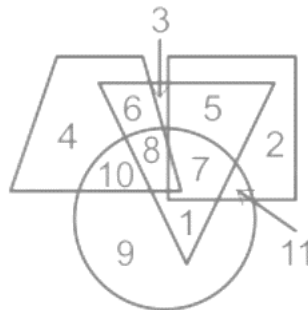
Sum of female teachers = 5

Ratio of sum of males who are not teachers and sum of female teachers = 1:5

Q3 Text Solution:

Explanation:

The logic followed here is:



Sum of the numbers surrounded by one figure
 $= 4 + 2 + 3 + 9 = 18$

Sum of the numbers surrounded by two figures
 $= 6 + 5 + 11 + 10 + 1 = 33$

Difference of Sum of the numbers surrounded by two figures and Sum of the numbers surrounded by one figure
 $= 33 - 18 = 15$

Q4 Text Solution:

Explanation:

The logic followed here is:

Figure 1: $3 + 9 = 12(L)$

Figure 2: $4 + 5 = 9(I)$

Figure 3: $4 + 4 = 8(H)$

Q5 Text Solution:

Explanation:

Statement I: $44 \text{ Q } 11 \text{ P } 6 \text{ S } 2 \text{ R } 2 = 16$

After applying symbols:

$$44 \div 11 + 6 - 2 \times 2 = 16$$

$$\Rightarrow 4 + 6 - 2 \times 2 = 16$$

$$\Rightarrow 6 \neq 16$$

Statement II: $36 \text{ Q } 3 \text{ R } 2 \text{ P } 2 \text{ S } 10 = 16$

After applying symbols:

$$36 \div 3 \times 2 + 2 - 10 = 16$$

$$\Rightarrow 12 \times 2 + 2 - 10 = 16$$

$$\Rightarrow 16 = 16$$

Therefore, only Statement II is correct.

Q6 Text Solution:

Explanation:

The logic followed here is:



Helmet is used for safety from **injury**

Similarly,

Levee is a low wall built at the side of a river to prevent it from **flood**.

Q7 Text Solution:

Explanation:

After arranging all the letters in a meaningful word:

1. ARCHM– MARCH (31 Days)
2. BMERNVOE– NOVEMBER (30 Days)
3. GUASUT– AUGUST (31 Days)
4. NAJRAUY – JANUARY (31 Days)

All the months have 31 days except November

Q8 Text Solution:

Explanation:

If exact figure is not shown in options, mark the most appropriate option present.

On observing the given figure carefully, we get:

In the question figure (X),

1. One dot is in the common area of the triangle and rectangle
2. One dot is in the common area of the circle and rectangle
3. One dot is in the common area of the arrow, circle and rectangle.

Figure (A)-- Common area of the arrow, circle and rectangle isn't present

Figure (B)-- All the required conditions are fulfilled as shown below:



Figure(C)-- Common area of the triangle and rectangle isn't present

Figure (D)-- Common area of the circle and rectangle isn't present

Q9 Text Solution:

Explanation:

After arranging all the letters in a meaningful word:

1. RPISM– PRISM (3D Figure)
2. UBEC– CUBE (3D Figure)
3. QSUAER – SQUARE (2D Figure)
4. OCNE– CONE (3D Figure)

All the figures are 3D figure except SQUARE which is a 2D figure.

Q10 Text Solution:

Explanation:

As **Architect** is the person who designs the **building**

Architect is related to **Building**

Similarly,

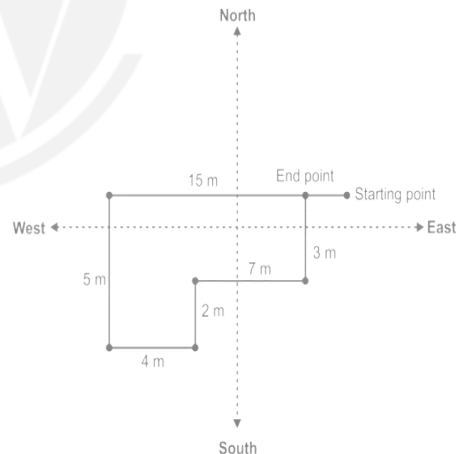
Curator is the person whose job is to look after the things that are kept in a **museum**

Therefore, **Curator** is related to **Museum**

Q11 Text Solution:

Explanation:

We have drawn the figure according to the information given in the question,



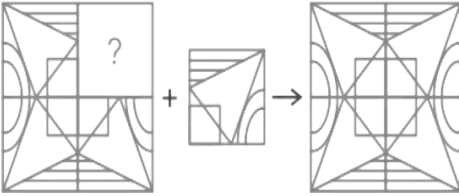
Clearly, Ram is facing north and is 4 meters away from its initial position

Q12 Text Solution:

Explanation:

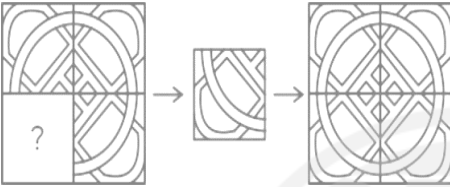


The figure that will replace the question mark (?) in the following figure series is shown below:



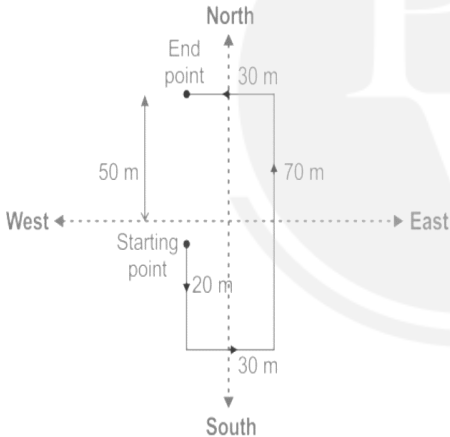
Q13 Text Solution:

Explanation:



Q14 Text Solution:

Explanation:



Hence, North, 50 m is the correct answer

Q15 Text Solution:

Explanation:

By decoding the given information:

A	B	C	D
Means			
+	-	×	÷

81 D 9 C 5 D 15 A 8 B 11

After applying the symbols

$$81 \div 9 \times 5 \div 15 + 8 - 11 = ?$$

$$9 \times 1/3 + 8 - 11 = ?$$

$$3 + 8 - 11 = ?$$

$$11 - 11 = 0$$

Q16 Text Solution:

Explanation:

The logic here is as follows:

1. The numbers are shifted in a clockwise direction.
2. When the upper right side letter shifted to the lower right side its replaced by a symbol.

1 → 2 ↑ 4 ← 3	4 → 1 ↑ 3 ← @	3 → 4 ↑ @ ← #	3 → @ ↑ # ← %	# @	% K

Q17 Text Solution:

Explanation:

The position of the letters according to the English alphabet series:

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

SAMPLE is written as RYJLGY



(19)	(1)	(13)	(16)	(12)	(5)
S	A	M	P	L	E
(-1)	(-2)	(-3)	(-4)	(-5)	(-6)
↓	↓	↓	↓	↓	↓
R	Y	J	L	G	Y
(18)	(25)	(10)	(12)	(7)	(25)

And,

MAPLE is written as LYMHZ

(13)	(1)	(16)	(12)	(5)
M	A	P	L	E
(-1)	(-2)	(-3)	(-4)	(-5)
↓	↓	↓	↓	↓
L	Y	M	H	Z
(12)	(25)	(13)	(8)	(26)

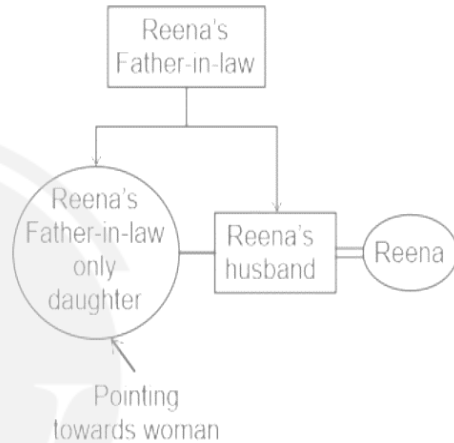
Similarly,

PEOPLE is written as?

(16)	(5)	(15)	(16)	(12)	(5)
P	E	O	P	L	E
(-1)	(-2)	(-3)	(-4)	(-5)	(-6)
↓	↓	↓	↓	↓	↓
O	C	L	L	G	Y
(15)	(3)	(12)	(12)	(7)	(25)

Symbol in Diagram	Meaning
○	Female
□	Male
==	Married Couple
—	Siblings
	Difference of A Generation

Family Tree:



Here, Woman is sister-in-law of Reena

Q19 Text Solution:

Explanation:

Preparing the family tree using the following symbols:

Q18 Text Solution:

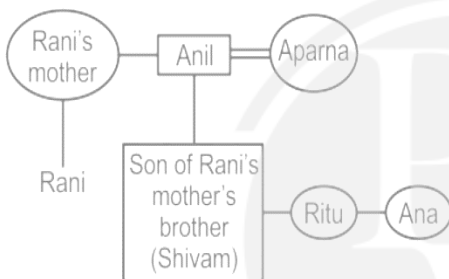
Explanation:

Preparing the family tree using the following symbol:



Symbol in Diagram	Meaning
○	Female
□	Male
==	Married Couple
—	Siblings
	Difference of A Generation

Family Tree:



Hence, Rani is the Cousin of Ritu

Q20 Text Solution:

Explanation:

The logic followed here is:

Teak and Pine both are types of trees.

Therefore Pine is related to Teak

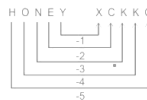
Similarly,

Lily and Lotus are flowers

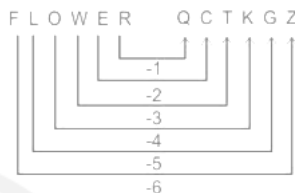
Therefore Lotus is related to Lily

Q21 Text Solution:

The logic followed here is:



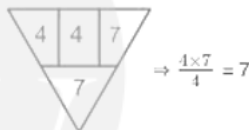
Similarly



Therefore, the code of FLOWER is QCTKGZ

Q22 Text Solution:

The Logic here is



So the value of ? = $\frac{9 \times 2}{3} = 6$

Q23 Text Solution:

Here Figure C is the most appropriate option present



Q24 Text Solution:

Here Triangle changes its position in a clockwise direction in each step

The circle changes its position in anticlockwise in each step

Direction of one arrow changes in each figure from the right side





Q25 Text Solution:
Solution

After arranging all the letters in a meaningful word

1) REABTH = BREATH

2) YALP = PLAY

3) GINS = SING

4) TEIRW = WRITE

BREATH is an involuntary activity and others are voluntary activity



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