

REGIONAL MATHEMATICS OLYMPIAD

“Mathematical Olympiad” is basically a talent search programme for the pre-university students. The main purpose of the programme is to encourage students to develop their mathematical ability. Through this programme a nationwide search is made every year to spot talented students in the field of Mathematics

In India, this programme is a major initiative undertaken by the National Board for Higher Mathematics (NBHM). On behalf of NBHM this programme is organized every year by Homi Bhabha Centre for Science Education (HBCSE), Mumbai. HBCSE has been organizing this programme since 1988. This programme is the earliest programme from amongst other similar programmes organized now for different science subjects like Physics, Chemistry, Biology, Astrophysics. **INMO programme is the only programme which leads to participation of Indian students at the International Mathematical Olympiad (IMO)** which was started way back in 1959 and is held in different countries every year (In India it was held in 1996). There are more than 100 participating countries. Indian performance has always been satisfactory.

From the year 2015, Indian team is also participating in (i) Asian-Pacific Mathematics Olympiad, and (ii) European Girls Mathematics Olympiad (for girls only).

Organization, conduction and training

For the selection of the talented students the tests are held throughout the country on a single day with a single paper. The questions asked are really challenging and they measure the students capacity for original critical thinking.

For holding and selecting the most talented the country has been divided in 25 regions in addition to three groups (CBSE, Kendriya Vidyalaya Sangathan and Navodaya Vidyalaya Sangathan). Each region is assigned a regional coordinator who organizes the tests for I and II stages. The students belonging to these three groups have **an option** to take the test through Regional Co-ordinator.

Stage I (RMO)

The stage is called Regional Mathematical Olympiad or RMO in which students of the region appear at the test. Students of class XI or below are eligible for this test, (at the discretion of the Coordinator) at this test which is a 3 hour written test. On the basis of this test 30 of students are selected for stage 2.

From the year 2015, additional 5 girls will be selected other than above certain students. These 5 girls will be selected in order of merit from the remaining candidates. These 5 girls will be eligible to take test at Stage II (INMO).

Stage 2 (INMO)

Those students who clear the first stage take another test in the region for stage 2. The question paper is uniform throughout the country and the level of questions is a little higher. This test is for 4 hours. On the basis of the test 30 students from all over the country are selected. Additionally 5 girls are also selected at this stage. These students are called INMO awardees and receive a certificate of merit.

International Mathematical Olympiad Training Camp.

The INMO awardees are called for a month long training camp as a preparation for International Mathematical Olympiad (IMO). The participants are given rigorous training by experts in subject of IMO syllabus at HBCSE, Mumbai. They have to face a number of tests there before a team of 6 is chosen for IMO and two other Olympiads.

From amongst these INMO awardees the teams will be chosen for other Olympiads too and they shall also undergo the pre-departure camp.

Scholarship

INMO awardees who successfully complete IMOTC and who chose Mathematics one of the subjects in their UG studies are eligible for NBHM scholarship of Rs. 4000/- PM (likely to be increased) throughout their UG studies. If they continue further Master's degree an enhanced scholarship is awarded to them.

In addition to above there is a Nurture programme for those who do not continue their studies directly to Mathematics. The details are available with NBHM.

Programme in Rajasthan

In Rajasthan INMO programme is being run successfully since its inception in the country. A good number of students from all over Rajasthan take part in this RMO. IN Rajasthan this RMO is held at about 8 to 10 centres situated at district headquarters. About 30 students and 5 girls in addition are selected from amongst nearly 600-700 students for INMO which is held at Jaipur only

This year RMO will be held on 16th October, 2016 and INMO shall take place on 15th January, 2017.

SYLLABUS FOR MATHEMATICS OLYMPIAD

The syllabus for mathematics Olympiad (regional, national and international) is pre-degree college mathematics. The areas covered are theory of number, arithmetic of integers, geometry, quadratic equations and expressions, trigonometry, co-ordinate geometry, systems of linear equations, permutations and combinations, factorization of polynomials, inequalities, elementary combinatorics, probability theory and number theory, finite series and complex numbers and elementary graph theory. The syllabus does not include calculus and statistics. The major areas from which problems are given are number theory, geometry, algebra and combinatorics. The problems under each topic are of exceptionally high level in difficulty and sophistication. The difficulty level increases from RMO to INMO to IMO. A good idea of what is expected of students in mathematics olympiads can be had from the following books:

1. Mathematics Olympiad Primer by V. Krishnamurthy, C.R. Pranesachar, K.N. Ranganathan and B.J. Venkatachala (Interline Publishing Pvt. Ltd., Bangalore).
2. Challenge and Thrill of Pre-College Mathematics by V. Krishnamurthy, C.R. Praneschar, K.N. Ranganathan and B.J. Benkatachala (New Age International Publishers, New Delhi-1996).
3. Problem Primer for the Olympiad by C.R. Pranesachar, B.J. Venkatachala and C.S. Yogananda (Interline Publishing Pvt. Ltd., Bangalore).
4. An Excursion in Mathematics by Regional Mathematical Olympiads Committee (Maharashtra and Goa).

P.S. Past papers are also available on this site (www.rajrmo.com).

Dr. A.K. Mathur
Regional Coordinator, RMO (Rajasthan)
Associate Professor (Retd.)
Department of Mathematics
University of Rajasthan, Jaipur

Received Rs.....
byDD/Cash
Date.....
Cashier

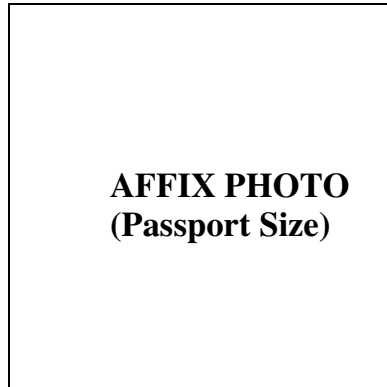
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**APPLICATION FORM FOR PARTICIPATION IN
REGIONAL MATHEMATICAL OLYMPIAD, RAJASTHAN
(National Board for Higher Mathematics, Department of Atomic Energy,
Government of India)**

Roll No.....
(Leave Blank)

To:

**Dr. A.K. Mathur
Regional Coordinator, INMO
Department of Mathematics
University of Rajasthan
JAIPUR-302004**



Centre Preference:

- 1.....
2.....

(To be attested by the Principal)

Full Name, Father's Name,
Permanent address, Mobile/Phone No.
of the candidate should be given
here legibly in CAPITAL LETTERS

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PIN CODE.....

List of likely Centres: Jaipur, Jodhpur, Udaipur, Ajmer, Alwar, Banswara,
Bhilwara, Bharatpur, Bikaner, Kota, Sriganganagar, Sikar and Jhunjhunu

Signature & Seal of the Principal

**PARTICULARS TO BE FILLED IN BY THE CANDIDATE CORRECTLY
AND LEGIBLY**

1. Name of the Candidate

(In Capital Letters) In English

In Hindi

2. Name of Father

.....

3. Date of Birth

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**4. Name of the School
where enrolled**

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5. Details of last Examination (attach photo copy of marks-sheet)

Roll No.

Year

School

Board

(For class XI candidates)

6. Total Marks with percentage:

Marks in Mathematics:

7. Details of D.D.:

No..... Dated.....

Name of Bank

Branch

.....
Signature of the Candidate in full

**Note: Please send a self addressed stamped envelope of Rs.5/- with this form
so that Roll Number may be sent at that address.**

REGIONAL MATHEMATICAL OLYMPIAD, RAJASTHAN

ADMISSION CARD

YEAR 201

**Roll No.....
(Leave Blank)**

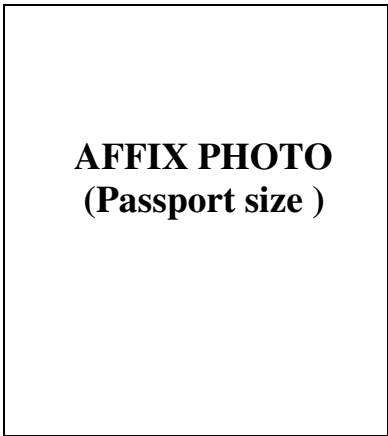
Please admit Miss/Mr.....

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Son/Daughter of Shri

.....



(To be attested by the Principal)

to
(Name of Centre leave Blank)

Jaipur

**REGIONAL COORDINATOR, INMO
Department of Mathematics
University of Rajasthan
JAIPUR-302004**

Dated.....