SOF
SCIENCE OLYMPIAD FOUNDATION

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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

Scan the QR code for more details

SYLLABUS

Section – 1 : Patterns, Analogy and Classification, Geometrical Shapes, Mirror and Water Images, Direction Sense Test, Ranking Test, Alphabet Test, Logical Sequence of Words, Puzzle Test, Coding-Decoding, Clock and Calendar.

Section – 2 : Numerals, Number Names, Number Sense (7 and 8 digit numbers), Computation Operations, Fractions and Decimals, Measurement of Length, Weight, Capacity, Time, Temperature and Money, Conversions, Geometrical Shapes and Solids, Angles, Perimeter of Various Shapes & Area of Rectangle and Square, Symmetry, Data Handling.

Section – 3 : Syllabus as per Section-2.

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

LOGICAL REASONING

1. If the following numbers are arranged in the descending order, then what will be the middle digit of the number which will be exactly in the middle?

317, 493, 283, 269, 875, 423, 725

(A) 2   (B) 3   (C) 6   (D) 7

2. Mohit travels 12 km West, then 3 km towards South and then 12 km towards East. How far is he from the starting point?

(A) 3 km   (B) 20 km   (C) 15 km   (D) 5 km

3. There is a certain relationship between figures (1) and (2). Establish a similar relationship between figures (3) and (4) by selecting a suitable figure from the options to replace the (?) in figure (4).

(1)   (2)   (3)   (4)
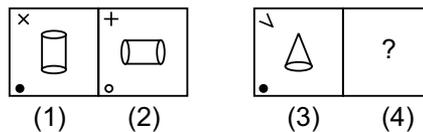
(A)   (B)   (C)   (D)

MATHEMATICAL REASONING

4. Rectangle *ACEG* below is divided into 4 parts. *BCDX* is square. What is the area of the shaded part?

(A) 28 sq. cm
(B) 32 sq. cm
(C) 48 sq. cm
(D) 64 sq. cm
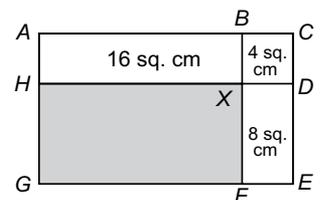
5. Rohan cycled from his house to the post office, then to the market, then to the hospital and then he went to his house. The distances are marked in the given figure. What is the total distance covered by Rohan?
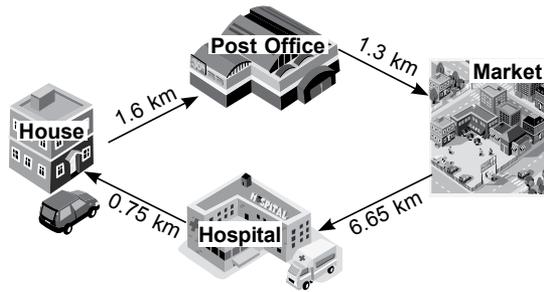
| (A) 12.5 km | (B) 11.4 km | (C) 9.53 km | (D) 10.3 km |

6. Which of the following is greatest?
(A) XLIII + XLIV
(B) LXXIX – XXXIX
(C) XCIX – LXVIII
(D) LVII + XL

EVERYDAY MATHEMATICS

7. Mr Gupta bought a house for ₹ 1672000. He spent ₹ 12582 on the furniture and ₹ 8540 on buying the curtains. Then he spent another ₹ 5675 for preparing the front lawn of the house. How much money did he spend altogether?
(A) ₹ 1678997
(B) ₹ 1698797
(C) ₹ 1498567
(D) ₹ 1512998

8. Mini took 35 minutes to complete her homework. She finished her homework at 12:05 p.m. What time did she start doing her homework?
(A) 11:30 p.m.
(B) 11:30 a.m.
(C) 12:40 a.m.
(D) 12:40 p.m.

ACHIEVERS SECTION

9. Monu is thinking of a four digit number having all different digits.
- The units place digit is the greatest one-digit number.
- When the tens place digit is divided by the thousands place digit, the quotient is 2.
- The difference between the tens and hundreds place digit is 1.
- The thousands place digit is double of 2.

(A) 3768
(B) 4789
(C) 5698
(D) 1239

10. The given figure is made up of a square and a rectangle. The breadth of the rectangle is $\left(\dfrac{1}{3}\right)^{rd}$ the length of the edge of the square. If the area of the whole figure is 384 sq. cm, then find the length of the rectangle.
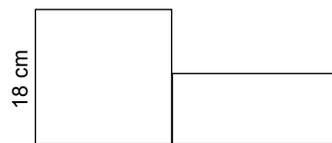
(A) 12 cm
(B) 8 cm
(C) 10 cm
(D) 9 cm

SPACE FOR ROUGH WORK

ANSWERS

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