*The Gen X Series*

**IMO** International Mathematics Olympiad
**NSO** National Science Olympiad
**NCO** National Cyber Olympiad
**IEO** International English Olympiad

# OLYMPIAD SAMPLE PAPERS 6

**Useful for Olympiads Conducted at School, National & International Levels**

Compiled By
**Shuchita Singhal**

**Strictly According to the Latest Syllabus of Olympiad**

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You will hardly be able to differentiate the Sample Papers from the Actual Exam Papers. All this has been made possible by the people who have been in their respective fields for years – coaching and guiding students to succeed in this vital exam.

*P.S. While every care has been taken to ensure correctness of content, if you come across any error, howsoever minor, anywhere in the book, do not hesitate to discuss with your teachers while pointing that out to us in no uncertain terms.*

We wish you All the Best!

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# INTERNATIONAL MATHEMATICS OLYMPIAD (IMO)

# Mock Test Paper

**1**

Total Questions : 50 Time : 1 Hour

**I M O**

INTERNATIONAL MATHEMATICS OLYMPIAD

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

**SYLLABUS**

**Section – 1:** Verbal and Non-Verbal Reasoning

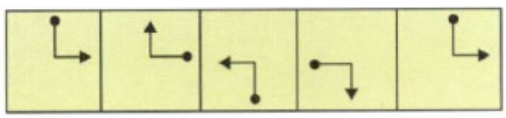
**Section – 2:** Knowing our Numbers, Whole Numbers, Playing with Numbers, Basic Geometrical Ideas, Understanding Elementary Shapes, Integers, Fractions, Decimals, Data Handling, Mensuration, Algebra, Ratio and Proportion, Symmetry, Practical Geometry

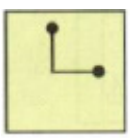
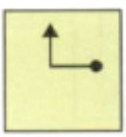
**Section – 3:** The Syllabus of this section will be based on the syllabus of Mathematical Reasoning.

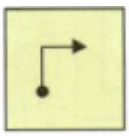
**Section – 4:** Higher Order Thinking Questions – Syllabus as per Section – 2.

## LOGICAL REASONING

1. Choose a figure from the options that could be the next term of the series.



(A)  (B) 

(C)  (D) 

2. Select the pair that has the same analogy as the given pair.

11 : 121

(A) 14 : 256 (B) 13 : 169

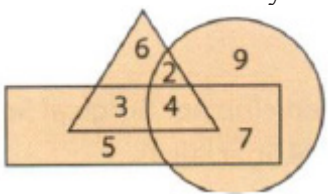
(C) 8 : 81 (D) 17 : 226

3. In a certain code language if NBUI is decoded as MATH. How will you decode the word MATH?

(A) ADHM (B) ABMH

(C) LZSG (D) UNPI

4. In the given Venn diagram, triangle represents healthy people, rectangle represents old persons and circle represents women. What is the number of those women who are healthy but not old?




(A) 4 (B) 2

(C) 3 (D) 6

5. If '+' denotes 'divided' by, '–' denotes 'added to', and '÷'denotes 'multiplied' by, then what is the value of 24 ÷ 12 – 18 + 9?
(A) 180 (B) 290
(C) 120 (D) 350

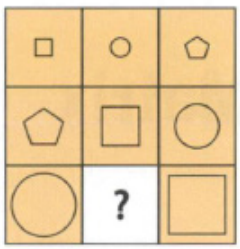
6. Choose the mirror image of the given figure from the following options.


Fig. (X)

(A)  (B) 

(C)  (D) 

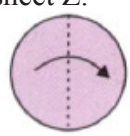
7. Choose the figure from the given options that completes the figure matrix.

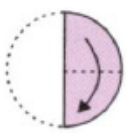


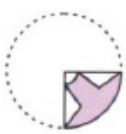
(A)  (B) 

(C)  (D) 

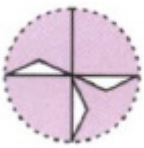
8. Choose the figure from the four options that resembles the unfolded form of the sheet Z.


X

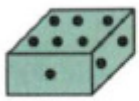

Y

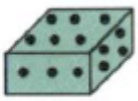

Z

(A)  (B) 

(C)  (D) 

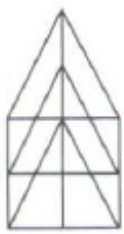
9. Two positions of a block are shown below. When six dots are at the bottom, how many dots will be at the top?


(i)


(ii)

(A) 4 (B) 2
(C) 5 (D) 6

10. How many triangles are there in the figure?



(A) 18 (B) 12
(C) 21 (D) 25

11. The time on a watch is quarter to three. If the minute hand points to North-East, in which direction does the hour hand point?
(A) North-East (B) North-West
(C) South-West (D) South-East

12. Pointing to a lady in the photograph, Rahul said, "Her mother's brother is the only son of my mother's father." How is the lady's mother related to Rahul ?
(A) Sister- in-law
(B) Aunt
(C) Grandmother
(D) None of these