# NATIONAL OLYMPIAD PROGRAMME IN PHYSICS, CHEMISTRY, BIOLOGY, ASTRONOMY AND JUNIOR SCIENCE

## 2013-2014

***leading to participation in International Olympiads***

**Homi Bhabha Centre for Science Education**
**Tata Institute of Fundamental Research**
**V. N. Purav Marg, Mankhurd**
**Mumbai - 400 088, India**

Tel: 022 – 2507 2300, 2507 2304
Fax: 022 – 2556 6635, 2556 6803
URL: http://olympiads.hbcse.tifr.res.in

**A**

**major olympiad programme in basic sciences is operational in the country. The programme aims at promoting excellence in science among pre-university students and selecting teams of students to represent India at the International Olympiads in physics, chemistry, biology, astronomy and junior science.**

**This brochure gives the necessary information to all concerned : students, teachers, parents and others regarding this programme.**

*Do India Proud at the International Olympiads 2014.*

*Enroll for NSEP/NSEC/NSEB/NSEA/NSEJS*

## Introduction

The need for a national olympiad programme in basic sciences had been recognized by the scientific community in India for a long time. India started participating in the International Mathematics Olympiad from 1989. It was felt that with a large base of quality human resources in science, the country must also participate in the International Olympiads in basic sciences: Physics, Chemistry, Biology and Astronomy.

In 1997-98, Homi Bhabha Centre for Science Education (HBCSE) [a National Centre of the Tata Institute of Fundamental Research (TIFR), Mumbai] and the Indian Association of Physics Teachers (IAPT) jointly took initiative in starting the physics olympiad programme. A year later, HBCSE took the initiative to extend the programme to chemistry and biology also. IAPT came forward to offer its wide network for help in the conduct of chemistry and biology examinations also. These initiatives received strong support and encouragement from the Department of Atomic Energy (DAE), Department of Science and Technology (DST) and the Ministry of Human Resource Development (MHRD) of the Government of India. India sent its first team to the International Physics Olympiad (IPhO) in 1998, International Chemistry Olympiad (IChO) in 1999 and International Biology Olympiad (IBO) in 2000. Around the same time TIFR in association with the National Council of Science Museums and Astronomical Society of India initiated efforts to participate in the International Astronomy Olympiad (IAO). Our first foray into IAO was in 1999. Indian teams started participating in International Junior Science Olympiad (IJSO) and International Olympiad in Astronomy and Astrophysics (IOAA) from 2004 and 2007 respectively. The good performances of the Indian teams right from the first few years of participation helped in the consolidation of the programme.

In July 2001, India hosted the 33$^{rd}$ International Chemistry Olympiad in Mumbai. Further, India hosted the 11$^{th}$ International Astronomy Olympiad in Mumbai in November 2006, the 19$^{th}$ International Biology Olympiad in Mumbai in July 2008 and the 13th Asian Physics Olympiad in Delhi, in May 2012. India is expected to host IJSO in December 2013 and IPhO in July 2015. These events organized by Homi Bhabha Centre for Science Education (TIFR) give a boost to the entire academic programme of Science Olympiads in India.

The National Olympiad programme in physics, chemistry, biology, junior science and astronomy is overseen by a National Steering Committee constituted by the DAE. The Olympiad programme is financially supported by Board of Research in Nuclear Science (BRNS, DAE), Department of Science and Technology (DST), Ministry of Human Resource Development (MHRD) and Department of Space, Indian Space Research Organization (DoS, ISRO).The programme follows a five stage process. Stage I of the programme is the organizational responsibility of the Indian Association of Physics Teachers (IAPT). All the subsequent stages are conducted by HBCSE. The programme for the year 2013-2014 is outlined below.

**Stage I** **National Standard Examinations (NSEs)**

National Standard Examinations constitute the first stage of selection of students in the National Olympiad Programme. Every student aspiring to go through successive stages of the programme must enroll for the NSEs.

**Eligibility**

*Physics, Chemistry, Biology (NSEP, NSEC, NSEB):*

All Indian students who are born on or after July 1, 1994 and, in addition, are in Class XII or lower as of November 30, 2013, are eligible to appear for NSEP, NSEC, and NSEB 2013-2014. If they qualify in NSEP/NSEC/NSEB they will be eligible for subsequent stages leading to participation in International Olympiads for Physics/Chemistry/Biology 2014 respectively.

*Junior Science (NSEJS):*

All Indian students who are born on or after January 1, 1999 and, in addition, are in Class X or lower as of November 30, 2013, are eligible to appear in NSEJS 2013–2014. If they qualify in the NSEJS, they will be eligible for subsequent stages leading to participation in International Junior Science Olympiad 2014.

*Astronomy (NSEA):*

All Indian students who are born on or after January 1, 1995 and, in addition, are in Class XII or lower as of November 30, 2013, are eligible to appear for NSEA 2013–2014. If they qualify in the NSEA they will be eligible for subsequent stages leading to participation in International Olympiad in Astronomy and Astrophysics 2014.

I**t is the student's responsibility to determine that he/she satisfies eligibility norms. If at some later stage it is found that the student does not meet eligibility norms, he/she may face disqualification from the programme.**

## Syllabus

The syllabus for NSEs in Physics, Chemistry and Biology is broadly equivalent to the senior secondary level (upto and including Class XII) of CBSE.

The syllabus for NSEA is broadly equivalent to senior secondary level (upto and including Class XII) of CBSE. There will be greater emphasis on physics and mathematics and elementary astronomy.

The syllabus for NSEJS is broadly equivalent to secondary school level (upto and including Class X) of CBSE. All the basic subjects of science (Physics, Chemistry, Biology) and Mathematics may have roughly equal emphasis.

The schedule for the NSEs is described herewith.

- **National Standard Examination in Physics (NSEP)**

Date of exam : 24th November 2013 (Sunday)

Time of exam : 09.30 am – 11.30 am

Last Date of Enrollment : 15th September 2013

Part A 50 multiple choice questions consisting of

(A1) 40 questions, each with only one of the four options correct, and

(A2) 10 questions, each with one or more than one option correct. To get credit, all correct option(s) and no incorrect option(s) should be marked.

Part B 5 or 6 short answer type questions or problems.

Language English (However, NSEP question papers may be available in Hindi and some other regional languages provided there are at least 300 students opting for that language. Please see the IAPT website: http://www.iapt.org.in in this connection.)

- **National Standard Examination in Chemistry (NSEC)**

Date of exam : 24th November 2013 (Sunday)

Time of exam : 12.30 pm – 02.30 pm

Last Date of Enrollment : 15th September 2013

The question paper consists of 80 multiple choice questions, each with only one of the four options correct.

Language : English only

- **National Standard Examination in Biology (NSEB**)

Date of exam : 24th November 2013 (Sunday)

Time of exam : 03.00 pm – 05.00 pm

Last Date of Enrollment : 15th September 2013

The question paper consists of 80 multiple choice questions, each with only one of the four options correct.

Language : English only

- **National Standard Examination in Astronomy (NSEA)**

| | | |
|---|---|---|
| Date of exam | : | 24th November 2013 (Sunday) |
| Time of exam | : | 03.00 pm – 05.00 pm |
| Last Date of Enrollment | : | 15th September 2013 |

The question paper consists of 80 multiple choice questions, each with only one of the four options correct.

Language : English only

- **National Standard Examination in Junior Science (NSEJS)**

| | | |
|---|---|---|
| Date of exam | : | 24th November 2013 (Sunday) |
| Time of exam | : | 03.00 pm – 05.00 pm |
| Last Date of Enrollment | : | 15th September 2013 |

The question paper consists of 80 multiple choice questions, each with only one of the four options correct.

Language : English only

For details please see the IAPT website: **http://www.iapt.org.in**

**To Enroll for NSEs**

Find out from the principal and/or the head of department whether your school/college is a registered centre. (Each registered centre may be an examination centre for all the subjects.) If so, enroll your name by paying the required fee. Your school/college will give you all necessary instructions pertaining to NSEs.

If your school/college is not a registered centre, visit the IAPT website: http://www.iapt.org.in. This website displays details of the centres which were registered **last year**. This may be of help to you in locating the centre nearest to you and in enrolling your name at the centre by paying the required fee.

- Fee

For students in India Rs. 100/- per student per subject.

- Fee is to be paid to the centre incharge of the centre where you have enrolled your name. No direct remittance to IAPT.

- No TA/ DA is admissible for NSE (Stage I Examination).

Please note that NSEs are the organizational responsibility of IAPT. If you have any queries about NSEP, NSEC, NSEB, NSEA and NSEJS or if you have any difficulty in getting enrolled for these examinations, you should contact the following person.

**Prof. M. L. Oglapurkar**
Chief Co-ordinator (IAPT Examinations)
IAPT Office, Sheela Vihar Colony,
7, Heramb Co-op HSG Society,
Near Kimaya Hotel, Karve Road,
Kothrud, Pune - 411 038
Tel: 020 – 2542 0163; 020 - 2025 2754(O)
E-mail: iaptpune@gmail.com

**PLEASE DO NOT CONTACT HBCSE IN THIS CONNECTION. ALL QUERIES ADDRESSED TO HBCSE IN CONNECTION WITH NSEs WILL BE FORWARDED TO THE ABOVE MENTIONED PERSON FOR REPLY.**

The aim of the first stage examination is to have a wide reach, to progressively increase this reach and to attain nationwide representation for stage II without overly compromising on merit. Hence the selection to the stage II examinations i.e. Indian National Olympiad Examinations (INOs) is based on the following scheme.

(a) **Eligibility Clause:** A candidate must secure a score equal to or greater than a Minimum Admissible Score (MAS) to be eligible for the Stage II INO exam leading to the International Olympiad . The MAS for a given subject will be 40% of the maximum score in that subject.

(b) **Proportional Representation Clause:** The number of students selected for Stage II (INO) in each subject is around 300. The number of candidates who appeared for NSE in 2011-12 in a subject from centers in each State or Union Territory (UT) will be considered the baseline for calculating the number qualifying from centers in that State or UT for that subject. Suppose this number in 2011-12 for centers in a given State in a given subject is S, and the total number that appeared in 2011-12 in that subject for the country is T, then the number selected to Stage II in that subject from that State would be S/T times 300, rounded off to the nearest higher integer. In the event of a tie at the last position in the list all students with the same marks at this position will qualify to appear for the Stage II examination. The selected students must nevertheless satisfy the eligibility clause laid out above. The total number to be selected from centers in each State for each subject will be displayed on the IAPT and HBCSE websites. ( www.iapt.org.in ; http://olympiads.hbcse.tifr.res.in )

(c) **Minimum Representation Clause:** Notwithstanding the proportional representation clause the number of students selected for INO from each State and UT must be at least one, provided that the eligibility clause is satisfied.

(d) **Merit Clause:** Given the eligibility clause, it is conceivable that 300 students may not qualify for Stage II in a subject. Should this occur, the shortfall (from 300) will be selected based purely on merit without further consideration to proportional representation and minimum representation clauses. In the event of a tie at the last position in the list all students with the same marks at this position will qualify to appear for the Stage II examination.

Candidates who have represented India in the International Olympiad (IPhO, IChO, IBO, IOAA and IJSO) need not appear for the first stage NSE examination in the respective subject. Candidates who have represented India in the Asian Physics Olympiad (APhO) and the International Astronomy Olympiad Junior (IAO-Jr) need not appear for the 1st stage NSEP and NSEA Examinations respectively. Those candidates who thus qualify to skip the 1st stage NSEs may be allowed, on written request, to the respective National Coordinator, to directly appear for the second stage Indian National Olympiad (INO) examination, provided they satisfy other eligibility criteria such as age, pre-college status, etc.

There will be no other criterion or provision for selection to the Indian National Olympiad Examinations (INOs).

**Stage II Indian National Olympiad Examinations**

Indian National Olympiads will be held in physics, chemistry, biology, astronomy and junior science. They will be organized by HBCSE. These examinations are held at about 15 centres in the country. The dates and schedule of these examinations will be communicated in the first week of January to the eligible students selected from Stage I examinations. They will also be announced on the website:http://olympiads.hbcse.tifr.res.in. Please note that hard copy of the selection letter sent by postal communication (normally speed post) is to be taken as official and not the announcement on the website. HBCSE will not be responsible for postal delays or delays due to incomplete, illegible/incorrect addresses provided by students, or any other reasons beyond HBCSE's control. As far as possible the National Olympiads in different subjects are held on separate days/timings so that a student who is eligible to appear for more than one subject can do so. Students appearing for INPhO/INChO/INBO/INAO/INJSO are eligible for TA/DA as per the norms of the programme.

**INDIAN NATIONAL PHYSICS OLYMPIAD EXAMINATION (INPhO)**

INPhO Duration 3 hours

The syllabus for INPhO is broadly equivalent to NSEP.

**INDIAN NATIONAL CHEMISTRY OLYMPIAD EXAMINATION (INChO)**

INChO Duration 3 hours

The syllabus for INChO is broadly equivalent to NSEC.

**INDIAN NATIONAL BIOLOGY OLYMPIAD EXAMINATION (INBO)**

INBO Duration 2 hours

The syllabus for INBO is broadly equivalent to NSEB.

**INDIAN NATIONAL ASTRONOMY OLYMPIAD EXAMINATION (INAO)**

INAO Duration 3 hours

The syllabus for INAO is broadly equivalent to the NSEA

**INDIAN NATIONAL JUNIOR SCIENCE OLYMPIAD EXAMINATION (INJSO)**

INJSO Duration 3 hours

The syllabus for INJSO is broadly equivalent to the NSEJS.

Questions and problems in National Olympiads while circumscribed by the above mentioned CBSE syllabus are usually non-conventional and of high difficulty level, and comparable to the International Olympiads.

**TENTATIVE DATES OF INO EXAMS**

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|---|---|
| February 1, 2014 (Saturday): | 09.00 a.m. - 12.00 noon (INAO) |
| February 1, 2014 (Saturday): | 01.00 p.m. - 04.00 p.m. (INJSO) |
| February 1, 2014 (Saturday): | 01.00 p.m. - 04.00 p.m. (INChO) |
| February 2, 2014 (Sunday): | 09.00 a.m. - 12.00 noon (INPhO) |
| February 2, 2014 (Sunday): | 01.00 p.m. - 03.00 p.m. (INBO) |

On the basis of performance in the Indian National Olympiads students will be selected in each subject for the Orientation Cum Selection Camp (OCSC) in that subject. The number of students to be selected in each subject will be announced before the INO Examinations.

In all the above cases, in the event there is a tie at the last position in the merit list of the respective INO all students with the same marks at the last position will qualify to be selected for the OCSC.

There will be no other criterion or provision for selection to Orientation Cum Selection Camps (OCSC).

**Stage III Orientation Cum Selection Camps (OCSC)**

*Physics, Chemistry and Biology*

The selected group of students in different subjects will be invited to the Orientation Cum Selection Camps at HBCSE. The camps will be of two to three weeks duration in each subject. The camps include several theoretical and experimental tests. Orientation is provided to students especially for the experimental tests. A camp concludes with a valedictory function where distinguished scientists are invited to speak to the students.

On the basis of their performance in OCSC the top 5 students in Physics, top 4 in Chemistry and top 4 in Biology will be declared to be special merit awardees. These special merit awardees are given Rs. 5000/- each in the form of books and cash. In addition there will be special prizes in each subject to recognize meritorious performance in theory and experiments.

The 5 special merit awardees in Physics constitute the 5-member student team to represent India at the International Physics Olympiad. The 4 special merit awardees in Chemistry constitute the 4-member student team to represent India at the International Chemistry Olympiad. The 4 special merit awardees in Biology constitute the 4-member student team to represent India at the International Biology Olympiad (IBO).

*Astronomy*

The selected group of students in Astronomy is invited to the Orientation Cum Selection Camp at HBCSE. The camp will be of about three week's duration. The camp includes several theoretical, data analysis and observation tests. Students are trained in basic concepts in astronomy and astrophysics during the camp. Orientation is provided to students especially for problem-solving in astronomy, astrophysics and for observational astronomy tests. The camp will conclude with a valedictory function where distinguished scientists will be invited to speak to the students.

On the basis of the performance in OCSC, the top 5 students will be declared special merit awardees. These special merit awardees will be given Rs. 5000 each in the form of books and cash. In addition there will be special prizes to recognize meritorious performance in theory, data analysis and observation.

The 5 special merit awardees will constitute the 5-member student team to represent India at the International Olympiad in Astronomy and Astrophysics (IOAA).

*Junior Science:*

The selected group of students from INJSO will be invited to the Orientation Cum Selection Camp at HBCSE. The camp will be of two to three weeks duration. The camp will include several theoretical and experimental tests. Orientation will be provided to students especially for the experimental tests. The camp will conclude with a valedictory function where distinguished scientists will be invited to speak to the students.

On the basis of their performance in OCSC the top 6 students will be declared to be special merit awardees. These special merit awardees will be given Rs. 5000/- each in the form of books and cash.

The 6 special merit awardees will constitute the 6-member student team to represent India at the International Junior Science Olympiad (IJSO).

**TENTATIVE DATES OF OCSC**

The OCSC dates will be announced on HBCSE website before March 15, 2014.

To the extent possible care is taken that the camp dates do not overlap with the national level competitive exams, (e.g. IIT-JEE or AIIMS). Students are advised to look at the OCSC dates and select Mumbai as their examination centre in the event their national level entrance examination is scheduled during this period.

**The selection of the members to the Indian teams (IPhO, IChO, IBO, IOAA, and IJSO) holds provided they satisfy required criteria such as age limit, pre-university status, medical fitness, parental/ guardian consent, etc. In addition they must hold a valid Indian passports as per the visa regulations of the host country by the beginning of the respective OCSC.**

**The recommendations of the examination committees of the INOs and OCSCs in the various subjects regarding special merit awardees and other awardees will be treated as final.**

**Stage IV Training of Indian teams for International Olympiads at HBCSE.**

The selected Indian teams undergo a rigorous training programme at HBCSE in theory and experiment and in case of astronomy, observational astronomy. Special laboratories have been developed in HBCSE for this purpose. Resource persons from different institutions across the country are

invited to the training camps. As per International Olympiad statutes, the training in chemistry and biology is limited to two weeks duration. In physics the training may be longer. For astronomy and junior Science the training camp will be of one week duration.

**Stage V Participation in International Olympiads**

The 5-member student team, two teacher leaders and one scientific observer will constitute the delegation to represent India at the International Physics Olympiad (IPhO). The 45th IPhO will be held in Astana, Kazakhstan, tentatively in July, 2014.

The 4-member student team, two teacher leaders and one scientific observer will constitute the delegation to represent India at the International Chemistry Olympiad (IChO). The 46th IChO will be held in Hanoi, Vietnam, tentatively in July, 2014.

The 4-member student team, two teacher leaders and one scientific observer will constitute the Indian delegation to the International Biology Olympiad (IBO). The 25th IBO will be held in Bali, Indonesia, tentatively in July, 2014.

The 5-member student team and two teacher leaders and one scientific observer will constitute the Indian delegation to the International Olympiad on Astronomy and Astrophysics (IOAA). The 8th IOAA will be held in Suceava, Romania, tentatively in August, 2014.

The 6-member student team with three teacher leaders each will constitute the Indian delegation to the International Junior Science Olympiad (IJSO). The 11th IJSO will be held in South Korea, tentatively in December, 2014.

**The courts at Mumbai alone shall have the jurisdiction to settle and decide all matters and disputes related to the Olympiads organised by HBCSE and Examinations from Indian National Olympiad (INO) and onwards as HBCSE is the Nodal Organising Institute for this programme.**

**Note on other Olympiads:**

The HBCSE is also a nodal centre for the Mathematics Olympiad. The details of selection to this Olympiad maybe found in a separate brochure and also on the HBCSE website.

We mention below a few other Olympiads recognized but not directly organized by HBCSE.

1. **Asian Physics Olympiad (APhO):** This is organized by IAPT. Students aspiring for this Olympiad must normally appear in the first stage NSEP exam followed by the second stage INPhO exam. The detail of further selection and training is decided by IAPT and you may consult their website (http://www.iapt.org.in).

2. **International Astronomy Olympiad - Junior (IAO - Jr):** This is organized by National Council of Science Museum (NCSM). Students aspiring for this Olympiad must normally appear in the first stage NSEJS exam followed by the second stage INAO exam. The details of further selection and training is decided by NCSM and you may consult their website (www.nehrusciencecentre.gov.in).

3. **International Earth Science Olympiad (IESO):** This is organized by the Geological Society of India and you may consult their website for more information (www.geosocindia.org).

4. **International Olympiad in Informatics (IOI):** This is organized by the Indian Association for Research in Computing Science and you may consult their website for more information (http://www.iarcs.org.in/inoi).

**We caution the students and teachers about numerous private examinations titled 'Olympiads', which may charge high fees, are not officially recognized by the Government of India and which do not lead to participation in the International Olympiads.**

**All queries regarding Stage I examinations (NSEs) should be addressed to IAPT (Prof. M. L. Oglapurkar - see page 6).**

For general queries regarding all Science (Physics, Chemistry, Biology and Junior Science) Olympiad programmes you may contact:

**Prof. Vijay Singh**
National Co-ordinator, Science Olympiads
Homi Bhabha Centre for Science Education (TIFR)
V. N. Purav Marg, Mankhurd, Mumbai 400 088.
Tel: 022-2507 2300; 022-2507 2322, 022-2548 2104
Fax: 022-2556 6635, 2556 6803
Email: nc_olympiad@hbcse.tifr.res.in

For general queries regarding the Astronomy Olympiad programmes you may contact:

**Prof. M. N. Vahia**
National Co-ordinator, Astronomy Olympiad.
Tata Institute of Fundamental Research
Homi Bhabha Road, Colaba, Mumbai 400 005.
Tel: 022-2278 4545; 2278 2350
Email: astronomy@hbcse.tifr.res.in

For more information visit the website: http://olympiads.hbcse.tifr.res.in

*Information in this brochure*
*is subject to revision in the event of unforeseen*
*circumstances.*

**Books:**

- Indian National Physics Olympiad - Theory Problems (1998 – 2005), *Vijay A. Singh* and *Shirish R. Pathare.*
  **Price Rs. 60/-** (Purchase in person from HBCSE) or by sending a **Demand Draft of Rs. 100/-**

- Indian National Physics Olympiad - Theory Problems and Solutions (2006 – 2009), *Vijay A. Singh* and *Praveen Pathak.*
  **Price Rs. 90/-** (Purchase in person from HBCSE) or by sending a **Demand Draft of Rs. 140/-**

- Indian National Chemistry Olympiad - Theory Examination Papers (2002-2007), *Savita Ladage* and *Swapna Narvekar.*
  **Price Rs. 145/-** (Purchase in person from HBCSE) or by sending a **Demand Draft of Rs. 195/-**

- Experimental Problems in Chemistry, *Savita Ladage, Swapna Narvekar and Indrani Sen.*
  **Price Rs. 145/-** (Purchase in person from HBCSE) or by sending a **Demand Draft of Rs. 195/-**

- Indian National Biology Olympiad -Theory Papers (2002-2004), *Rekha Vartak and Anupama Ronad.*
  **Price Rs. 90/-** (Purchase in person from HBCSE) or by sending a **Demand Draft of Rs. 140/-**

- Indian National Biology Olympiad -Theory Papers (2005-2007), *Rekha Vartak and Anupama Ronad.*
  **Price Rs. 90/-** (Purchase in person from HBCSE) or by sending a **Demand Draft of Rs. 140/-**

- Question Papers of Indian National Astronomy Olympiad (1999-2008) Aniket Sule, Anand Ghaisas and M. N. Vahia, Manovikas Prakashan. **Price Rs. 100/-** (Purchase in person from HBCSE) or by sending a **Demand Draft of Rs. 150/-**

The Demand Draft includes postage charges for registered parcel and should be drawn in favor of ***Homi Bhabha Centre for Science Education, payable at Mumbai*** and sent to:

*HBCSE Publications Section*
*Homi Bhabha Centre for Science Education (TIFR)*
*V. N. Purav Marg, Mankhurd, Mumbai 400 088*

**List of Acronyms**

| | | |
|---|---|---|
| HBCSE | – | Homi Bhabha Centre for Science Education |
| TIFR | – | Tata Institute of Fundamental Research |
| NSE | – | National Standard Examinations |
| NSEP | – | National Standard Examination in Physics |
| NSEC | – | National Standard Examination in Chemistry |
| NSEB | – | National Standard Examination in Biology |
| NSEA | – | National Standard Examination in Astronomy |
| NSEJS | – | National Standard Examination in Junior Science |
| INPhO | – | Indian National Physics Olympiad Examination |
| INChO | – | Indian National Chemistry Olympiad Examination |
| INBO | – | Indian National Biology Olympiad Examination |
| INAO | – | Indian National Astronomy Olympiad Examination |
| INJSO | – | Indian National Junior Science Olympiad Examination |
| IPhO | – | International Physics Olympiad |
| IChO | – | International Chemistry Olympiad |
| IBO | – | International Biology Olympiad |
| IOAA | – | International Olympiad in Astronomy and Astrophysics |
| IJSO | – | International Junior Science Olympiad |
| OCSC | – | Orientation cum Selection Camp |
| IIT-JEE | – | Indian Institute of Technology-Joint Entrance Exam |
| AIIMS | – | All India Institute of Medical Sciences (Examination) |
| CBSE | – | Central Board of Secondary Education |
| IAPT | – | Indian Association of Physics Teachers |
| DAE | – | Department of Atomic Energy |
| DST | – | Department of Science and Technology |
| MHRD | – | Ministry of Human Resource Development |
| BRNS | – | Board of Research in Nuclear Sciences |
| ISRO | – | Indian Space Research Organization |
| DoS | – | Department of Space |
| NCSM | – | National Council of Science Museums |

**43rd International Physics Olympiad 2012 Medalists at Tartu & Tallinn, Estonia**


**Standing from left to right**: Shri. Shirish Pathare (Scientific Observer), Prof. Patrick Das Gupta (Leader), Pulkit Tandon (Bronze), Kunal Singhal (Silver), Bijoy Singh Kochar (Silver), Inala Jeevana Priya (Silver), Dr. M. K. Raghavendra (Leader), Rahul Trivedi (Gold).

**6th International Olympiad on Astronomy and Astrophysics 2012**
**Medalists at Rio de Janeiro and Vassouras, Brazil**


**Standing from left to right**: Pavan Hebbar (Bronze), Prof. M. N. Vahia (Scientific Observer), Sharad Mirani (Gold), Alankar Kotwal (Gold), Sandesh Kalantre (Gold), Manmohan Mandhana (Silver), Dr. Yogesh Wadadekar (Leader), Dr. Aniket Sule (Leader).

**44th International Chemistry Olympiad 2012 Medalists at Washington, USA**

**Standing from left to right**: Dr. Prabhakar Rohankar (Scientific Observer), Manav Avlani (Gold), Diptarka Hait (Gold), Prof. Savita Ladage (Leader), Nimit Kumar Singh (Silver), Shubham Chandak (Gold), Ms. Gomathi Shridhar (Leader).

**23rd International Biology Olympiad 2012 Medalists at Singapore**


**Standing from left to right:**Ms. Anupama Ronad (Scientific Observer), Dr. Dharmedra Shah (Leader), Pritish Patil (Silver), Apeksha Mittal (Silver), Sharvil Thatte (Silver), Deepa Jain (Silver) and on the foreground is Prof. P. V. Balaji (Leader).

**9th International Junior Science Olympiad 2012 Medalists at Tehran, Iran**


**Standing from left to right**: Prof. Vijay Singh, National Coordinator, Science Olympiads (Observer), Nikhil Kumar Lakumarapu (Silver), Prof. Deepak Mathur (Observer), Dr. P. K. Joshi (Leader), Mr. P. Nawale (Leader), Swati Sanjay Gupta (Silver), Charles Rajan (Silver), Pratyush Rajput (Silver), Kushal Babel (Silver), Bhavya Choudhary (Silver), Prof. Smita Marathe (Leader).