SOF
SCIENCE OLYMPIAD FOUNDATION

I M O
SOF INTERNATIONAL MATHEMATICS OLYMPIAD

Total Questions : 35   Time : 1 hr.

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

SYLLABUS

Section – 1 : Patterns, Analogy and Classification, Alphabet Test, Coding-Decoding, Ranking Test, Grouping of Figures and Figure Matrix, Mirror Images, Geometrical Shapes, Embedded Figures, Days and Dates & Possible Combinations.

Section – 2 : Numerals, Number Names and Number Sense (4-digit numbers), Computation Operations, Fractions, Length, Weight, Capacity, Temperature, Time, Money, Geometry, Data Handling.
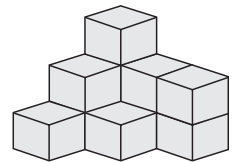
Section – 3 : Syllabus as per Section – 2.

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

LOGICAL REASONING

1. Find the number of cubes in the given figure.
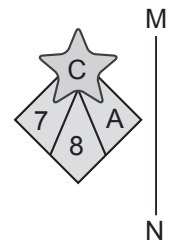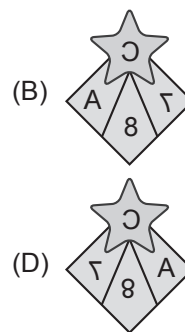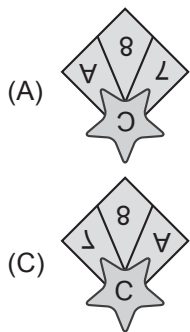- (A) 9
- (B) 10
- (C) 11
- (D) 12

2. Find the combination of numbers so that letters are arranged accordingly to form a meaningful English word.

E	A	C	S	L
1	2	3	4	5

- (A) 2, 3, 4, 1, 5
- (B) 4, 3, 2, 5, 1
- (C) 4, 2, 3, 5, 1
- (D) 4, 3, 1, 5, 2

3. Select the correct mirror image of the given figure, if mirror is placed along MN.

(A)   (B)   (C)   (D)

MATHEMATICAL REASONING

4. There are two possible routes that Akshita can take to reach her school from her house. Which route is shorter and by how much?
- (A) P, 230 m
- (B) Q, 236 m
- (C) P, 236 m
- (D) Q, 230 m

Library — 2 km 48 m — Akshita's house — 3 km 260 m — School
Akshita's house — 3 km 264 m — Market — 2 km 280 m — School
Route P →
Route Q ⇢
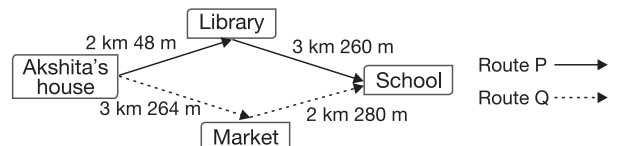
5. The missing number in the box is _____.

$$1242 \div 3 = \boxed{} \div 8$$

(A) 3213   (B) 3312   (C) 4132   (D) 1292

6. The difference between 5038 and 512 is _____ the product of 453 and 8.

(A) Greater than   (B) Less than   (C) Equal to   (D) Can't be determined

EVERYDAY MATHEMATICS

7. Priti is learning sign language in a special school. She learned 78 signs in the first 2 months. She learned 112 signs in the next 3 months. How many signs did she learn in all?

(A) 170   (B) 180   (C) 190   (D) 135

8. In Meeku's school, the lunch time is from 12:15 p.m. to 1:20 p.m. What is the duration of the lunch time?

(A) 1 hr 15 minutes   (B) 1 hr 5 minutes
(C) 1 hr 20 minutes   (D) 1 hr

ACHIEVERS SECTION

9.

$$\triangle \times \triangle = \star$$

$$\triangle + \triangle + \triangle + \triangle = \star$$

What number does $\star$ represent?

(A) 4   (B) 16   (C) 25   (D) 36

10. Find the values of P, Q, R and S respectively.

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    2  3  R  S
 +  P  Q  7  8
 ─────────────
    5  9  1  0
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(A) 2, 3, 5, 3   (B) 2, 3, 5, 1
(C) 3, 5, 3, 2   (D) 2, 4, 8, 3

SPACE FOR ROUGH WORK

ANSWERS

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