

# Institute of Mathematics Education

यथा शिखा मयूराणां ।  
नागानां मणयो यथा ॥



तद्वद् वेदांगशास्त्राणां ।  
गणितं मूर्धनि स्थितम् ॥

Just as the crest of the peacock and the gem of the cobra, stays right at the top, similarly study of Mathematics is the topmost among the study of all Vedas and Shastras.

Tel.: (022) 25343111 | Mobile : +91 810 401 1965  
Website : [www.aiime.org](http://www.aiime.org) | Email : [imethane@gmail.com](mailto:imethane@gmail.com)

## All India Junior Maths Olympiad

### Mathematical Competition

(Academic Year 2020-21)



**For Std. V / VI & VII / VIII - Preliminary Exam**  
**Maths Aptitude Test - 2020 (All India Level)**

Exam	Day	Date	Time	Registration on or before	Registration Fee
Mock Test	Sat.	12 <sup>th</sup> Sept. 2020	2 p.m. to 4 p.m.	31 <sup>st</sup> Aug. 2020	FREE
MAT 2020	Sat.	21 <sup>st</sup> Nov. 2020	2 p.m. to 4 p.m.	31 <sup>st</sup> Oct. 2020	Rs. 350/-

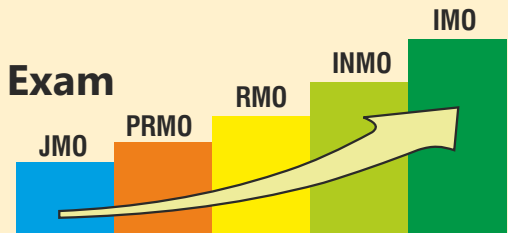
Note :- There is no separate registration for Mock Test. Students who register for MAT 2020, on or before 31<sup>st</sup> August 2020 are eligible to appear for Mock Test.

Due to Corona Pandemic, MAT 2020 will be conducted only once on Saturday, 21<sup>st</sup> November 2020 in offline mode, like every year. Date of examination is subject to change as per pandemic situation and Government guidelines.

For the benefit of students, we will conduct mock test for MAT on Saturday, 12<sup>th</sup> September 2020 in online mode. Students can take this examination from their homes.



**For Std. V / VI & VII / VIII - Final Exam**  
**Junior Maths Olympiad - 2021**  
**(All India Level)**



Exam	Day	Date	Time	Registration on or before	Registration Fee
JMO	Sun.	31 <sup>st</sup> Jan. 2021	10 a.m. to 12 noon	10 <sup>th</sup> Jan. 2021	Rs. 400/-

# Junior Maths Olympiad 2021

For Class V, VI, VII & VIII students (ICSE, CBSE, State Board Schools)

## *An Appeal*

Dear Principals, Maths Teachers & Parents,

Greeting from the Institute of Mathematics Education!

We, at IME, have been dedicated to the cause of nurturing excellence in Mathematics, for several years now. Our endeavor is to stimulate the spirit of enquiry, innovation and creativity amongst children through activities that make Mathematics an enjoyable and interesting pursuit. One such activity that the IME conducts is the Junior Maths Olympiad (JMO).

JMO serves as a strong preparatory foundation for the Pre Regional Maths Olympiad (PRMO), conducted by Homi Bhabha Centre for Science Education under National Board of Higher Mathematics, Government of India. So far 53103 students have appeared for MAT and 7125 for JMO. One such JMO Gold Medalist student represented India in International Olympiads of Physics and Astronomy and won laurels for the country. You will find more about Olympiads on the last page of the brochure.

We are aware that you are always taking initiative in making learning interesting and meaningful for students. We look forward to your support, in our endeavor to ignite the spark of curiosity and learning in young minds.

## MAT : Maths Aptitude Test

It is conducted in two groups.

- Primary Level : Std. V & VI
- Higher Primary Level : Std. VII & VIII

Students scoring 50% and above in MAT exam become eligible to appear for JMO.

### How to register for MAT ?

This year due to Corona Pandemic, registration for MAT 2020 will be done online. Please visit our website [www.aiime.org](http://www.aiime.org) for more details. Please find a MAT registration link here.

### Syllabus for MAT

#### Primary Level :

- 1) Study of Numbers including Basic Operations on Numbers, Even/ Odd/ Prime/ Composite Numbers and Tests of Divisibility. Also G.C.D. & L.C.M.
- 2) Fractions and Decimal fractions
- 3) Metric Measures
- 4) Roman Numerals
- 5) Time and Calendar
- 6) Equations using Letters, Inequality and Simplification of Expressions
- 7) Unitary Method
- 8) Perimeter and Area
- 9) Profit and Loss
- 10) Percentage

## Higher Primary Level :

- 1) G.C.D. & L.C.M.
- 2) Ratio-Proportion
- 3) Percentage
- 4) Profit and Loss
- 5) Simple & Compound Interest
- 6) Average
- 7) Distance, Time & Speed
- 8) Time & Work
- 9) Squares, Square roots, Cubes, Cube roots
- 10) Indices
- 11) Equations in One Variable
- 12) Factorization of Algebraic Expressions & Identities
- 13) Lines & Angles
- 14) Triangles & Pythagoras Theorem
- 15) Area, Surface Area & Volume
- 16) Circle - Chords & Tangents
- 17) Polygon

## About MAT Question paper (Primary and Higher Primary Group)

It consists of 50 MCQs (Multiple Choice Questions)

Each Question carries 2 marks.

Each question is provided 4 options, of which ONLY ONE is correct.

Students are supposed to darken appropriate circle on the OMR sheet provided.

There is no negative marking.

Q. 1 to Q. 45 are of easy to moderate level of difficulty.

Q. 46 to Q. 50 are of higher level of difficulty.

For Higher Primary group, Q. 1 is based on syllabus of primary group.

## Study material for MAT :

This year due to Corona pandemic, study material will be available in the online mode only on our website.

Study books are available for both the groups.

Topicwise last TEN YEARS question papers with answer keys are also available for both the groups.

Please find the link here.

## Awards for MAT

### Students Scoring

- 1) 40% to 49% : Passing Certificate
- 2) 50% to 89% : Selection Certificate
- 3) 90% and above : Selection Certificate and prize (JMO study material)



Lectures for MAT 2020 will be conducted in the month of August in the online mode. Please check website in the last week of July for more details.

# JMO 2021 (Junior Maths Olympiad)

Candidates scoring 50% and above in MAT 2020 are eligible to appear for JMO 2021.

## How to register for JMO ?

This year due to Corona Pandemic, registration for exam is done online. It is to be done by eligible students after MAT 2020 result. More details will be provided later.

## Syllabus for JMO

### Primary Level

- |   |                               |
|---|-------------------------------|
| 1) Divisibility                           | 5) Numbers of Different Bases |
| 2) Prime Numbers and Some Special Numbers | 6) Sequences & Series         |
| 3) Crypt Arithmetic                       | 7) Magic Square               |
| 4) Permutation                            | 8) Basic Concepts of Geometry |

### Higher Primary Level

- |   |  |
|---|--|
| 1) Divisibility including Euclidian Algorithm   | 5) Permutation and Combination   |
| 2) Modular Arithmetic including Congruence, Applications of Wilson Theorem, Euler Theorem | 6) Sequence and Series including A.P, G.P. H.P., A.M., G.M., H.M.  |
| 3) Quadratic Equations  | 7) Geometry including Straight Lines, Triangles - Similar and Congruent, Circles, Cyclic Quadrilaterals. |
| 4) Sets, Relations and Functions  |  |

## About JMO Question Paper

This is subjective type of examination.

A question paper consists of 13 questions.

Q.1 to Q.5 carry 6 marks each.

Q.6 to Q.10 carry 8 marks each.

Q.11 to Q.13 carry 10 marks each.

Students have to write answer below the question in the space provided. We provide separate space for rough work. Main aim of this exam is to test understanding of concepts. Hence explanation given by students with logical approach is important.

## Study Material for JMO :

Study books as well as past year papers are available in IME office. You can also get the same by courier. Please contact IME office for more details.

## Awards for JMO

Cut off for Selection of students for awards is decided by Examination Committee. Following awards are distributed to meritorious students.

- 1) Ramanujan Scholarship : Rs. 1000/- with certificate and gold medal.
- 2) Kaprekar Scholarship : Rs. 500/- with certificate and silver medal.
- 3) Consolation prize : Merit certificate with prize



## JMO 2020 : Schools Winning Medals

Sr. No.	School Name	Gold Medal		Silver Medal		Total
		V/VII	VII/VIII	V/VI	VII/VIII	
1	Sulochanadevi Singhania School, Thane	4	7	5	5	21
2	St. Joseph Convent Secondary School, Jalgaon	-	2	4	4	10
3	Vasant Vihar High School, Thane	-	1	5	2	8
4	Apeejay School, Nerul	1	1	1	2	5
5	Omkar International School, Dombivali	-	4	1	-	5
6	D.A.V. Public School, Thane	1	1	2	1	5
7	Vidya Niketan, Dombivali	-	-	2	2	4
8	Hiranandani Foundation School, Powai	-	1	2	1	4
9	Smt. K. C. Gandhi School, Kalyan	1	1	1	-	3
10	Fr. Agnel Multipurpose School, Vashi	-	-	2	-	2

### About Mathematics Olympiads

The National Board of Higher Mathematics (NBHM) was set up by Government of India under the Department of Atomic Energy (DAE) in the year 1983 to foster the development of Higher Mathematics in the country.

The Mathematics Olympiad activity was undertaken by NBHM from 1986 and is currently run in collaboration with Homi Bhabha Centre for Science Education, Mumbai. Main purpose of this activity is to support mathematical talent among high school students of our country.

To reach IMO (International Mathematical Olympiad), students have to go through following stages.

- i) PRMO (Pre Regional Mathematical Olympiad)
- ii) RMO (Regional Mathematical Olympiad)
- iii) INMO (Indian National Mathematical Olympiad)



For more information, you may visit following sites :  
[www.hbcse.tifr.res.in](http://www.hbcse.tifr.res.in) & [www.nbhm.dae.gov.in](http://www.nbhm.dae.gov.in)

### OUR JMO CHAMPIONS



**Amey Patwardhan**

JMO 2013 Gold Medalist.  
He represented India in International Olympiad of Physics and Astronomy in 2017 and won Gold medal for the country.  
Currently pursuing BS (Research) at IISc-Bangalore.



**Atharva Korde**

JMO 2010 Gold Medalist.  
He cleared PRMO, RMO, INMO successfully. He was among top 20 students who were selected for training of International Mathematics Olympiad at Homi Bhabha Centre for Science Education in the year 2014.  
Graduated from IIT Bombay and also worked as faculty for INMO. Currently pursuing Ph.D. from University of British Columbia.