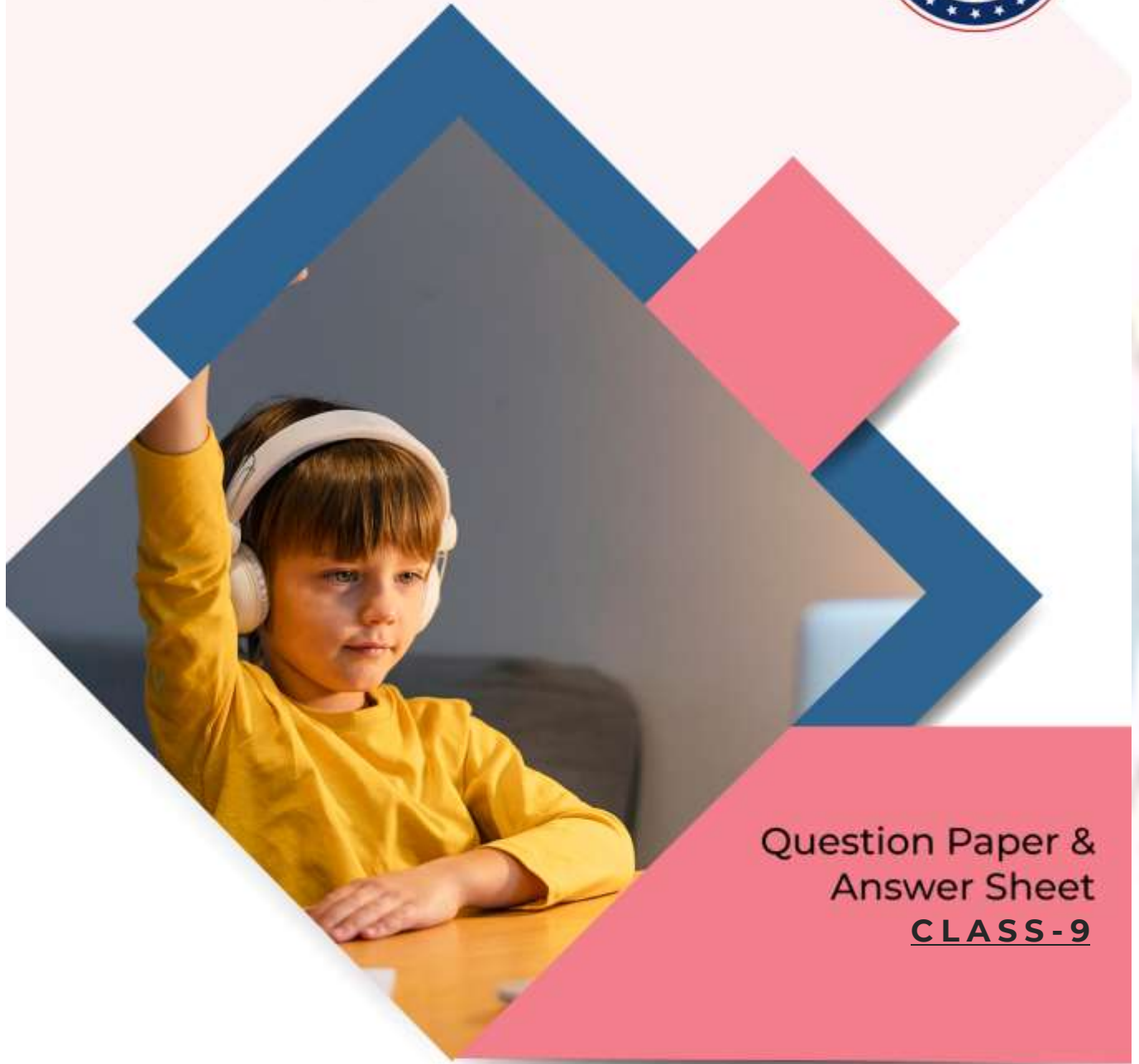


International Olympiad Foundation (IOF)  
(IOLYMPIADS LLP)  
Certifying Talents Across World



Question Paper &  
Answer Sheet  
**CLASS - 9**

 **IFRAO**  
International Foundation  
Reasoning & Aptitude  
Olympiad

**International Foundation**  
**Reasoning & Aptitude Olympiad(IFRAO)**  
**CLASS-9**  
**PAPER - 2021**

**SECTION-A**  
**Verbal Reasoning**

1. In the following series determine the order of the letters. Then from the given options select the one which will complete the given series.  
  
b e d f ? h j ? l  

A. i m	B. m i
C. i n	D. j m
  
2. In the following letter series, some of the letters are missing which are given in that order as one of the alternatives below it. Choose the correct alternative.  
\_ bc \_ ca \_ aba \_ c \_ ca  

A. abcbb	B. bbbec
C. bacba	D. abbec
  
3. In the series given below, what would come in place of the question-mark?  
3J, 6M, 12L, ?, 48N  

A. 24O	B. 8M
C. 26M	D. 22°
  
4. Which of the following does not fit in the letter number series given below?  
B0R, G3U, E3P, J7S, H9N  

A. E3P	B. J7S
C. H9N	D. G3U
  
5. If HARD is coded as 1357 and SOFT as 2468, what will 21448 stand for?  

A. SHAFT	B. SHORT
C. SHOOT	D. SHART



- 11 P, Q, R, S, T, V, W and Z are travelling to three destinations Delhi, Chennai and Hyderabad in three different vehicles Honda City, Swift D'Zire and Ford Ikon. There are three females among them one in each car. There are atleast two persons in each car. R is not travelling with Q and W. T, a male, is travelling with only Z and they are not travelling to Chennai. P is travelling in Honda City to Hyderabad. S is sister of P and travels by Ford Ikon. V and R travel together. W does not travel to Chennai.

**Members in which of the following combinations are travelling in Honda City?**

- A. PRS  
B. PQW  
C. PWS  
D. Data inadequate

- 12 This problem consists of three statements. Based on the first two statements, the third statement may be true, false, or uncertain.

- (i) Blueberries cost more than strawberries.  
(ii) Blueberries cost less than raspberries.  
(iii) Raspberries cost more than both strawberries and blueberries.

**If the first two statements are true, the third statement is**

- A. True  
B. False  
C. Uncertain  
D. None of these

- 13 Six friends P, Q, R, S, T and U are sitting around the hexagonal table each at one corner and are facing the centre of the hexagonal. P is second to the left of U. Q is neighbour of R and S. T is second to the left of S.

**Which one is sitting opposite to P?**

- A. R  
B. Q  
C. T  
D. S

- 14 Six friends P, Q, R, S, T and U are sitting around the hexagonal table each at one corner and are facing the centre of the hexagonal. P is second to the left of U. Q is neighbour of R and S. T is second to the left of S.

**Who is the fourth person to the left of Q?**

- A. P  
B. U  
C. R  
D. Data inadequate

- 15 Directions: In each question below is given a statement followed by two courses of action numbered I and II. You have to assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the suggested courses of action logically follow(s) for pursuing.

**Statement:** Exporters in the town are alleging that commercial banks are violating a Reserve Bank of India directive to operate a post shipment export credit denominated in foreign currency at international rates from March this year.

**Courses of Action:**

- I. The officers concerned in the commercial banks are to be suspended.
- II. The RBI should be asked to stop giving such directives to commercial banks.

- A. If only I follows
- B. If only II follows
- C. If either I or II follows
- D. If neither I nor II follows

- 16 Directions: In each question below is given a statement followed by two courses of action numbered I and II. You have to assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the suggested courses of action logically follow(s) for pursuing.

**Statement:** Most of those who study in premier government engineering colleges in India migrate to developed nations for better prospects in their professional pursuits.

**Courses of Action:**

- I. All the students joining these colleges should be asked to sign a bond at the time of admission to the effect that they will remain in India at least for ten years after they complete education.
- II. All those students who desire to settle in the developed nations should be asked to pay entire cost of their education which the government subsidies.

- A. If only I follows
- B. If only II follows
- C. If either I or II follows
- D. If neither I nor II follows

- 17 Directions: In the following question, two statements numbered I and II are given. There may be cause and effect relationship between the two statements. These two statements may be the effect of the same cause or independent causes. These statements may be independent causes without having any relationship. Read both the statements and mark your answer from the options given

**Statements:**

- I. The government has recently fixed the fees for professional courses offered by the unaided 'institutions which are much lower than the fees charged last year.
- II. The parents of the aspiring students launched a severe agitation last year a protesting against the high fees charged by the unaided institutions.

- A. If statement I is the cause and statement II is its effect;
- B. If statement II is the cause and statement I is its effect;
- C. If both the statements I and II are independent causes;
- D. If both the statements I and II are effects of independent causes

18 Directions: In the following question, two statements numbered I and II are given. There may be cause and effect relationship between the two statements. These two statements may be the effect of the same cause or independent causes. These statements may be independent causes without having any relationship. Read both the statements and mark your answer from the options given

**Statements:**

- I. The Reserve Bank of India has recently put restrictions on few small banks in the country.
- II. The small banks in the private and co-operative sector in India are not in a position to withstand the competitions of the bigger in the public sector.

- A. If statement I is the cause and statement II is its effect;
- B. If statement II is the cause and statement I is its effect;
- C. If both the statements I and II are independent causes;
- D. If both the statements I and II are effects of independent causes

19 The following questions are based on the code pattern given below:

Letters : T R A H U X C I B L

Numbers : 3 0 1 7 4 9 6 8 2 5

Which of the given options has the correct coded form of the given letters?

BUHLAI

- A. 247018
- B. 247508
- C. 247538
- D. 247518

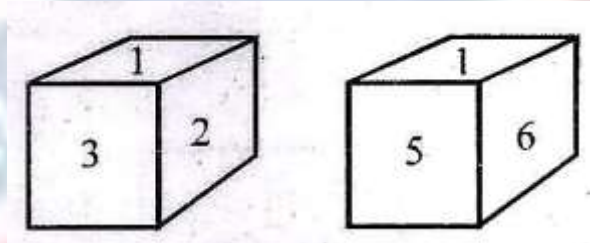
20 If 'A + B' means 'A is brother of B', 'A - B' means 'A is sister of B', 'A x B' means 'A is wife of B' and 'A % B' means 'A is father of B', then which of the following indicates 'S is the son of P'?

- A.  $P \times Q \% R + S - T$
- B.  $P \times Q \% S - R + T$
- C.  $P \times Q \% R - T + S$
- D.  $P \times Q \% R - S + T$

## SECTION-B

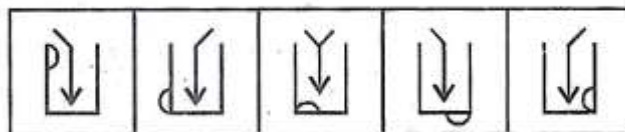
### Non Verbal Reasoning

- 21 Two positions of a dice are shown below. When 4 is at the bottom, what number will be on the top?

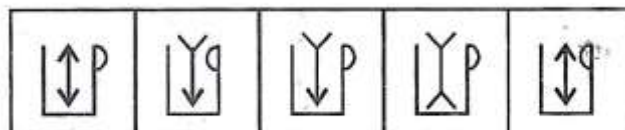


- A. 1  
B. 2  
C. 5  
D. 6
- 22 A toy cube is painted orange on all sides. It is cut into 64 smaller cubes of equal size. How many smaller cubes are not painted at all?
- A. 4  
B. 8  
C. 16  
D. 20
- 23 Direction: The following questions consist of problem figure followed by answer figures. Select a figure from amongst the answer figures which will continue the same series or pattern as established by the problem figures.

**Problem Figures**



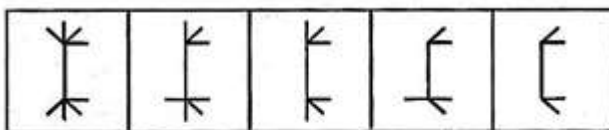
**Answer Figures**



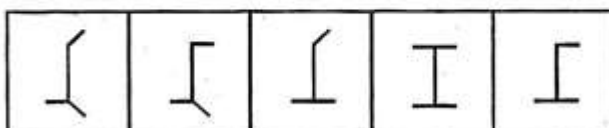
A      B      C      D      E

- 24 Direction: The following questions consist of problem figure followed by answer figures.  
 . Select a figure from amongst the answer figures which will continue the same series or pattern as established by the problem figures.

**Problem Figures**



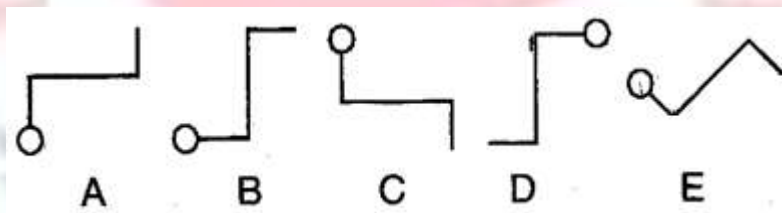
**Answer Figures**



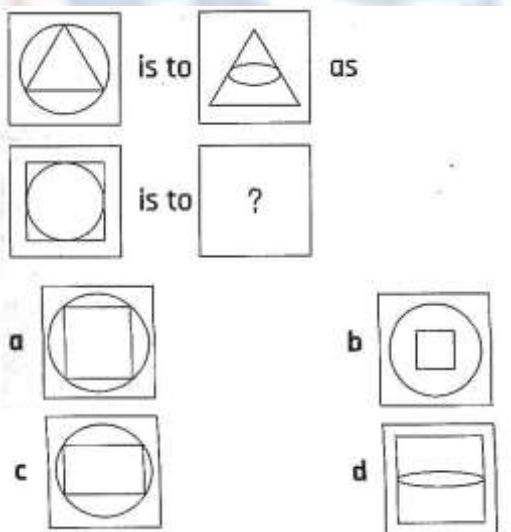
A B C D E

- A. E
- B. B
- C. C
- D. D

- 25 In the following question one of the figures is different from the rest. Spot the figure.

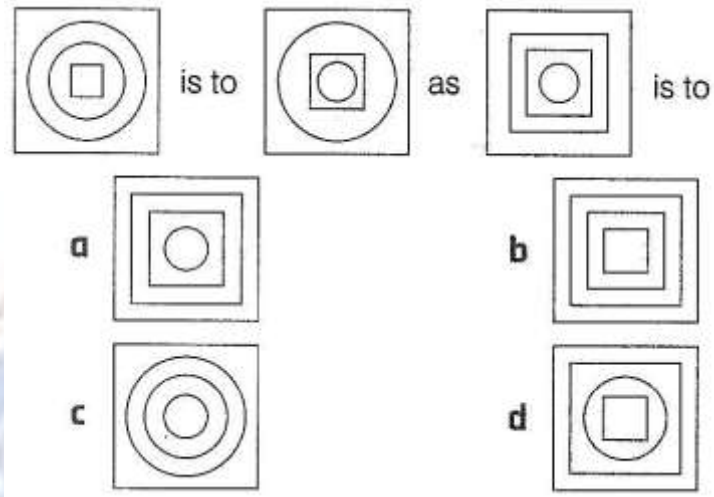


- 26 Which option figure completes the second pair in the same way as the first pair?

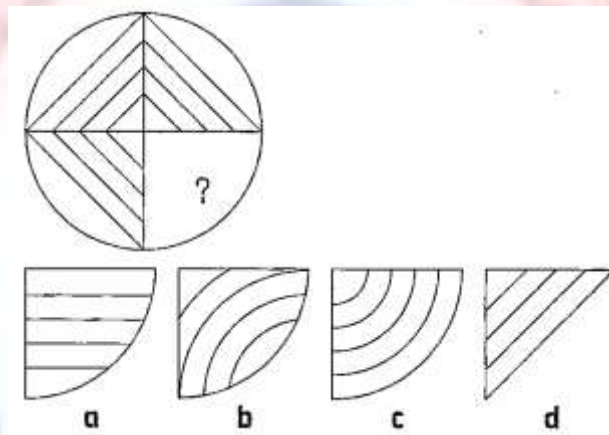




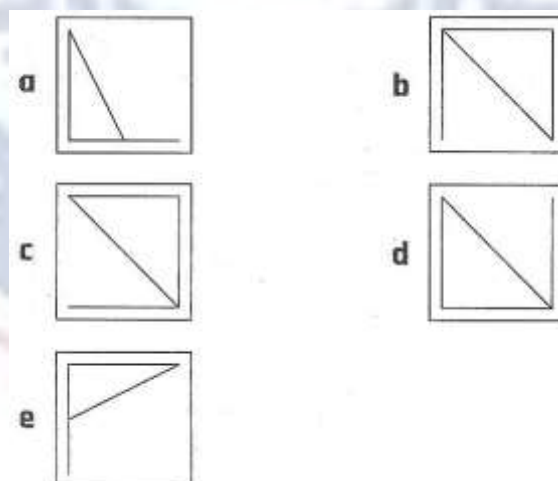
27 Which option figure completes the second pair in the same way as the first pair?



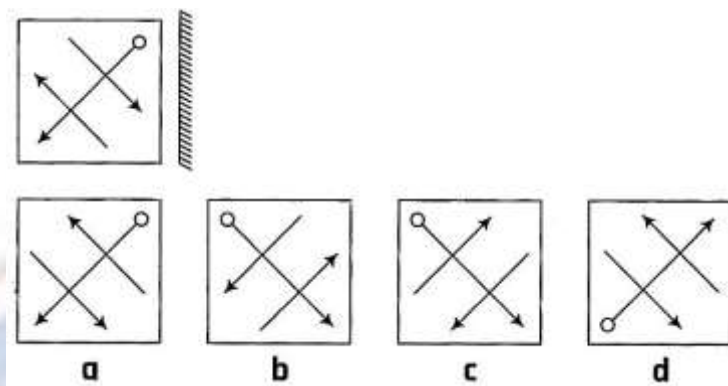
28 Which shape or pattern completes the large square?



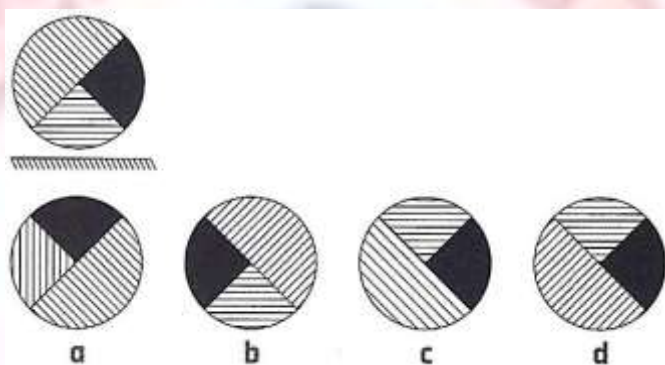
29 Choose the figure which is different from others.



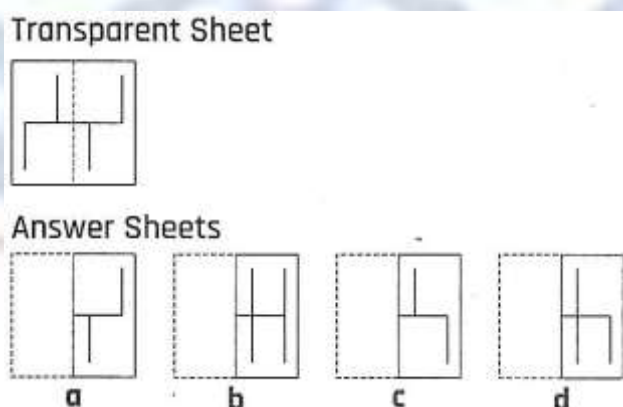
- 30 In the following question, choose the correct mirror image from among the four given alternatives.



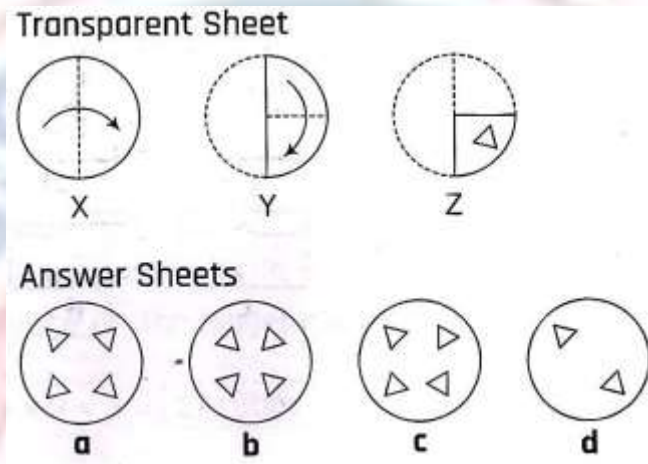
- 31 In the question, choose the correct mirror image of the given figure, if mirror is placed below the figure.



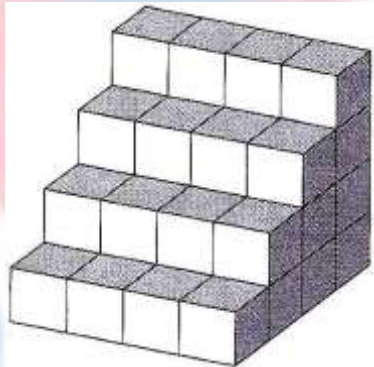
- 32 In the question, a transparent sheet with a certain design and a dotted line is given. From amongst the four answer figures, choose the one which resembles the transparent sheet after folding it along the dotted line.



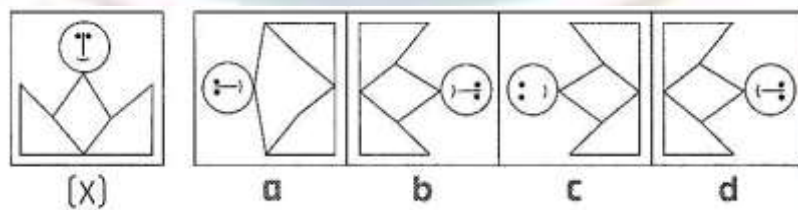
- 33 The question consists of a set of three transparent sheets (X), (Y) and (Z) showing a sequence of folding a piece of paper. Sheet (Z) depicts the manner in which the folded paper has been cut. From amongst the four answer sheets a, b, c and d, choose the one showing the unfolded form of sheet (Z).



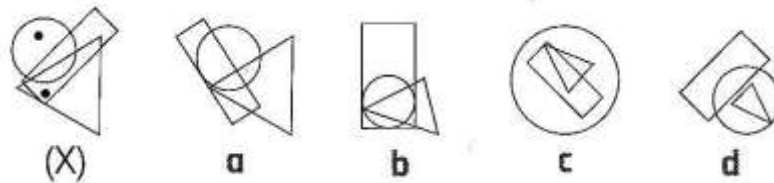
- 34 Calculate the number of cube required to make the figure a perfect cube.



- A. 20  
 B. 24  
 C. 28  
 D. 30
- 35 Find out which one of the option figures is identical as the given figure (X).

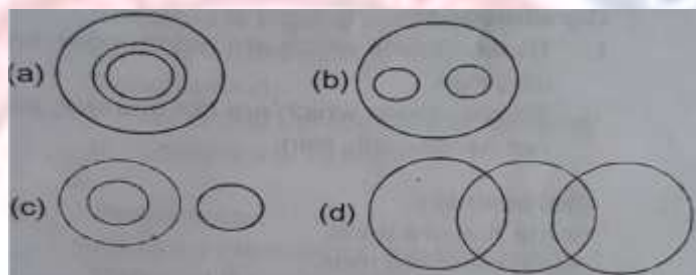


- 36 Choose the one figure from the four option figures, which best explains the characteristics given in the question figure (X).



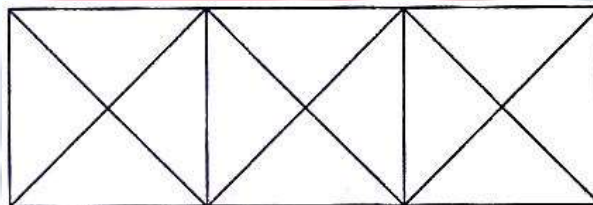
- 37 Choose the diagram that best illustrates the relationship among the three given classes in the question.

**Criminals, Thieves, Murderers**



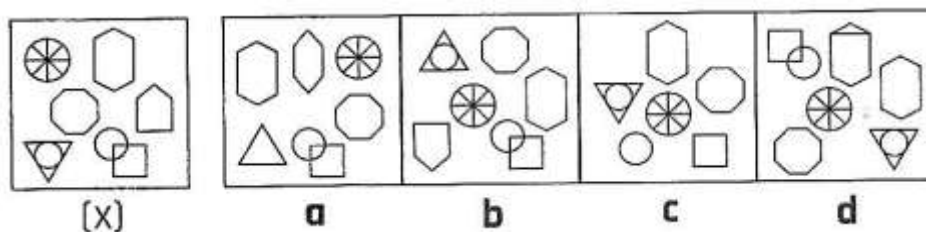
- A. a  
B. b  
C. c  
D. d

- 38 Count the number of triangles and squares in the figure given below.

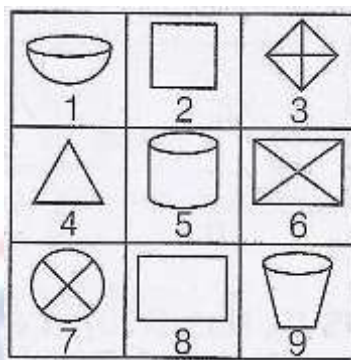


- A. 28 triangles, 2 squares  
B. 24 triangles, 5 squares  
C. 28 triangles, 5 squares  
D. 24 triangles, 3 squares

- 39 Select an option figure which has the same components as that of the given figure (X).



40 In the following question, group figures into three classes using each figure only once.



A. 1, 5, 9 ; 3, 6, 7 ; 2, 4, 8

B. 2, 3, 6 ; 4, 8, 9 ; 1, 5, 7

C. 3, 6, 8 ; 2, 4, 9 ; 1, 5, 7

D. 2, 5, 8 ; 1, 7, 9 ; 3, 4, 6

## SECTION - C

### Mathematical Reasoning & Data Interpretation

41 Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.

120, 99, 80, 63, 48, ?

A. 35

B. 38

C. 39

D. 40

42 If  $A + D > C + E$ ,  $C + D = 2B$  and  $B + E > C + D$ , it necessarily follows that

A.  $A + D > B + E$

B.  $A + D > B + C$

C.  $A + B > 2D$

D.  $B + D > C + E$

43 If "x" stands for "+" ; "y" stands for "-" ; "z" stands for "÷" and "w" stands for "x" then

$10w \ 2x \ 5y \ 5 = ?$

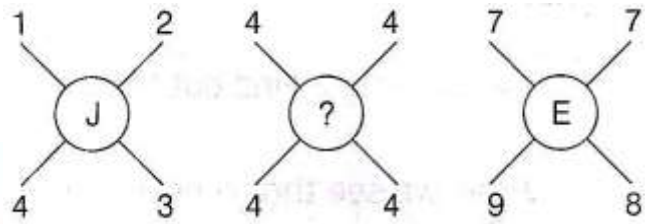
A. 15

B. 12

C. 20

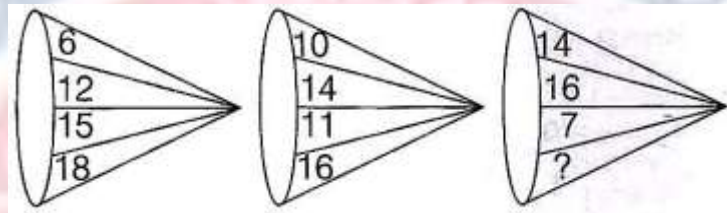
D. 10

- 44 Identify the pattern in the given figures and determine which term replaces the question mark?



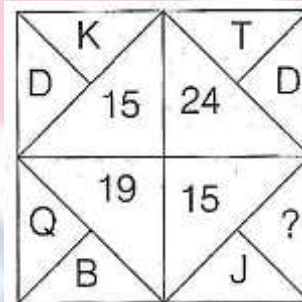
- A. O  
B. A  
C. P  
D. S

- 45 Find the number that replaces the question mark.



- A. 10  
B. 12  
C. 11  
D. 14

- 46 Find the alphabet in place of question mark.



- A. E  
B. F  
C. D  
D. H

- 47 Directions: Read the following statements carefully and answer the questions that follow.

- I. X is older than L.  
II. M and N are of equal age.  
III. Z is the youngest.  
IV. Y is younger than N  
V. Y is older than X.

**Which two of the above statements indicate that Y is older than L?**

- A. I and IV  
B. IV and V

C. I and V

D. None of these

48 Directions: Read the following statements carefully and answer the questions that follow.

I. X is older than L.

II. M and N are of equal age.

III. Z is the youngest.

IV. Y is younger than N

V. Y is older than X.

**Which statement(s) indicate(s) that N is older than Z?**

A. II and III

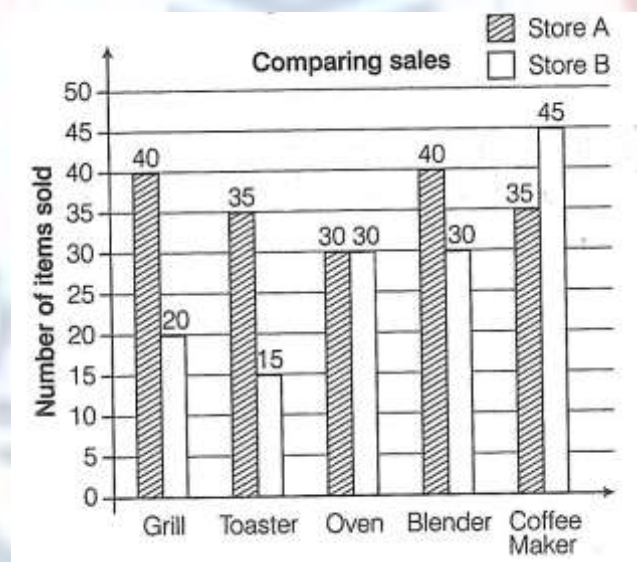
B. Only III

C. III and IV

D. None of these

Directions (Q. Nos. 49-50) Study the bar diagram carefully and answer the questions that follow.

Mr. Oberoi owns two kitchen appliances store. He compares the sales of two stores and recorded the information in a bar graph



49 How many total appliances were sold by store B?

A. 140

B. 130

C. 110

D. 95

50 What is the difference on sales of blender in store A and Toaster in store B?

A. 45

B. 15

C. 25

D. 35



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## IFRAO

International Foundation Reasoning  
& Aptitude Olympiad

### ANSWER SHEET

Question No.	Answer	Question no.	Answer
1.	A	26.	C
2.	A	27.	D
3.	A	28.	D
4.	B	29.	C
5.	B	30.	B
6.	B	31.	D
7.	A	32.	C
8.	D	33.	A
9.	D	34.	B
10.	C	35.	D
11.	B	36.	A
12.	A	37.	B
13.	D	38.	C
14.	A	39.	B
15.	D	40.	A
16.	B	41.	A
17.	B	42.	B
18.	B	43.	C
19.	D	44.	C
20.	D	45.	D
21.	A	46.	A
22.	B	47.	C
23.	C	48.	B
24.	A	49.	A
25.	A	50.	C