

# Mindbenz Logical Reasoning Olympiad (MLRO)

## Sample Paper

### Grade- 5

Maximum Marks: 40

Time Allowed – 45 Minutes

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

1. Which of the following shapes remains unchanged after reflection across both the vertical and horizontal axes?  
(a) Rhombus  
(b) Rectangle  
(c) Equilateral triangle  
(d) Circle
2. What comes next in the sequence?  
3, 16, 39, 72, 115, \_\_\_\_  
(a) 176  
(b) 168  
(c) 198  
(d) 150
3. In a code, the word "CHAIR" is written as "XLMFQ." How will "TABLE" be written in this code?  
(a) GZLHF  
(b) GZHIJ  
(c) HZIFQ  
(d) GYHFI
4. A rectangle is rotated  $45^\circ$  clockwise and then folded vertically in half. What is the final orientation of the figure?  
(a) Original orientation  
(b) Tilted at a  $45^\circ$  angle

- (c) Upside down  
(d) No change
5. Which pair does **not** share the same type of relationship?  
(a) Fish : Gills  
(b) Bird : Feathers  
(c) Spider : Eyes  
(d) Lion : Claws
6. A person facing East turns  $180^\circ$  clockwise, then  $270^\circ$  anticlockwise.  
Which direction is he facing now?  
(a) North-East  
(b) South-East  
(c) West  
(d) North
7. In an alphabet series skipping every third letter starting from A, what letter comes after P?  
(a) R  
(b) S  
(c) T  
(d) U
8. Which sequence is correct for sorting the shapes in terms of decreasing number of diagonals?  
(a) Square  $\rightarrow$  Pentagon  $\rightarrow$  Hexagon  $\rightarrow$  Octagon  
(b) Octagon  $\rightarrow$  Hexagon  $\rightarrow$  Square  $\rightarrow$  Pentagon  
(c) Square  $\rightarrow$  Hexagon  $\rightarrow$  Pentagon  $\rightarrow$  Octagon  
(d) Hexagon  $\rightarrow$  Octagon  $\rightarrow$  Square  $\rightarrow$  Pentagon
9. Which of the following is not a perfect cube?  
1, 27, 125, 250, 343  
(a) 27  
(b) 125  
(c) 250  
(d) 343

10. Find the odd one out:

- (a) Prime Meridian
- (b) Latitude
- (c) Longitude
- (d) Equator

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

11. If BLUE is coded as 5132 and GREEN is coded as 79445, what would be the code for GLUE?

- (a) 7512
- (b) 7132
- (c) 7325
- (d) 7521

12. Arrange the following logically:

1. Graduation 2. Assignment 3. Exam 4. Study 5. Application

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

13. Which word **cannot** be made from the letters of the word "ORGANIZATION"?

- (a) ORIGIN
- (b) RATION
- (c) ORGAN
- (d) STATION

14. Find the next number:

- 2, 7, 20, 61, 182, \_\_\_\_
- (a) 547
  - (b) 548
  - (c) 540
  - (d) 550

15. Which one is different?
- (a) Neutron
  - (b) Electron
  - (c) Proton
  - (d) Quark
16. If  $\clubsuit \times \spadesuit = 20$  and  $\clubsuit + \spadesuit = 9$ , what is the value of  $\clubsuit - \spadesuit$ ? (Assume  $\clubsuit$  is the larger number)
- (a) 1
  - (b) 5
  - (c) 3
  - (d) 4
17. What letter is 5th to the right of the 8th letter from the left end in A-Z?
- (a) M
  - (b) N
  - (c) O
  - (d) P
18. What comes next in the sequence?  
AX, BY, CZ, DW, \_\_\_\_
- (a) EV
  - (b) FU
  - (c) GV
  - (d) HW
19. In the word 'PLANET', which letter is second to the left of the last letter?
- (a) L
  - (b) A
  - (c) N
  - (d) E
20. If today is Tuesday, what day was the day before yesterday?
- (a) Sunday
  - (b) Monday
  - (c) Wednesday
  - (d) Saturday

**Section: C: Logic Mastery (10 Questions × 2 marks = 20 marks)**

21. The word "SKY" is rotated  $180^\circ$  and then its mirror image is taken. Which of the following is correct?

- (a) SxΛ
- (b) Λx℄
- (c) Y K S
- (d) ℄ K Y

22. Ravi points towards a man and says, "He is the son of my uncle's only daughter." After walking 5 km south, he meets him. In which direction is Ravi's home from his current position?

- (a) North
- (b) South
- (c) East
- (d) West

23. In a code language:

'A + B' means A is mother of B.

'A ÷ B' means A is sister of B.

'A - B' means A is brother of B.

'A × B' means A is father of B.

If  $P + Q ÷ R - S \times T$ , how is R related to S?

- (a) Daughter
- (b) Sister
- (c) Aunt
- (d) Mother

24. A paper is folded twice, and two triangular cutouts are made at each fold. After unfolding, how many shapes appear, and what symmetry does

the paper have?

- (a) 4 shapes, 4 lines of symmetry
- (b) 8 shapes, 2 lines of symmetry
- (c) 6 shapes, 3 lines of symmetry
- (d) 2 shapes, 1 line of symmetry

25. A person walks 5 km north, then 7 km west, and then 10 km south. He then turns right and walks 5 km. How far and in which direction is he now from his starting point?





- (a) 6 km, North-East
- (b) 8 km, South-West
- (c) 10 km, South-East
- (d) 10 km, South-West

26. In a family of 6 members, A is the father of B. C is the mother of D. D is the brother of B. E is the daughter of C.

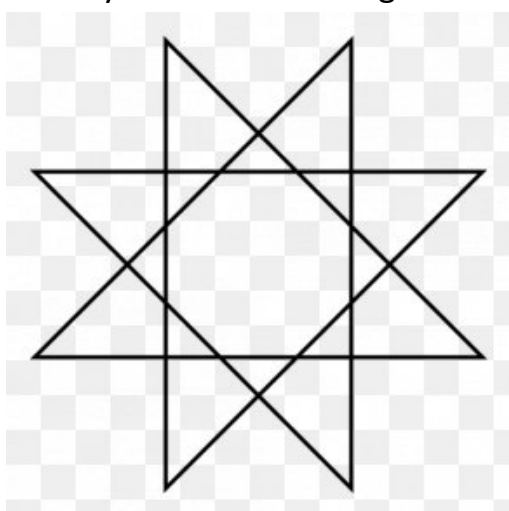
If C walks 3 km north and then 3 km east, where is E from C's starting position?

- (a) North-East
- (b) South-East
- (c) North-West
- (d) South-West

27. Find the water image of the word "PART" after rotating it  $180^\circ$  first.

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

28. Identify the embedded figure and determine its type of symmetry.



- (a) Octagon, 4 lines of symmetry
- (b) Star, rotational symmetry
- (c) Octagon, 8 lines of symmetry
- (d) Star, mirror symmetry

29. In a race, P finishes after Q but before R. T finishes before Q but after S. Who finishes first among P, Q, R, S, and T?

- (a) P
- (b) Q
- (c) T
- (d) S

30. Priya has a picture frame shaped like the letter 'A'. If she places this frame on a table and looks at its reflection in a mirror placed vertically beside it, what letter shape will she see in the mirror? Now, imagine Priya's brother has a picture frame that looks like the mirror image of the letter 'b'. What letter shape is his picture frame?

- (a) A, d
- (b) A, p
- (c) A, q
- (d) V, d

# Answer key

## Section A:

1(d), 2(b), 3(d), 4(b), 5(c), 6(a), 7(b), 8(a), 9(c), 10(a)

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## Section B:

11(d), 12(b), 13(d), 14(a), 15(d), 16(b), 17(a), 18(a), 19(c), 20(a)

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## Section C:

21(b), 22(a), 23(c), 24(b), 25(b), 26(a), 27(b), 28(b), 29(d), 30(a)