SAMPLE PAPER SYLLABUS 2016-17

SOF INTERNATIONAL MATHEMATICS OLYMPIAD

| Total Questions: 35 | PATTERN \& MARKING SCHEME |  |  | Time: 1 hr . |
| :---: | :---: | :---: | :---: | :---: |
| Section | (1) Logical <br> Reasoning | (2) Mathematical <br> Reasoning | (3) Everyday <br> Mathematics | (4) Achievers <br> Section |
| No. of Questions | $\mathbf{1 0}$ | $\mathbf{1 0}$ | $\mathbf{1 0}$ | $\mathbf{5}$ |
| Marks per Ques. | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{2}$ |

SYLLABUS : Numerals and Number Names (5 digit numbers), Place Value, Roman Numerals, Addition and Subtraction, Geometry : Square, Rectangle, Circle, Closed and Open Figure, Multiplication and Division, Factors and Multiples, Fractions, Measurement, Pictorial Representation of Data, Money, Time, Weight and Capacity, Series and Pattern Formation of Numbers and Figures, Conversions, Comparison, Perimeter of Various Shapes, Direction Sense Test, Mirror Images, Embedded Figures, Ranking Test, Alphabet Test, Coding-Decoding, Mathematical Reasoning, Symmetry.
Achievers Section : Higher Order Thinking Questions - from the above given Syllabus.

## LOGICAL REASONING

1. What is the rule for this number pattern?

$$
1,1,2,6,24,120, \ldots
$$

(A) Add 0 , then add 1 , then add 2 , and so on
(B) Multiply by 1 , then multiply by 2 , then multiply by 3 , and so on
(C) Multiply by 1, then add 1
(D) Multiply by two, then subtract 1
2. There are four figures out of which three are same in some way while one is different from the rest. Find out the different figure.
(A)

(B)

(C)

(D)

3. Count the number of straight lines in the given figure.
(A) 17
(B) 18
(C) 19
(D) 20

4. If in a certain code "MONKEY" is coded as 'YEKNOM', then how is 'MONIKA' coded in that language?
(A) KANIMO
(B) AKINOM
(C) NOMIKA
(D) AIKONIM
5. Which number lies in all the three figures?
(A) 1
(B) 2
(C) 4
(D) 5


MATHEMATICAL REASONING

(A) 110
(B) 440
(C) 550
(D) 990
7. Mohit went for swimming at 2:30 p.m. and returned back home $3 \frac{1}{2}$ hours later. The time he came
back home is back home is $\qquad$
(A)

(B)

(C)

(D)

8. How many vertices does this pyramid have?
(A) 4
(B) 5
(C) 6
(D) 8

9. There are $\qquad$ tens in 36520.
(A) 12
(B) 36
(C) 365
(D) 3652
10. The perimeter of the given figure (not drawn to scale) is $\qquad$ .
(A) 35 cm
(B) 27 cm
(C) 38 cm
(D) 42 cm


## EVERYDAY MATHEMATICS

11. There are 3 rows of strawberry plants. Each row has 6 plants. How many strawberry plants are there in all?
(A) 9
(B) 18
(C) 22
(D) 24
12. Ram, Rahul and Rohit shared a bag of marbles. The bag contained 272 marbles. How many marbles were left over after the friends shared them equally?
(A) 90
(B) 91
(C) 6
(D) 2
13. There were 3856 trees in a forest. In another forest, there were 4795 trees. How many more trees were there in the second forest?
(A) 930
(B) 939
(C) 1689
(D) 1600

## ACHIEVERS SECTION

14. Find the value of $\frac{P-Q+R}{S}$.
(A) 3
(B) 4

| $\begin{array}{c}1 P 19 \\ 3 8 \longdiv { P 2 9 5 4 } \\ \frac{-38}{349}\end{array}$ |
| :---: |
| 1022 |

(C) 6
(D) 7

$$
\frac{-3 \mid Q^{2}}{75}
$$

$$
\frac{-38}{3 \boxed{R} 4}
$$

$$
\frac{-342}{\sqrt{3} 2}
$$

15. The given bar graph shows the favourite ice-cream flavours of a group of children. $\qquad$ of the children prefer strawberry flavour.
(A) $1 / 4$
(B) $1 / 5$
(C) $1 / 6$
(D) $4 / 15$


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

