

FIRST STEP TOWARDS INTERNATIONAL OLYMPIADS

INTERNATIONAL OLYMPIAD QUALIFIER IN PHYSICS	: IOQP 2020 - 21 (NSEP)
INTERNATIONAL OLYMPIAD QUALIFIER IN CHEMISTRY	: IOQC 2020 - 21 (NSEC)
INTERNATIONAL OLYMPIAD QUALIFIER IN BIOLOGY	: IOQB 2020 - 21 (NSEB)
INTERNATIONAL OLYMPIAD QUALIFIER IN ASTRONOMY	: IOQA 2020 - 21 (NSEA)
INTERNATIONAL OLYMPIAD QUALIFIER IN JUNIOR SCIENCE	: IOQJS 2020 - 21 (NSEJS)

These examination IOQ replace NSE 2020-21 in corresponding subjects and are the only examination that lead to the participation of Indian students in the International Olympiads. No other examination is recognized for this purpose.

Organized by



INDIAN ASSOCIATION OF PHYSICS TEACHERS (IAPT)

206, Adarsh Complex, Awas Vikas - I, Keshavpuram, Kalyanpur, Kanpur-208017

AND

Homi Bhabha Centre for Science Education (TIFR) Mumbai

In co-ordination with

ASSOCIATION OF CHEMISTRY TEACHERS (ACT) &
ASSOCIATION OF TEACHERS IN BIOLOGICAL SCIENCES (ATBS)

Step II

Toppers of these IOQP, IOQC, IOQB, IOQA & IOQJS Part I from all States/Union Territory will be eligible for evaluation of IOQ Part II in respective subjects. For details visit the website www.iapt.org.in and the student's handout. Also HBCSE website www.hbcse.tifr.res.in

Step III

About 35 toppers in each of IOQP, IOQC, IOQB, IOQA and IOQJS will qualify for the **Orientation Cum Selection Camp (OCSC)** in respective subjects for about two weeks at Homi Bhabha Centre for Science Education (HBCSE) Mumbai. Indian teams to participate in International Olympiads-2021 will be selected on the basis of performance of students in respective OCSC.

In addition, about 5 toppers from IOQP may get an opportunity to participate in **Asian Physics Olympiad (APhO - 2021)**. APhO will be held in 1st week of May 2021.

Awards: Students attending **OCSC** will be awarded Gold medals and a merit certificate in all subjects.

Syllabus: All Syllabi are displayed on website : <https://www.iapt.org.in>

Programme: Online enrollment by the student himself / herself shall be done on www.iapt.org.in from Nov 1, 2020 till Nov 27, 2020. A fee around Rs. 200 per student per subject shall be deposited by the student through online payment gate way at his / her own login provided on the website. Examination centre will be displayed on the website by Dec 15, 2020.

DATE AND TIME OF EXAMINATION: SUNDAY, Jan 17, 2021; **Junior Science (IOQJS)** : 02:30 pm to 05:45 pm
SATURDAY, Feb 06, 2021; **Astronomy (IOQA)**: 09:00 am to 12:15 pm, **Chemistry (IOQC)**: 02:30 pm to 05:45 pm,
SUNDAY, Feb 07, 2021; **Physics (IOQP)**: 09:00 am to 12:15 pm, **Biology (IOQB)**: 2:30 pm to 5:45 pm

PREVIOUS 5 YEARS QUESTION PAPERS BOOKLET IN EACH SUBJECT IS AVAILABLE FOR Rs 50/- EACH FROM IAPT KANPUR OFFICE.

Prof. B.P. Tyagi

Chief Coordinator (Examination)

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Ph: 9837123716, E-mail: bptyagi@gmail.com

Visit Website: www.iapt.org.in

Dr. Vijay V Soman (9822107522) NSEJS Co-ordinator

Dr. Anand Singh Rana (9412954316) NSE Co-ordinator

Central IAPT Examination Office:

15, Block II Rispana Road, DBS College Chowk Dehradun-248001

Email: iapt.nse@gmail.com, Helpline: 9632221945/9411530162

For all queries regarding the examination students should contact the IAPT Examination Office Dehradun

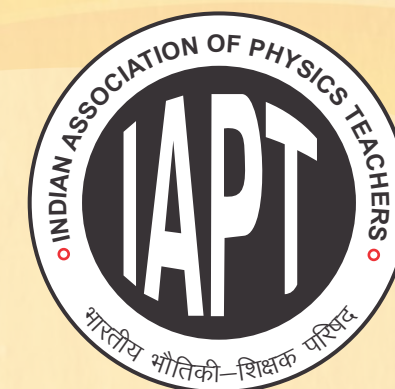
EXAMINATION	IOQP 2020-21 Part I (NSEP)	IOQC 2020-21 Part I (NSEC)	IOQB 2020-21 Part I (NSEB)	IOQA 2020-21 Part I (NSEA)	IOQJS 2020-21 Part I (NSEJS)
Day & Date	Sunday (February 07, 2021)	Saturday (February 06, 2021)	Sunday (February 07, 2021)	Saturday (February 06, 2021)	Sunday (January 17, 2021)
Time of Exam (both Part I & II)	09.00 am to 12.15 pm	02.30 pm to 5.45 pm	02.30 pm to 5.45 pm	09.00 am to 12.15 pm	02.30 pm to 05.45 pm
Venue	Designated IOQP centre	Designated IOQC centre	Designated IOQB centre	Designated IOQA centre	Designated IOQJS centre
Eligibility (i.e) who can appear for	<ol style="list-style-type: none"> Must be eligible to hold an Indian passport. Date of birth between July 1, 2001 and June 30, 2006, both days inclusive. Must be residing and studying in India since 30 November 2018 or earlier. OR Must be studying in an Indian school system since 30 November 2018 or earlier. Must not have passed (or scheduled to complete) class XII board examination or equivalent earlier than November 30, 2020. Must not have commenced (or planning to commence) studies in a university or equivalent institution by June 1, 2021. Must not be appearing for NSEJS 2020. 	<ol style="list-style-type: none"> Must be eligible to hold an Indian passport. Date of birth between July 1, 2001 and June 30, 2006, both days inclusive. Must be residing and studying in India since 30 November 2018 or earlier. OR Must be studying in an Indian school system since 30 November 2018 or earlier. Must not have passed (or scheduled to complete) class XII board examination or equivalent earlier than November 30, 2020. Must not have commenced (or planning to commence) studies in a university or equivalent institution by June 1, 2021. Must not be appearing for NSEJS 2020. 	<ol style="list-style-type: none"> Must be eligible to hold an Indian passport. Date of birth between July 1, 2001 and June 30, 2006, both days inclusive. Must be residing and studying in India since 30 November 2018 or earlier. OR Must be studying in an Indian school system since 30 November 2018 or earlier. Must not have passed (or scheduled to complete) class XII board examination or equivalent earlier than November 30, 2020. Must not have commenced (or planning to commence) studies in a university or equivalent institution by June 1, 2021. Must not be appearing for NSEJS 2020. 	<ol style="list-style-type: none"> Must be eligible to hold an Indian passport. Date of birth between July 1, 2001 and June 30, 2006, both days inclusive. Must be residing and studying in India since 30 November 2018 or earlier. OR Must be studying in an Indian school system since 30 November 2018 or earlier. Must not have passed (or scheduled to complete) class XII board examination or equivalent earlier than November 30, 2020. Must not have commenced (or planning to commence) studies in a university or equivalent institution by June 1, 2021. Must not be appearing for NSEJS 2020. 	<ol style="list-style-type: none"> Must be eligible to hold an Indian passport. Date of birth between January 1, 2006 and December 31, 2007, both days inclusive. Must be residing and studying in India since November 30, 2018 or earlier. OR Must be studying in an Indian school system since November 30, 2018 or earlier. Must not have passed (or scheduled to complete) class X board examination or equivalent earlier than November 30, 2020. Must not be appearing for any of NSEA, NSEB, NSEC or NSEP 2020.
Level of Question Paper	Syllabus is specified on the website https://www.iapt.org.in	Syllabus is specified on the website https://www.iapt.org.in	Syllabus is specified on the website https://www.iapt.org.in	Syllabus is specified on the website https://www.iapt.org.in	Syllabus is specified on the website https://www.iapt.org.in
Language of Question Paper	Question paper will be in English, Hindi, Gujarati, Bangla & Tamil (option during enrolment)	Question paper will be in English & Hindi (option during enrolment)	Question paper will be in English & Hindi (option during enrolment)	Question paper will be in English & Hindi (option during enrolment)	Question paper will be in English & Hindi (option during enrolment)
Question Paper Pattern of IOQ Part I	<ol style="list-style-type: none"> 24 multiple choice questions with one alternative correct. +3 marks credit for correct choice. -1 mark penalty for incorrect choice. 08 multiple choice questions with one or more than one correct alternatives. To get credit, all the correct option(s) and no incorrect option(s) should be marked. 	<ol style="list-style-type: none"> 24 multiple choice questions with one alternative correct. +3 marks credit for correct choice. -1 mark penalty for incorrect choice. 08 multiple choice questions with one or more than one correct alternatives. To get credit, all the correct option(s) and no incorrect option(s) should be marked. 	<ol style="list-style-type: none"> 24 multiple choice questions with one alternative correct. +3 marks credit for correct choice. -1 mark penalty for incorrect choice. 08 multiple choice questions with one or more than one correct alternatives. To get credit, all the correct option(s) and no incorrect option(s) should be marked. 	<ol style="list-style-type: none"> 24 multiple choice questions with one alternative correct. +3 marks credit for correct choice. -1 mark penalty for incorrect choice. 08 multiple choice questions with one or more than one correct alternatives. To get credit, all the correct option(s) and no incorrect option(s) should be marked. 	<ol style="list-style-type: none"> 24 multiple choice questions with one alternative correct. +3 marks credit for correct choice. -1 mark penalty for incorrect choice. 08 multiple choice questions with one or more than one correct alternatives. To get credit, all the correct option(s) and no incorrect option(s) should be marked.
For IOQ (Part II)	See HBCSE Website www.hbcse.tifr.res.in				
Total Marks of IOQ Part I	120	120	120	120	120

Please Note:

- The eligibility criteria are laid down by authorities (not by IAPT). IOQ Part I (60 minutes) and Part II (2 hours) both will commence in a single sitting for each subject.
- It is your (the students) responsibility to ensure that you satisfy the eligibility norms. If at some later stage it is found that you do not satisfy the norms you will be immediately disqualified without any refund of fees.
- Legal matters (If Any) pertaining to all these examination will be subject to the jurisdiction of Dehradun District Court only (the location of central examination office and the office of chief coordinator of IAPT examination) and no other court in India.

For Students

(Student's Brochure)



INDIAN ASSOCIATION OF PHYSICS TEACHERS

206, Adarsh Complex, Awas Vikas - 1, Keshavpuram, Kalyanpur, Kanpur-208 017

International Olympiad Qualifier (Part I) (in place of NSE) in

- Physics** - IOQP 2020-21 Part I (NSEP)
Chemistry - IOQC 2020-21 Part I (NSEC)
Biology - IOQB 2020-21 Part I (NSEB)
Astronomy - IOQA 2020-21 Part I (NSEA)
Junior Science - IOQJS 2020-21 Part I (NSEJS)

2020 - 21 EXAMINATION

What is IAPT?

IAPT (Indian Association of Physics Teachers) is an association of Physics Teachers spread throughout the country. It was started by Late Dr. D.P. Khandelwal in 1984 and today it has nearly 8000 life members. All the work of this (our) organization is voluntary in character-thus NOBODY is paid any Honorarium or remuneration for ANY WORK of IAPT.

What is International Olympiad Qualifier

IOQ is the pre-requisite for the selection in the team for International Olympiad from India. This year IOQ Part I (2020-21) is in place of NSE and the IOQ Part II is in place of INO in respective subject, IOQJS is for students upto class X. While all the others IOQP, IOQC, IOQB and IOQA is for students of upto class XII.

What are International Science Olympiads?

Olympiads are internationally recognized competitions in various fields of knowledge at the school level. They are the highest level examination and are hosted by different countries every year. Participation in any of the Olympiads has world wide recognition and is considered as a great achievement. International Olympiads are held every year in Mathematics, Physics, Chemistry, Biology, Astronomy and Junior Science.

How do I go to (or participate in) the Physics (or Chemistry or Biology or Astronomy or Jr. Science) Olympiad?

You will have to appear for IOQ 2020-21 (IOQP / IOQC / IOQB / IOQA / IOQJS) both Part I and Part II in a single sitting. The selected students will be eligible for attending Orientation Cum Selection Camp-2021, the next stage for International Olympiad.

Is there any other way to go to International Olympiads in these subjects?

No! There is none.

How do I enroll myself for any of these?

Any students satisfying the eligibility conditions for IOQ may enroll himself / her self online on the web <https://www.iapt.org.in> w.e.f November 1, 2020 to November 27, 2020. For all relevant informations be in touch with the same website.

NO DIRECT ENROLMENT.

What is the fee?

Fee is ₹200/- per student per subject each student is responsible to deposit his fee online on the given bank portal.

What are the details of the entire selection procedure?

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 over all compromising on merit, the selection for the Stage II examination, i.e., International Olympiad Qualifier (Part II) the following scheme (Points (a) to (f)) is adopted.

(a) **Minimum Admissible Score (MAS) Clause:** To be eligible among 300 students for the evaluation of International Olympiad Qualifier (Part II) leading to the International Olympiad, a candidate must secure a score equal to or greater than a Minimum Admissible Score (MAS). The MAS for a given subject will be 50% of the average of the top ten scores in that subject rounded off to the nearest lower integer.

(b) **Merit Index Clause:** There will be a high score called the Merit Index (MI) associated with each subject in IOQ (Part I). The MI in a subject is defined as 80% of the average of the top ten scores in that subject rounded off to the nearest lower integer. All students with a score equal to or greater than merit index MI for the subject will automatically qualify for the IOQ (Part II) in that subject. For example, if the average of top ten scores in a certain subject is 92, then 80% of this is 73.6. Then the MI in that subject will be 73. All candidates with a score equal to or above 73 in IOQ (Part I) of that subject will automatically qualify for the evaluation of IOQ (Part II).

(c) **Proportional Representation Clause:** Students from all States and UTs in India need to be encouraged to appear for the first stage examination and a nationwide representation for IOQ (Part II) is desirable. The quota for each State/UT used in National Talent Search Examination (NTSE) 2013-14, a nationwide competitive examination is used as the baseline for calculating the number of students qualifying for IOQ (Part II) in every subject from centres in that State or UT. Suppose the NTSE quota is S for a State, and the total for all States and UTs is T, then the total number of students to be selected for IOQ (Part II) from that State would be S/T times 300, rounded off to the nearest higher integer. This number will include those selected on the basis of the Merit Index. In the event of tie at the last position in the list, all students with same marks at this position will qualify for the evaluation of IOQ (Part II). The selected students must nevertheless satisfy the eligibility clause. The number to be selected from all the centres in each State or UT will be displayed on the IAPT and HBCSE websites. (<https://www.iapt.org.in>; <http://olympiads.hbcse.tifr.res.in>)

(d) **Minimum Representation Clause:** Notwithstanding the proportional representation clause the number of students selected for evaluation of IOQ (Part II) from each State and UT must be at least five, provided that the eligibility clause is satisfied.

The above criteria are illustrated with the following examples:

(i) Let the quota on the basis of the Proportional Representation Clause (c) for a State S_1 be 20. Suppose the number of students satisfying the Merit Index Clause (b) in a subject is 10. These 10 students will qualify for the evaluation of IOQ (Part II) in the given subject and an additional 10 students from the State S_1 in the given subject will be selected merit-wise, provided they satisfy the Eligibility Clause (a).

(ii) Let the quota on the basis of the Proportional Representation Clause (c) for a State S_1 be 20. Suppose

the number of students satisfying the Merit Index Clause (b) in a subject is 30. In this case, all 30 students will qualify for the evaluation of IOQ (Part II) in the given subject, and there will be no further selection from the State S_1 .

(e) **Previous International Representation Clause:** Candidates who have represented India in the International Olympiad on a previous occasion (IOAA, IBO, IChO, IJSO, IPHO, APHO and IAO-Jr.) will qualify for evaluation of IOQ part II in the respective subjects (irrespective of their score in IOQ part I). Such student shall be required to make a written request for the same to the National Coordinator Science Olympiads (nc_olympiad@hbcse.tifr.res.in).

(f) **Minimum Total Number Clause:** In each subject, after all the above criteria have been applied, it is possible that the target number of 300 students to be selected for the evaluation of IOQ (Part II) is not reached (due to non-availability of enough number of students in some states who satisfy Minimum Admissible Score Clause (a). In such an event, additional students will be selected purely merit-wise, provided Eligibility Clause (a) is satisfied, till the target number of 300 is reached. Other clauses will not apply for these students. In case of a tie at the last position, all students with the same marks at this position will qualify for the evaluation of IOQ (Part II).

There will be no other criterion or provision for the evaluation of IOQ (Part II).

Eligibility for IOQA and OCSC-Astronomy in 2021

In order to encourage younger students to participate in Astronomy olympiad. The rules are as below:

1. The eligibility criterion for IOQA (Part I) has been given above.
2. The student pool of IOQA (Part I) will be divided into two groups:
 - (i). Group A: Students who are in Class XII as of Nov. 30, 2020.
 - (ii). Group B: Students who are in Class XI or lower as of November 30, 2020.
3. For the evaluation of IOQA (Part II), a target number of 250 students will be selected from each group. Thus, a total of 500 students will be selected.
4. The MI and MAS will be calculated separately for each of these groups.
5. All the clauses [(a) to (f) above]] of selection will be applied separately to each group.
6. The question papers of IOQA (Part I) and IOQA (Part II) will be identical for the two groups.

There will be no other criterion or provision for the evaluation of IOQA (Part II).

All these IOQ (Part II) are to be organized by HOMI BHABHA CENTRE for SCIENCE EDUCATION (HBCSE) Mumbai. For the next stage students are chosen on the basis of their performance at these IOQ. These students in each subject attend Orientation Cum Selection Camp (OCSC) in respective discipline for about 2 weeks at HOMI BHABHA CENTRE for SCIENCE EDUCATION (HBCSE) Mumbai. Indian team to participate in International Olympiad is selected from the OCSC in respective subjects.

For more details visit www.hbcse.tifr.res.in / www.iapt.org.in

Are there any other fees for these INOs or camps?

None! You pay only once at the time of enrolment for IOQ.

What is the time schedule?

ONLINE STUDENT ENROLLMENT BEGINS: November 1, 2020

LAST DATE OF ENROLMENT: NOVEMBER 27, 2020

Examination schedule:

IOQJS 2020-21 (NSEJS)	Sunday, January 17, 2021	2.30 pm to 5.30 pm
IOQA 2020-21 (NSEA)	Saturday, February 06, 2021	09.00 am to 12.00 N
IOQC 2020-21 (NSEC)	Saturday, February 06, 2021	2.30 pm to 5.30 pm
IOQP 2020-21 (NSEP)	Sunday, February 07, 2021	09.00 am to 12.00 N
IOQB 2020-21 (NSEB)	Sunday, February 07, 2021	2.30 pm to 5.30 pm
Expected date of result of IOQ Part II (INO)	Monday, March 15, 2021	
OCSCs	May-June 2021	

Previous Years Question Papers: Yes, separate booklets containing question papers with solution/answers for past five years each in Physics, Chemistry, Biology, Astronomy and Junior Science are available at a cost of ₹ 50/- per booklet.

To obtain the previous year papers of NSE deposit the amount online or by NEFT in the account given below. Send the details with proof along with your address on email: iaptknp@rediffmail.com The booklet will be sent to you by registered post from Kanpur IAPT Registered office.

Account Name: Indian Association of Physics Teachers

Account Number: 20768203191

Bank: Indian Bank, **Branch:** Kakadeo Kanpur (UP)

IFSC Code: ALLA0210490

Phone: 0512 2500075, 9935432990

Are there any CERTIFICATES / AWARDS?

Yes, in each subject,

- i) Report card will be generated to all the candidates above (MAS) and can be downloaded by the enrolled students.
- ii) Certificates are given to 'top 10%' students of every centre.
- iii) Merit Certificates are awarded to 'top 1%' students in each state, in each subject.
- iv) Special Merit Certificates and a prize (book) will be awarded to 'National top 1%' students in Physics, Astronomy & Junior Science.
- v) Gold Medals are awarded to the students attending OCSC in Physics, Chemistry, Biology, Astronomy & Junior Science.

Prof. B.P. Tyagi (9837123716)

Chief Coordinator IAPT Examination

NSE Coordinators:

DR. Anand Singh Rana (9412954316) Dehradun

DR. Vijay V. Soman (9822107522) NAGPUR

IAPT Central Examination Office:

15, Block II Rispana Road Dehradun - 248001

Help Line No: 9632221945, 9411530162, 8533993332

Email: iapt.nse@gmail.com, iaptddn@gmail.com

Website: <https://www.iapt.org.in>

For all queries regarding the IOQ (Part I) students should contact the IAPT Examination Office, Dehradun