

**IMO CLASS 8**

**Sample Paper**

**Total Questions: 50**

**Total Marks: 60**

**Time: 1 hr.**

**Section – 1 :** Rational Numbers, Squares and Square Roots, Cubes and Cube Roots, Exponents and Powers, Comparing Quantities, Algebraic Expressions and Identities, Linear Equations in One Variable, Understanding Quadrilaterals, Constructions, Mensuration, Visualising Solid Shapes, Data Handling, Direct and Inverse Variations, Factorisation, Introduction to Graphs, Playing with Numbers.

**Section – 2 :** Higher Order Thinking Questions - Syllabus as per Section – 1.

**Section – 3 :** Verbal and Non-Verbal Reasoning.

**PATERN & MARKING SCHEME**

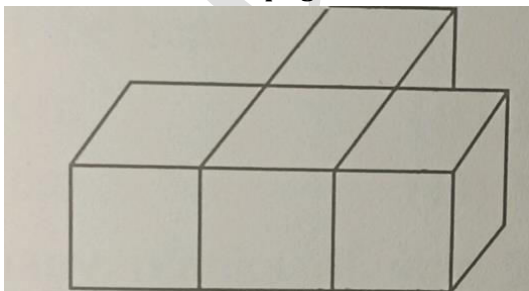
Section	Subjective (MCQ)	Hot's	Logical Reasoning
Number of Question	35	5	10
Marks per Question	1	3	1

**MATHEMATICS**

1. A bag contains 4 red balls, 5 green balls and 7 black balls. They are mixed thoroughly and one ball is drawn at random. What is the probability of getting a black ball?

- a)  $7/16$
- b)  $4/16$
- c)  $5/16$
- d)  $9/16$

2. A solid is of the shape given. Which is its top view?

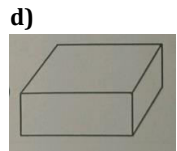
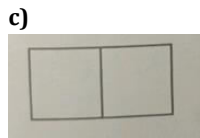
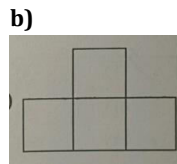
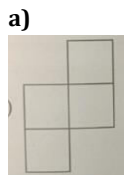


4. The quadrilateral whose diagonals are equal and bisect each other at right angle is\_\_\_\_\_.

- a) Triangle
- b) Rhombus
- c) Square
- d) None of these

5. Complete the square given below and find the value of the sum of missing numbers. The sum of the magic square is 34.

5	x	e	d
16	y	7	c
a	13	b	6
2	z	9	f



- a) 68  
c) 78

- b) 39  
d) 84

6. The diagonal of a square is  $4\sqrt{2}$  m. What is its perimeter?

- a) 12 m  
c) 24 m

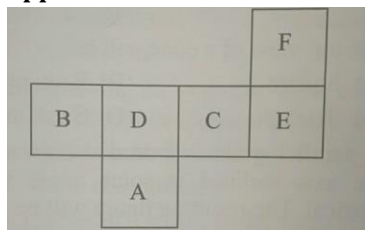
- b) 16 m  
d) None of these

3. A regular polyhedron has :

- a) Congruent faces                      b) Non-congruent faces  
c) Vertices are formed by              d) None of these  
different number of faces

**HOTS**

7. If "E" is the bottom face then which of following is the upper face of cube?



- a) D    b) C  
c) B    d) A

8. Umesh tossed a coin three times. What is the probability that Umesh gets more heads than tails?

- a) 0.5    b) 0.125  
c) 0.375    d) None of these

**LOGICAL REASONING**

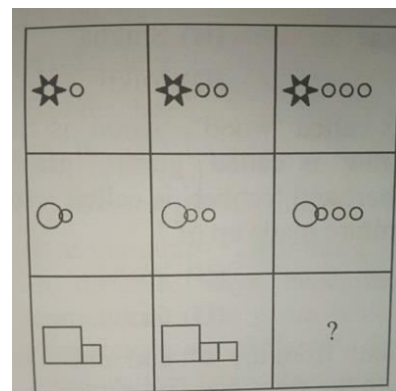
9. If ZOO stands for 56, DEER stands for 32 then for which numerical value does LION stand for?

- a) 48    b) 49  
c) 50    d) 51

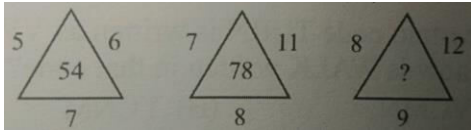
10. How many odd numbers are there in the sequence which are immediately preceded and also immediately followed by an even number in the sequence? 5 1 4 7 3 2 5 6 8 9 6 7 3 2 1 5 6 4 3 2 7 4

- a) 4    b) 3  
c) 5    d) 2

12. Find it?



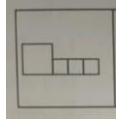
11. Find the next term in the following series.



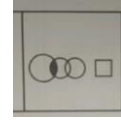
- a) 85  
c) 87

- b) 86  
d) 89

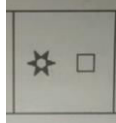
a)



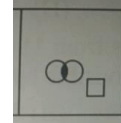
b)



c)



d)



13. Nitesh faces towards North. Turning to his right he walks 20 meters. He then turns to his left and walks 20 meters, then he moves 30 m to his right then turns to his right again and walks 45 meters. At last he turns to his right and moves 35 meters. In which direction is he now from the starting position?

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

ANSWER KEY

1. A

2. B

3. A

4. C

5. C

6. B

7. A

8. A

9. C

10. A

11. C

12. A

13. B