CAREERS360

IMO
CLASS 8
SAMPLE PAPER
2019-20

SCIENCE OLYMPIAD FOUNDATION

SAMPLE PAPER SYLLABUS 2019-20

IMO

CLASS **8**

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.

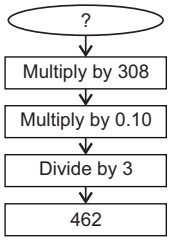
Section – 2 : Rational Numbers, Squares and Square Roots, Cubes and Cube Roots, Exponents and Powers, Comparing Quantities, Algebraic Expressions and Identities, Linear Equations in One Variable, Understanding Quadrilaterals, Constructions, Mensuration, Visualising Solid Shapes, Data Handling, Direct and Inverse Variations, Factorisation, Introduction to Graphs, Playing with Numbers.

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

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

LOGICAL REASONING

1. What is the number you started with?



(A) 5

(B) 45

(C) 56

(D) 25

2. Find out the wrong term in the given series.

24, 27, 31, 33, 36

(A) 24 (B) 27

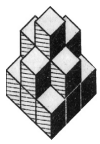
(C) 31 (D) 33

3. Rohit is 40 m South-West of Aarav. Ansh is 40 m South-East of Aarav. Then Ansh is in which direction of Rohit?

(A) East (B) West

(C) North-East (D) South

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



(A) 14 (B) 15

(C) 12 (D) 20

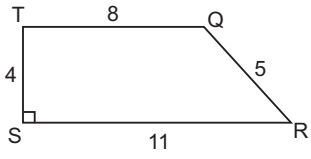
MATHEMATICAL REASONING

5. 200 kg of sugar was purchased at the rate of ₹ 15 per kg and sold at a profit of 5%. Compute the selling price per kg.

(A) ₹ 18.25 (B) ₹ 13.85

(C) ₹ 15.75 (D) ₹ 31.50

6. What is the area of trapezium QRST (in square units)?



(A) 22

(B) 27

(C) 38

(D) 48

7. Which property is used in the equation given below?

$12(x + 4) = 12x + 48$

(A) Associative Property of Addition

(B) Commutative Property of Addition

(C) Distributive Property

(D) None of these

8. Simplify : $\frac{25 \times a^{-4}}{5^{-3} \times 10 \times a^{-8}}$

(A) $625a^{-4}$ (B) $\frac{625}{2}a^4$

(C) $\frac{625}{4}a^4$ (D) $25a^8$

9. Three numbers are in the ratio 2 : 3 : 4. The sum of their cubes is 33957. Find the largest number.

(A) 28 (B) 21

(C) 32 (D) 14

10. Find the value of x :

$$\frac{9x+7}{2} - \left[x - \left(\frac{x-2}{7}\right)\right] = 36$$

(A) 9 (B) 18

(C) 5 (D) 4

EVERYDAY MATHEMATICS

11. Mohit is thinking of two numbers. Their greatest common factor is 6. Their least common multiple is 36. One of the numbers is 12. What is the other number?

(A) 18 (B) 16
(C) 6 (D) 24

12. Ramu put a square fence around his vegetable garden to keep the deer away from eating his corn. One side was 10 m in length. If the posts were placed 2 m apart, then how many posts did he use?

(A) 16 (B) 20
(C) 10 (D) 15

13. Find the number of coins, each of which are 1.5 cm in diameter and 0.2 cm thick, required to form a right circular cylinder of height 10 cm and diameter 4.5 cm.

(A) 450 (B) 250
(C) 350 (D) 400

ACHIEVERS SECTION

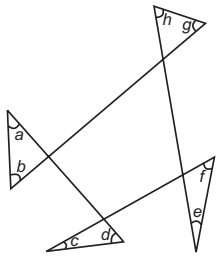
14. Find the sum of a, b, c, d, e, f, g and h.

(A) 720°

(B) 360°

(C) 540°

(D) 180°



15. Study the statements and choose the correct option.

Statement - 1 : The square root of certain decimals are obtained by first changing the decimals into fractions with perfect squares as their numerators and denominators.

Statement - 2 : $(26.1)^2$ lies between 400 and 900.

(A) Statement-1 is true and statement-2 is false.
(B) Statement-1 is false and statement-2 is true.
(C) Both statements 1 and 2 are false.
(D) Both statements 1 and 2 are true.

SPACE FOR ROUGH WORK

ANSWERS

1. (B) 2. (C) 3. (A) 4. (B) 5. (C) 6. (C) 7. (C) 8. (B) 9. (A) 10. (A) 11. (A) 12. (B) 13. (A) 14. (B) 15. (D)