Logical Reasoning

VERBAL REASONING

1. Which of the following will be the last digit of the second highest number after the positions of the digits in each number is reversed?

738 429 156 273 894

(a) 1 (b) 2
(c) 4 (d) 7

2. Which of the following set of letters will complete the given letter series?

WFB, TGD, QHG,?

(a) NIJ (b) NIK
(c) NJK (d) PJK

3. In a joint family, there are father, mother, 4 married sons and three unmarried daughters. Of the sons, two have 2 daughters each, and two have a son and a daughter each. How many female members are there in the family?

(a) 15 (b) 12
(c) 14 (d) 11

4. In a certain code, TELEPHONE is written as ENOHPELET. How is ALI GATOR written in that code?

(a) ROTAGILA (b) ROTAGAIL
(c) ROTAGILE (d) ROTEGILA

5. Arrange the given words in the sequence in which they occur in the dictionary and choose the correct sequence.

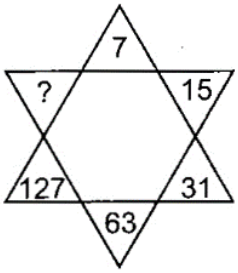
1. Protein 2. Problem
3. Proverb 4. Property
5. Project

(a) 1, 2, 3, 4, 5
(b) 2, 1, 4, 3, 5
(c) 2, 5, 4, 1, 3
(d) 3, 4, 5, 2, 1

6. If English alphabets are written in reverse order, what will be seventh letter on the right of the 12th letter from the left end?

(a) F (b) G
(c) H (d) S

7. Find the missing character, if a certain rule is followed in the figure.



(a) 190 (b) 221
(c) 236 (d) 255

8. If husband is called wife, wife is called grandfather, grandfather is called grandmother, grandmother is called maternal grandmother, maternal grandmother is called maternal grandfather, maternal grandfather is called maternal uncle and maternal uncle is called maternal aunt, then what will the father of the mother be called?

(a) Maternal grandmother
(b) Maternal uncle
(c) Maternal grandfather
(d) Maternal aunt

9. In a class of 35 students, Kunal is placed seventh from the bottom whereas Sonali is placed ninth from the top. Pulkit is placed exactly in between the two. What is Kunal's position from Pulkit?

(a) 9 (b) 10
(c) 11 (d) 13

10. A, B, C, D, E, F and G are sitting in a row facing North.
(i) F is to the immediate left of G.
(ii) E is 4th to the right of G.
(iii) C is the neighbour of B and D.
(iv) Person who is third to the left of D is at one of the ends.
Who are the neighbours of B?
(a) C and D (b) C and G
(c) G and F (d) C and E

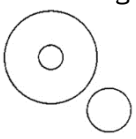
11. Some letters are given which are numbered 1, 2, 3, 4 and 5. Find the combination of numbers from the options so that the letters arranged accordingly form a meaningful word.

N	C	R	W	O
1	2	3	4	5

(a) 2, 3, 5, 4, 1 (b) 2, 3, 5, 1, 4
(c) 3, 2, 4, 5, 1 (d) 2, 1, 5, 4, 3

12. Pia walks a distance of 4 metres towards South. Then she turns to the left and walks 3 metres. After this she turns to the right and walks 4 metres. In which direction is she facing now?
(a) North-East (b) South
(c) North (d) South-West

13. Which of the following elements satisfies the Venn diagram given here?



(a) Judge, Thief, Criminal
(b) Father, Mother, Parents
(c) Teacher, College, Student
(d) Polygons, Rectangles, Squares

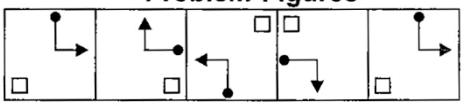
14. If '+' denotes '–', '–' denotes '×', '×' denotes '÷', and '÷' denotes '+', then
$15 - 3 + 10 \times 5 \div 5 = ?$
(a) 5 (b) 22
(c) 48 (d) 52

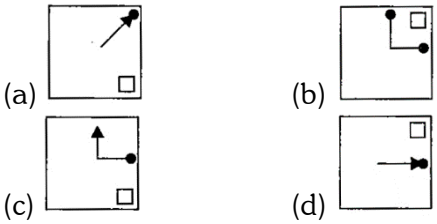
15. Rohit walked 25 metres towards South. Then he turned to his left and walked 20 metres. He then turned to his left and walked 25 metres. He again turned to his right and walked 15 metres. At what distance is he from the starting point and in which direction?
(a) 35 metres East (b) 35 metres North
(c) 40 metres East (d) 60 metres East

NON-VERBAL REASONING

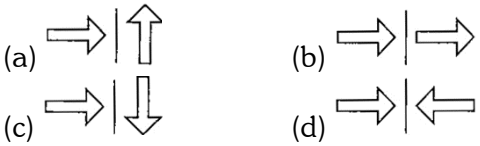
16. Select a figure from the options which will continue the same series as established by the Problem Figures.

Problem Figures

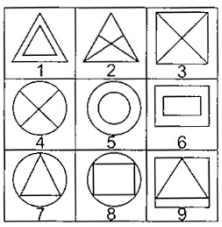




17. Which pair of figures shows a reflection over the line segment?

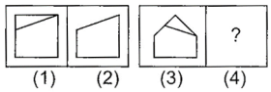


18. Group the given figures into three classes using each figure only once.



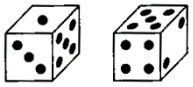
(a) 1, 5, 6; 2, 3, 4; 7, 8, 9
(b) 1, 4, 7; 2, 5, 8; 3, 6, 9
(c) 1, 2, 3; 4, 5, 8; 6, 7, 9
(d) 1, 3, 5; 2, 4, 8; 6, 7, 9

19. There is a certain relationship between figures (1) and (2). Establish the similar relationship between figures (3) and (4) by selecting a suitable figure from the options which will replace the (?) in the figure (4).



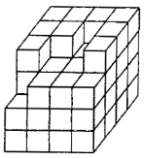
(a) 
(b) 
(c) 
(d) 

20. Two positions of a dice are shown. If two dots are on the bottom, then how many dots will be on the top?



(a) 1 (b) 3
(c) 6 (d) 5

21. Count the number of cubes in the given figure.



(a) 56 (b) 55
(c) 54 (d) 52

22. Which of the following options will complete the pattern in Fig. (X)?

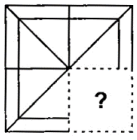


Fig. (X)

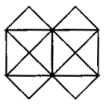
(a) 
(b) 
(c) 
(d) 

23. Select the correct water image of the given Fig.(X).


Fig. (X)

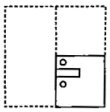
(a) 
(b) 
(c) 
(d) 

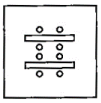
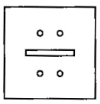
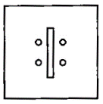
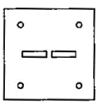
24. Count the number of triangles in the given figure.



(a) 12 (b) 16
(c) 22 (d) 24

25. A sheet of paper is folded in a particular manner and a punch is made. Select a Figure amongst the options that would closely resemble the unfolded form of given sheet.



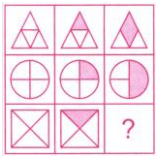
(a) 
(b) 
(c) 
(d) 

26. Select a figure from the options in which fig. (X) is exactly embedded as one of its part.


Fig. (X)

(a) 
(b) 
(c) 
(d) 

27. Which of the following figures will complete the given figure matrix?



(a) 
(b) 
(c) 
(d) 

28. Select a figure from the options which satisfies the same condition of placement of the dots as in Fig. (X).

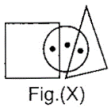
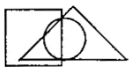


Fig.(X)

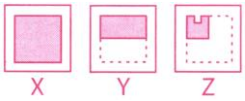
(a) 
(b) 
(c) 
(d) 

29. Find out from the options which is the mirror-image of the given word, if the mirror is placed vertically right.

CONTENTS

(a) ƧTИƎTИOↃ (b) ƧTИƎTИOↃ
(c) STNETNOC (d) CONTENTS

30. A set of three figures X, Y and Z showing a sequence of folding of a piece of paper. Fig. (Z) shows the manner in which the folder paper has been cut. Select a figure from the options which would closely resemble the unfolded form of Fig. (Z).



(a) 
(b) 
(c) 
(d) 

ANSWER KEY									
1.	D	**2.**	B	**3.**	C	**4.**	A	**5.**	C
6.	C	**7.**	D	**8.**	B	**9.**	B	**10.**	D
11.	A	**12.**	B	**13.**	A	**14.**	C	**15.**	A
16.	C	**17.**	D	**18.**	A	**19.**	B	**20.**	B
21.	A	**22.**	D	**23.**	C	**24.**	C	**25.**	A
26.	B	**27.**	B	**28.**	C	**29.**	A	**30.**	D

HINTS & EXPLANATIONS

1. (d) : After reversing the digits, the sequence become,

837 924 651 372 498

Hence, second highest number is 837 and its last digit is 7.

2. (b) : The pattern followed is,

$W \xrightarrow{-3} T \xrightarrow{-3} Q \xrightarrow{-3} \boxed{N}$

$F \xrightarrow{+1} G \xrightarrow{+1} H \xrightarrow{+1} \boxed{I}$

$B \xrightarrow{+2} D \xrightarrow{+3} G \xrightarrow{+4} \boxed{K}$

3. (c) : Total female members in the family

$= 1+4+3+2\times2+2\times1 = 14$

4. (a): The letters of the word are written in a reverse order to obtain the code. So, code for ALIGATOR is ROTAGILA.

5. (c): The dictionary order of words is. Problem, Project, Property, Protein, Proverb i.e. 2, 5, 4, 1, 3

6. (c) : The series is,

ZYXWVUTSRQPONMLKJI(H)GFEDCBA

(Left) (Right)

12th letter from left is 0 and 7th to the right of O is H.

7. (d) : The pattern is,

$7\times2+1 = 15$

$15\times2+1 = 31$

$31\times2+1 = 63$

$63\times2+1 = 127$

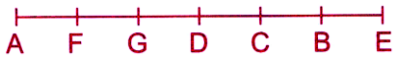
$\therefore 127\times2+1 = \boxed{255}$

8. (b): The father of the mother will be maternal grandfather and maternal grandfather is called maternal uncle.

9. (b) : Number of students between Kunal and Sonali $= 35-(7+9)=19$

Clearly, there are 9 students between Kunal and Pulkit, as well as Pulkit and Sonali. So, Kunal is at 10th position from Pulkit.

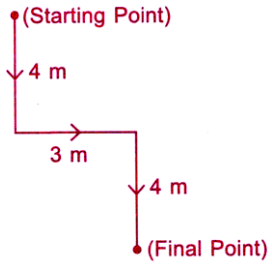
10. (d) :



11. (a) : The word formed is

C	R	O	W	N
2	3	5	4	1

12. (b) :



So, Pia is facing South.

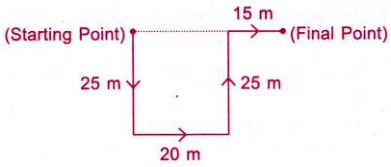
13. (a)

14. (c) : After replacing the symbols, the given equation becomes,

$15\times3-10\div5+5$

$=15\times3-2+5=45-2+5=48$

15. (a) :



Distance between starting point and final point $=(20+15)\,\text{m} = 35\,\text{m}$

So, Rohit is 35 metres far away from starting point and in East direction.

16. (c): The figure repeats itself after every 4th figure.

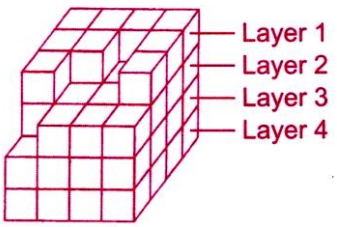
17. (d) Not Available

18. (a): 1, 5, 6 - Two similar shapes one contained in other.
2, 3, 4 - One shape with two intersecting lines in interior.
7, 8, 9 - Two different shapes one circumscribing the other.

19. (b): The upper part of figure (1) along the line is removed to get figure (2).

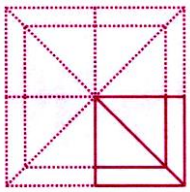
20. (b): Number of dots on the opposite faces are (1, 4); (2, 3); (5, 6).

21. (a):

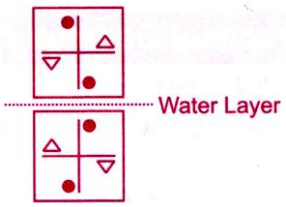


Number of cubes in the Layer 1=9
Number of cubes in the Layer 2=15
Number of cubes in the Layer 3=16
Number of cubes in the Layer 4=16
$\therefore$ Total number of cubes in the given figure
$=9+15+16+16=56$

22. (d):



23. (c):



24. (c) : The triangles formed are

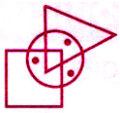
A, B, C, D, E, F, G, H, I, J,
K, L, CD, EJ, FG, IH, GH,
FI, DE, CJ, JEFI, DEFG
$\therefore$ Total number of triangles formed = 22

25. (a) :

26. (b)

27. (b) : In each row, the second figure is obtained by shading one of the four parts of the first figure and the third figure is obtained by shading two out of the four parts of the first figure.

28. (c):



29. (a) :

30. (d):