

Mindbenz Logical Reasoning Olympiad (MLRO)

Sample Paper

Grade- 6

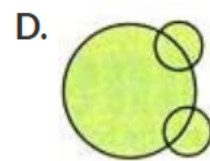
Maximum Marks: 60

Time Allowed – 55 Minutes

Section: A Basic of Logic (10 Questions × 1 mark = 10 marks)

1. Find the next term in the series: 3, 7, 16, 35, 74, ?
(A) 153
(B) 151
(C) 149
(D) 155
2. If Doctor : Stethoscope, then Carpenter : ?
(A) Wood
(B) Saw
(C) Hammer
(D) Chisel
3. In a certain code, 'MIND' is written as 'KGLB'. How is 'ARGUE' written in that code?
(A) YPESF
(B) BQGUI
(C) YPFSF
(D) YQEUG
4. A man walks 5 km south, then turns right and walks 3 km. He then turns left and walks 5 km. In which direction is he from the starting point?
(A) West
(B) South
(C) South-West
(D) North-East
5. Pointing to a photograph, a man said, "I have no brother or sister, but that man's father is my father's son." Whose photograph was it?
(A) His own
(B) His son's
(C) His father's
(D) His nephew's

6. Which of the following diagrams correctly represents the relationship between Crow, Bird and Dog?



7. If '+' means ' \div ', ' \div ' means '-', '-' means ' \times ', and ' \times ' means '+', what is the value of $48 + 16 \times 4 - 2 \div 8$?

- (A) 3
(B) 6
(C) -2
(D) 12

8. Choose the alternative which is closely resembles the mirror image of the given combination.

1965 INDOPAK

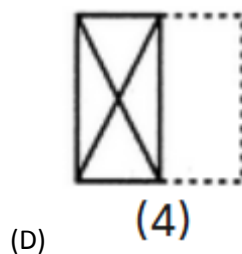
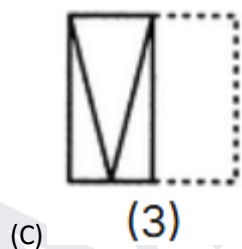
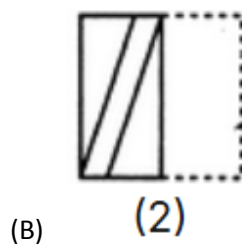
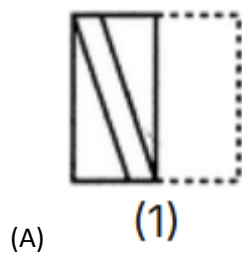
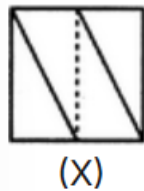
(A) 1965 INDOPAK

(B) 5961 IDNI KAP

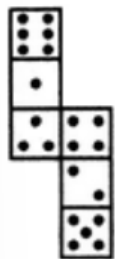
(C) 1965 INDOPAK

(D) 1692 INDOPAK

9. Find out from amongst the four alternatives as to how the pattern would appear when the transparent sheet is folded at the dotted line.



10. How many dots lie opposite to the face having three dots, when the given figure is folded to form a cube?



- (A) 6
- (B) 2
- (C) 1
- (D) 4

Section: B Application Zone (10 Questions × 1 mark = 10 marks)

11. Find the missing term: J2Z, K4X, I7V, ?, H16R, M22P

- (A) L11T
- (B) L12S
- (C) L11S
- (D) L12T

12. $8 : 4 :: 10 : ?$

- (A) 3
- (B) 7
- (C) 2
- (D) 5

13. Find the odd one out.

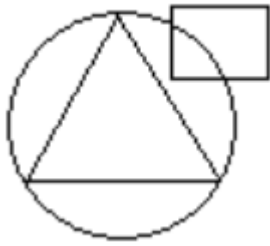
- (A) Guitar
- (B) Sitar
- (C) Flute
- (D) Violin

14. A river flows west to east and on the way turns left and goes in a semi-circle round a hillock, and then turns left at right angles. In which direction is the river finally flowing?

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

15. In an organization of pollution control board, engineers are represented by a circle, legal experts by a square and environmentalist by a triangle. Who is most represented in the

board as shown in the following figure ?



- (A) Environmentalists
- (B) Legal Experts
- (C) Engineers with legal background
- (D) Environmentalists with Engineering background

16. Find the correct sequence of mathematical signs to replace '*' and balance the equation: $9 * 3 * 3 * 3 * 27$

- (A) $\times, +, -, =$
- (B) $\times, -, +, =$
- (C) $+, \times, -, =$
- (D) $-, \times, +, =$

17. Choose the correct water image of the given figure.

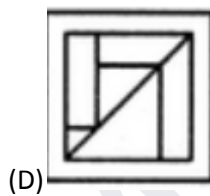
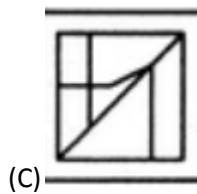
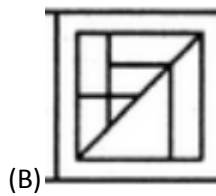
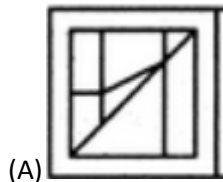


- (A)
- (B)
- (C)
- (D)

18. Find out the alternative figure which contains the figure given below as its part.



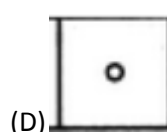
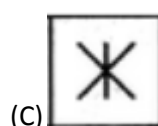
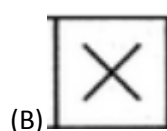
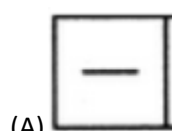
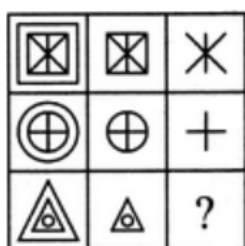
(X)



19. A cube is painted blue on all faces. It is then cut into 64 smaller cubes of equal size. How many smaller cubes have only one face painted?

- (A) 4
- (B) 8
- (C) 16
- (D) 24

20. Select a suitable figure from the four alternatives that would complete the figure matrix.



Section: C: Logical Mastery (20 Questions \times 2 marks = 40 marks)

21. If 'P + Q' means 'P is the father of Q', 'P - Q' means 'P is the mother of Q', 'P \times Q' means 'P is the brother of Q', and 'P \div Q' means 'P is the sister of Q', then what is the relationship of A with D in the expression $A \times B + C \div D$?

- (A) Uncle
- (B) Paternal Uncle
- (C) Maternal Uncle
- (D) Brother

22. A person starts from point A, walks 10m in the direction represented by the result of (5×2) , which corresponds to East. He then turns left and walks 5m. He again turns left and walks a

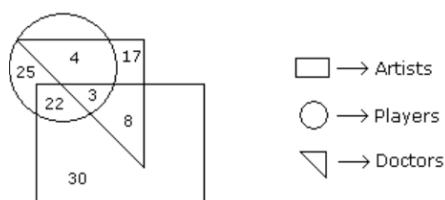
distance equivalent to $(12 \div 2 + 4)$ m. If 'North' is coded as 'South', 'East' as 'West' and so on, in which direction is he from his starting point?

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

23. Complete the series: 4, 9, 25, 49, 121, ?. Now, find an analogy for the missing term if Prime : Composite :: Odd : ?. The answer is the property of the missing number.

- (A) 169, Even
- (B) 169, Prime
- (C) 169, Odd
- (D) 169, Composite

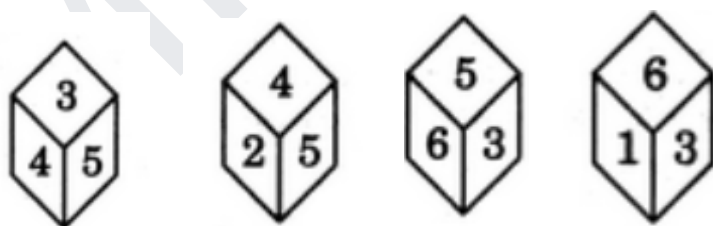
24. Study the following figure and answer the question given below.



How many artists are neither players nor doctors ?

- (A) 10
- (B) 17
- (C) 30
- (D) 15

25. The four different positions of a dice are given below: Find the number on the face opposite the face showing 6?



- (A) 1
- (B) 2
- (C) 4
- (D) 5

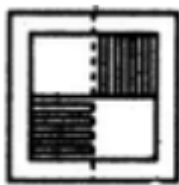
26. 'A' is the father of 'B' and 'C' is the son of 'D'. 'E' is the brother of 'A'. If 'C' is the sister of 'B', how is 'D' related to 'E', and in which direction must 'E' travel to meet 'D' if 'D' is to the south-east of 'E'?

- (A) Sister-in-law, South-East
- (B) Brother-in-law, South-West
- (C) Sister, North-East
- (D) Mother, North-West

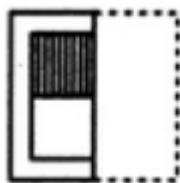
27. In a certain code, VICTORY is coded as 22-9-3-20-15-18-25. If the value of each letter is its position in the alphabet, what is the value of $(F \times A) + I - L + U \times R$ according to the given code?

- (A) 400
- (B) 412
- (C) 381
- (D) 399

28. Find out from amongst the four alternatives as to how the pattern would appear when the transparent sheet is folded at the dotted line.



(X)



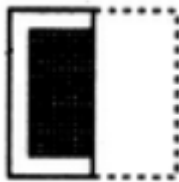
(A)

(1)



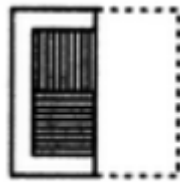
(B)

(2)



(C)

(3)



(D)

(4)

29. Ornithologist : Birds :: Herpetologist : ?. Find the odd one out from the following: Snake, Lizard, Frog, Crocodile.

- (A) Reptiles, Frog
- (B) Amphibians, Snake

- (C) Reptiles, Snake
- (D) Amphibians, Crocodile

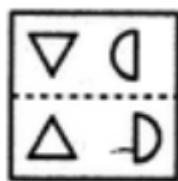
30. My mother's brother's father's only son's wife is standing 10m to my North. I walk 5m East, then 5m South, and then 10m West. If 'North' is called 'East', 'South' is called 'West' and so on, what is my position relative to the person, and who is that person to me?

- (A) 5m North-West, Grandmother
- (B) $5\sqrt{2}$ m South-West, Mother
- (C) $5\sqrt{2}$ m North-East, Aunt
- (D) 5m South-East, Grandmother

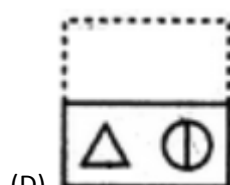
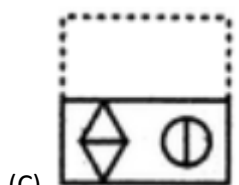
31. In a group of 50 people, the number of people who like only tea is equal to $(4 \times 5 - 5)$. The number of people who like only coffee is the number of sons a man has if he says, "That man's father is my father's son," and he has no brothers. The number of people who like both is 10. How many people like neither tea nor coffee, and what is the relationship of the man in the coffee problem to his father?

- (A) 24, Son
- (B) 25, Himself
- (C) 24, Father
- (D) 25, Grandson

32. Find out from amongst the four alternatives as to how the pattern would appear when the transparent sheet is folded at the dotted line.



(X)



33. In a coded language, directions are represented by numbers: North=2, East=4, South=6, West=8. A boy starts walking and his path follows the number series: 4, 6, 8, 2, 4, ... If each

number represents a 5 km walk in the corresponding direction, where is he after the 4th step? If 'START' is coded as 'UVCTV', how would 'NORTH' be coded?

- (A) 10 km West of start, PQTWJ
- (B) 5 km South-West of start, MPQVI
- (C) At the starting point, PQTVJ
- (D) 5 km North-East of start, MPQVI

34. A large cube is made of 216 smaller cubes. It is painted green on all faces. The number of cubes with exactly two faces painted is 'A'. The number of cubes with no faces painted is 'B'. Find the value of $(A \div 12) + (B - 50)$. Now complete the analogy: Cube : Square :: A : ?

- (A) 20, Line
- (B) 20, Edge
- (C) 18, Edge
- (D) 18, Point

35. Consider the word "NUCLEAR". Find its mirror image and its water image. Now, identify the letters from the original word that look the same in the water image. Which of these letters is the odd one out based on the type of lines (curved or straight) used to draw it?

- (A) C, U
- (B) N, C, L
- (C) C, L, E, A, R
- (D) C, L, E, A, R, N

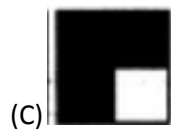
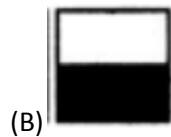
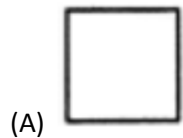
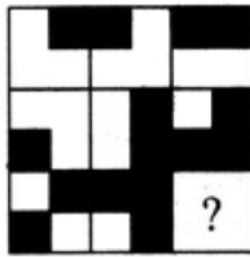
36. Six family members A, B, C, D, E, and F are standing in different directions with respect to each other. 'A' is the son of 'B'. 'C', A's sister, is 5m to the East of 'A'. 'D' is the husband of 'B' and is 10m to the North of 'C'. 'E' is the maternal uncle of 'C' and is 5m West of 'D'. 'F' is the wife of 'E'. In a coded message, 'FAMILY' is written as 'GZNHKB'. What is the shortest distance between 'A' and 'D', and how is 'UNCLE' written in this code?

- (A) 15m, TMBKD
- (B) $5\sqrt{5}$ m, TMBKD
- (C) $5\sqrt{5}$ m, VMEKG
- (D) 10m, VMEKG

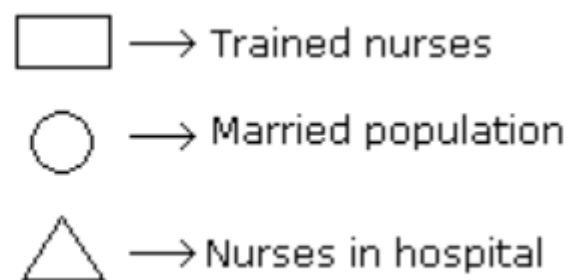
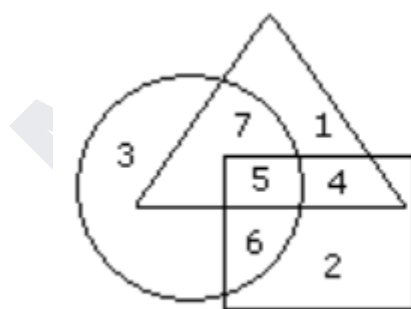
37. Find the next number in the series: 3, 4, 12, 45, 196, ? The logic is $(\text{Previous Term} \times n) + n^2$ where n starts from 1. Let the missing number be 'X'. In a survey of X students, if 500 like Physics and 600 like Chemistry and 150 like both, how many students do not like either subject?

- (A) 1005, 55
- (B) 1005, 45
- (C) 1001, 51
- (D) 1001, 46

38. Select a suitable figure from the four alternatives that would complete the figure matrix.



39. If hospital management requires only married trained nurses for operation theater, which part of diagram should be chosen by him ?



- (A) 7
 (B) 4
 (C) 5

(D)6

40. Three different positions of a dice are shown below. How many dots lie opposite 2 dots?



- (A)1
- (B)3
- (C)5
- (D)6

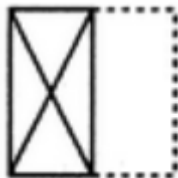
ANSWER KEY

Section A

1. (A) 153
2. (B) Saw
3. (A) YPESF
4. (C) South-West
5. (B) His son's



6. (A)
7. (A) 3
8. (C)



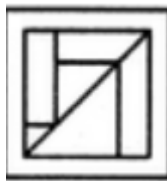
9. (D)
10. (A) 6

Section B

11. (A) L11T
12. (D) 5
13. (C) Flute
14. (A) East
15. (D) Environmentalists with Engineering background
16. (B) \times , $-$, $+$, $=$

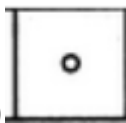


17. (D)



18. (D)

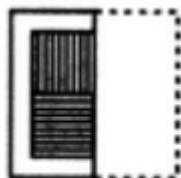
19. (D) 24



20. (D)

Section C

21. (B) Paternal Uncle
22. (D) South
23. (A) 169, Even
24. (C) 30
25. (A) 1
26. (A) Sister-in-law, South-East
27. (C) 381



28. (D) (4)

29. (A) Reptiles, Frog

30. (B) $5\sqrt{2}$ m South-West, Mother

31. (A) 24, Son



32. (D)

33. (C) At the starting point, PQTWJ

34. (C) 18, Edge

35. (A) C, U

36. (C) $5\sqrt{5}$ m, VMEKG

37. (A) 1005, 55



38. (D)

39. (C) 5

40. (C) 5