CLASS
9

SOF OLYMPIADS

SAMPLE PAPER
2025-26

IMO
SOF INTERNATIONAL MATHEMATICS OLYMPIAD

Total Questions : 50 Time : 1 hr.

PATTERN & MARKING SCHEME				
Section	(1) Logical Reasoning	(2) Mathematical Reasoning	(3) Everyday Mathematics	(4) Achievers Section
No. of Questions	15	20	10	5
Marks per Ques.	1	1	1	3

SYLLABUS

Section – 1 : Verbal and Non-Verbal Reasoning.

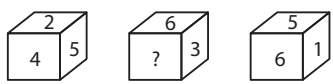
Section – 2 : Number Systems, Polynomials, Coordinate Geometry, Linear Equations in Two Variables, Introduction to Euclid's Geometry, Lines and Angles, Triangles, Quadrilaterals, Circles, Heron's Formula, Surface Areas and Volumes, Statistics.

Section – 3 : The syllabus of this section will be based on the syllabus of Mathematical Reasoning and Quantitative Aptitude.

Section – 4 : Higher Order Thinking Questions - Syllabus as per Section – 2.

LOGICAL REASONING

1. Three different positions of a dice are shown here. Select a number from the options that will replace the question mark (?) in the given dice.



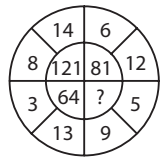
(A) 2 (B) 4 (C) 5 (D) 1

2. In a certain code language, 'health is wealth' is written as 'sol liv mah', 'smile good health' is written as 'tim sol gil' and 'cry is not smile' is written as 'mah vil tan gil'. How will 'wealth' be written in the same code language?

(A) sol (B) liv (C) mah (D) gil

3. Find the missing number in the given figure.

(A) 64
(B) 49
(C) 100
(D) 72



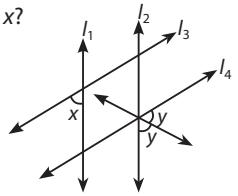
MATHEMATICAL REASONING

4. Which of the following equations satisfies the data in the given table?

x	–1	0	1	2
y	–3	–1	1	3

(A) $y = x - 2$ (B) $y = 2x - 1$ (C) $y = 3x - 3$ (D) $y = x + 1$

5. If $l_1 \parallel l_2$ and $l_3 \parallel l_4$, then what is the value of y in terms of x?



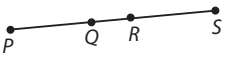
(A) $90° + x$

(B) $90° + 2x$

(C) $90° - \frac{x}{2}$

(D) $90° - 2x$

6. In the given figure, if $PQ = RS$, then which Euclid's axiom is used to prove $PR = QS$?



(A) The whole is greater than the part.

(B) Things which are double of the same things are equal to one another.

(C) If equals are added to equals, the wholes are equal.

(D) Things which coincide with one another are equal to one another.

EVERYDAY MATHEMATICS

7. Vikas has ₹$(x^3 + 2ax + b)$, with this money he can buy exactly $(x - 1)$ jeans or $(x + 1)$ shirts with no money left. How much money Vikas has, if $x = 4$?

(A) ₹ 80 (B) ₹ 120 (C) ₹ 30 (D) ₹ 60

8. A conical tent is to accommodate 11 persons. Each person must have 4 sq. metres of the space on the ground and 20 cubic metres of air to breath. Find the height of the cone.

(A) 11 m (B) 16 m (C) 14 m (D) 15 m

ACHIEVERS SECTION

9. Read the given statements carefully and select the correct option.

Statement-I : The $\frac{p}{q}$ form of $15.7\overline{12} + 4.3\overline{2}$ is $\frac{389}{90}$.

Statement-II : The value of $\frac{\sqrt[3]{0.125} \times \sqrt[5]{(0.00032)^{-2}}}{\sqrt[5]{(0.00243)^{-3}} \times (27)^{2/3}}$ is $\frac{3}{80}$.

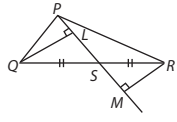
(A) Both Statement-I and Statement-II are true.

(B) Both Statement-I and Statement-II are false.

(C) Statement-I is true but Statement-II is false.

(D) Statement-I is false but Statement-II is true.

10. Which of the following is incorrect?



(A) In triangles ABC and RQP, if $AB = AC$, $\angle C = \angle P$ and $\angle B = \angle Q$, then the two triangles are isosceles and congruent.

(B) The perpendiculars drawn from the vertices of equal angles of an isosceles triangle to the opposite sides are equal.

(C) In the adjoining figure, if PS is a median and QL & RM are perpendiculars drawn from Q and R respectively on PS and PS produced, then $QL = RM$.

(D) None of these

ANSWER KEY

1. (B) 2. (B) 3. (B) 4. (B) 5. (C) 6. (C) 7. (D) 8. (D) 9. (D) 10. (A)