The Gen X Series

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NSO National Science Olympiad
NCO National Cyber Olympiad
IEO International English Olympiad

OLYMPIAD SAMPLE PAPERS 8

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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Head Office
F-2/16, Ansari Road, Daryaganj,
New Delhi-110002 ☎ 23240026, 27, 28
✉ info@vspublishers.com
🌐 www.vspublishers.com

Regional Office
5-1-707/1, Brij Bhawan (Beside Central
Bank of India Lane) Bank Street, Koti,
Hyderabad - 500 095 ☎ 040-24737290
✉ vspublishershyd@gmail.com

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ISBN 978-93-711962-0-8
New Edition

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Printed at : Param Offsetters, Okhla, New Delhi–110020

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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 : Real Numbers, Polynomials, Pair of Linear Equations in Two Variables, Quadratic Equations, Arithmetic Progressions, Triangles, Coordinate Geometry, Introduction to Trigonometry, Some Applications of Trigonometry, Circles, Constructions, Areas Related to Circles, Surface Areas and Volumes, Statistics, Probability.

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

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

LOGICAL REASONING

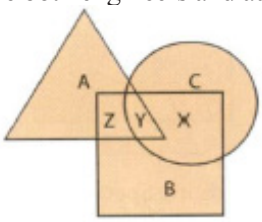
1. Find the term which replace the question mark to complete the given series.
   0, 6, 24, 60, 120, 210, ?
   (A) 412 (B) 336
   (C) 202 (D) 290

2. In a certain code, NOIDA is written as 39658. Following the same rule of coding, what should be the code word for INDIA?
   (A) 35468 (B) 63568
   (C) 23459 (D) 36954

3. A is B's father's nephew. C is B's cousin but not the brother of A. How is C related to A if A has only one uncle?
   (A) Brother
   (B) Aunt
   (C) Sister
   (D) None of these

4. Sameera went to attend a wedding ceremony of her cousin in another city situated 5 km away in the North-East direction of her own city. From there she came to meet her brother-in-law living in another city situated 4 km in the South of her cousin's city. How far away and in which direction is she now from her own city?
   (A) 2 km in the South
   (B) 3 km in the East
   (C) 6 km In the North
   (D) None of these

5. In the given figure, square represents engineers, triangle represents males and circle represents authors. By which letter the males who are both engineers and authors represented ?



(A) Z (B) Y
(C) B (D) C

6. Arrange the words given below in a meaningful sequence.

i. Puberty ii. Adulthood
iii. Childhood iv. Infant
v. Adolescence

(A) iv, iii, i, v, ii (B) ii, iv, iii, i, v
(C) v, ii, iii, iv, i (D) None of these

7. If a stands for –, b stands for ÷, c stands for + and d stands for ×, then 15 b 3 c 24 a 12 d 2 = ?

(A) 24 (B) 4
(C) 5 (D) $\frac{2}{9}$

8. How many triangles are there in the figure given below?



(A) 40 (B) 18
(C) 24 (D) 32

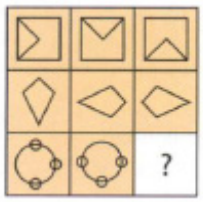
9. Choose the correct mirror image of the figure (X) from the given options as mirror is being placed to the left of the figure.



(A)  (B) 

(C)  (D) 

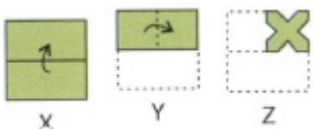
10. Select a figure from the options that can replace the question mark(?) in order to complete the given figure matrix.



(A)  (B) 

(C)  (D) 

11. There are three square sheets of paper marked as X, Y and Z. X and Y show two consecutive folds of the sheet respectively. And the figure Z shows cuts of the folded sheet. Choose the figure that is the unfolded form of the sheet.



(A)  (B) 

(C)  (D) 

12. Choose the box that is similar to the box formed by folding the given sheet (X) of paper.

