<u>Memorandum of Understanding</u>

THIS MEMORANDUM OF UNDERSTANDING (hereinafter referred to as "**This Agreement**") is made on this _____ day of September, 2020 by and between,

Homi Bhabha Centre For Science Education, a centre of Tata Institute of Fundamental Research (TIFR) (which is registered as a Trust registered under the Bombay Public Trusts Act, 1950), having its office at V N Purav Marg, Mankhurd, Mumbai-400088, (hereinafter referred to as "**HBCSE**"), represented herein by its Centre Director, Prof. K Subramaniam, (which expression shall unless repugnant to the context thereof, mean and include its successors and assigns) of the First Part,

Annexure-II AGREEMENT

१. मुद्रांक विक्री नोंद वही अनु. क्रमांक-/दि

२. दस्ताचा प्रकार

३. दस्त नोंदणी करणार आहेत का ?

४. मिळकतीचे थोडक्यात वर्णन-

५. मुद्रांक विकत घेणाऱ्याचे नांव व सही

६. हस्ते असल्यास त्यांचे नाव, पत्ता व सही

७. दुसऱ्या पक्षकाचे   नाव IAPT & PTA

८. मुद्रांक शुल्क रक्कम

परवाना   ची नोंद व परवाना क्र
तसेच

परवाना

मुद्रांक वि

शॉप नं. १   ंद बोंगाळे

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                 कल्याण

Indian Association of Physics Teachers, a Society / Association registered under Section XXI of Societies Act, 1860, having its registered office at Flat no. 206, Adarsh Complex, Awas Vikas-1, Keshavpuram, Kalyanpur, Kanpur 208017 and the examination office at #15, Block II Rispana Road DBS (PG) College Chowk, Dehradun – 248001 (23, Adarsh Vihar, Raipur Road, Dehradun – 248001) (hereinafter referred to as "**IAPT**"), represented herein by its President, Prof. Vijay A. Singh, (which expression shall unless repugnant to the context hereof mean and include its successors and permitted assigns) of the Other part

AND

Mathematics Teachers' Association of India, a Society / Association registered under Section XXI of Societies Act, 1860, having its registered office at Homi Bhabha Centre For Science Education (TIFR), V N Purav Marg, Mankhurd, Mumbai-400088 (hereinafter referred to as "**MTA(I)**"), represented herein by its President, Prof. S. G. Dani, (which expression shall unless repugnant to the context hereof mean and include its successors and permitted assigns) of the Other part.

WHEREAS:-

1. HBCSE is in charge of the Science Olympiad activity in India for selection of teams to represent India at the International Olympiads. The Science Olympiads include Astronomy, Biology, Chemistry, Junior Science and Physics Olympiads.

2. In 2020-2021, the National Olympiad Programme in Astronomy, Biology, Chemistry, Junior Science and Physics will follow a four stage process. This is a one-time arrangement being made in view of the current pandemic situation in the country. This document pertains only to the first of these four stages. This stage will be called Indian Olympiad Qualifiers (IOQs) in Astronomy, Biology, Chemistry, Junior Science and Physics: IOQA, IOQB, IOQC, IOQJS and IOQP, respectively. The common name "**IOQS**" is used hereafter to refer to these five examinations collectively. The examination will be of pen-and-paper type, and will not involve on-screen answering.

3. HBCSE and IAPT have agreed and decided that they shall be responsible for conducting IOQS jointly. IAPT has the experience and resources to conduct the first level of the Olympiads, namely, the National Standard Examination (NSE), in all the above subjects and have been doing so since the inception of the programme. HBCSE has been conducting the second stage exam for the Olympiads, namely the Indian National Olympiad (INO), in the same subjects since the inception of the programme. This year's IOQS is a joint version of these two stages. The National Steering Committee of Science Olympiads in India (NSC), the principal office-bearers of IAPT and the HBCSE-TIFR administration have approved this arrangement.

4. For the year 2020-21, the IOQS will be tentatively held on: January 17, February, 6 and February 7, 2021. The tentative detailed schedule is as follows:

Indian Olympiad Qualifier in Junior Science (IOQJS): January 17, 2021 (Sunday) 14:30 - 17:30 hrs

Indian Olympiad Qualifier in Astronomy (IOQA): February 6, 2021 (Saturday) 9:00 -12:00 hrs

Indian Olympiad Qualifier in Chemistry (IOQC): February 6, 2021 (Saturday) 14:30 - 17:30 hrs

Indian Olympiad Qualifier in Physics (IOQP) February 7, 2021 (Sunday) 9:00 - 12:00 hrs
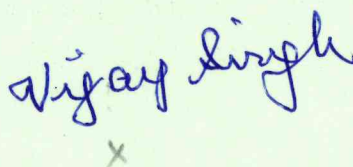
Indian Olympiad Qualifier in Biology (IOQB): February 7, 2021 (Sunday) 14:30 - 17:30 hrs

5. The IOQS in each subject will be a combination of two examinations (Part I and Part II), held in a single sitting for the examinee.

Part I: National Standard Examination (NSE): The duration of this part will be 1 hour and will consist of multiple-choice questions, similar in standard to the usual NSE. This part will be a screening examination for selective evaluation of the second part (INO) only and performance in this part (NSE) will not play any role in the selection for the next level of the national programme. This part of IOQ in different subjects will be called National Standard Examinations (NSEs) in Astronomy, Biology, Chemistry, Junior Science and Physics: NSEA, NSEB, NSEC, NSEJS and NSEP, respectively.

Part II: Indian National Olympiad (INO): The duration of this part will be two hours and will consist of detailed questions, similar in standard to the usual INO. This part will be evaluated only for students screened through the first part (NSE), and the selection for the next level of the national programme will be determined solely by the performance in this part. This part of IOQ in different subjects will be called Indian National Olympiads

(INOs) in Astronomy, Biology, Chemistry, Junior Science and Physics: INAO, INBO, INChO, INJSO and INPhO, respectively.

6. The National Board of Higher Mathematics (NBHM) is in charge of the Mathematical Olympiad activity in India for selection of a team to represent India at the International Mathematical Olympiad. NBHM has entrusted implementation of the selection procedure to the HBCSE to be carried out in coordination with the Mathematical Olympiad Cell and the National Coordinator appointed by NBHM, supervised by a Committee constituted by NBHM.

7. In 2020-2021, it is proposed to have a two-stage selection process to select students for the International Mathematical Olympiad Training Camp (IMOTC). It is proposed to name the two stages as:

   1. Indian Olympiad Qualifier in Mathematics (IOQM).

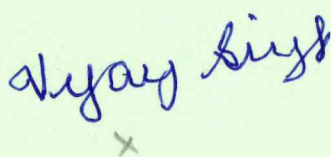   2. Indian National Mathematical Olympiad (INMO).

   IOQM exam will be of the same type and at the same level as the Pre-Regional Mathematical Olympiad (PRMO) examination in previous years. There will be no Regional Mathematical Olympiad (RMO) examination. Those who qualify in the IOQM will directly appear for the second exam, namely, INMO. The INMO and subsequent stages of the Mathematical Olympiad are the responsibility of HBCSE. This document is concerned only with IOQM.

8. The IOQM exam shall be the only recognized exam for qualifying for the INMO exam. No other independently administered examinations are recognized. A certain number of the students per region who qualify the IOQM shall be selected for the INMO. The further process of selection and conducting of exams will remain the same and will be implemented by HBCSE.

9. The IOQM is expected to be held on Sunday, January 17, 2021 (9:00 to 12:00 hrs) in several hundred centres across the country.

10. It is possible that the dates of all or some of the examinations mentioned in paras 4 and 9 need to be changed due to unavoidable circumstances. In such an event, a minimum notice of two weeks will be given to students.
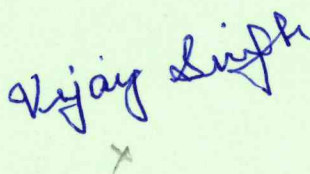
11. HBCSE, with the concurrence of NBHM, has approached IAPT and MTA(I) with a request to conduct the IOQM exam.

12. HBCSE, IAPT and MTA(I) have agreed and decided that MTA(I) shall be responsible for conducting the IOQM with necessary administrative support from HBCSE and support from IAPT solely for the purpose of enrolment. IAPT has the experience and resources to conduct the said exam and has been conducting the NSE since the inception of the programme. MTA(I) has conducted the first stage of the Olympiad in mathematics, PRMO, in previous years. The principal office-bearers of IAPT and MTA(I) have approved this arrangement.

13. The Parties are desirous of laying down the terms and conditions of their agreement regarding the manner of conducting the IOQS and IOQM and other details regarding the examinations.

NOW THEREFORE, THE PARTIES HEREBY AGREE AS FOLLOWS:

1. The first stage of the selection process for International Olympiads of 2021 in science subjects (Astronomy, Biology, Chemistry, Junior Science and Physics), namely Indian Olympiad Qualifiers in the above subjects (hereafter referred to as IOQS) will be organized and conducted jointly by the IAPT and HBCSE. The first stage of the selection process for International Mathematical Olympiad of 2021, namely the Indian Olympiad Qualifier in Mathematics (IOQM) will be organized and conducted by MTA(I) with necessary administrative support from HBCSE, and additional support from IAPT solely for the process of enrolment.

2. It is agreed that the task of conducting the examinations of both IOQS and IOQM at several hundred centres across the country according to the above schedule will be entrusted with an external professional agency, hereafter referred to as **Agency**, with adequate expertise in conducting such large scale examinations.

3. HBCSE shall be responsible for the choice of the Agency through appropriate procedures as permissible under Govt. of India regulations. IAPT and MTA(I) representatives will be involved in the decision-making process. HBCSE shall be responsible for the award of the contract and payment to the Agency.
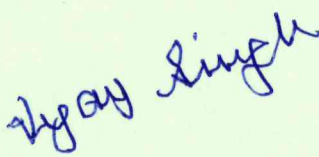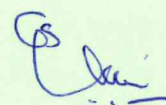
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4. The Agency hired will have the responsibility for identifying and securing exam centres, allocation of exam centres to students, printing and delivery of question papers, verification of candidates, preparing hall tickets and submitting the results. The Agency will be required to strictly adhere to all local COVID-related restrictions and norms that would be in effect at the time of the examinations. The answer scripts of IOQS Part II will be delivered by the Agency to HBCSE, which will proceed to evaluate the same. The OMR sheets of IOQS Part I and IOQM will be preserved for reference by the Agency for a mutually agreed upon period after the completion of the examinations.

5. IAPT will be responsible for the enrolment of students for both IOQS and IOQM on behalf of itself, MTA(I) and HBCSE. The mode of enrolment will be primarily through online enrolment by individual students, with a fallback option of online enrolment by schools on behalf of their students.

6. After enrolment, IAPT shall provide the Agency with the student details necessary to conduct the examinations at least 8 weeks before the scheduled date of the respective IOQS/IOQM examination. IAPT shall also provide MTA(I) with the full student data for IOQM enrolments. The allotment of examination centres and provision of admit cards for IOQs to students will be carried out by the Agency.

7. IAPT and HBCSE will announce the dates of the IOQS, enrolment procedure and related matters at least 1 month in advance of the last date of enrolment for IOQS. IAPT, MTA(I) and HBCSE will announce the date of the IOQM, enrolment procedure and related matters at least 1 month in advance of the last date of enrolment for IOQM.

8. There will be a fee of Rs X per subject per student for IOQS and IOQM. This amount X is determined by the formula: $X = A + B$, where

   a. A = amount charged by the Agency per subject per student (inclusive of taxes and overhead expenses) for the conduct of the IOQ examinations -- rounded upwards to the nearest multiple of Rs 5.

   b. B = amount charged by IAPT per subject per student for administrative contribution to the overall conduct of IOQS or, the amount charged by IAPT and MTA(I) for administrative contribution to the overall conduct of IOQM.

   The Parties have agreed that the amount B will be Rs 30. The amount A will be known only after the process of award of the contract to the Agency is completed. Thus the total fees collected from each student per subject will be Rs X = Rs $(A + 30)$.

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9. IAPT will collect the enrolment fees per subject from each student during the enrolment process.

   a. For IOQM, IAPT shall transfer 50% of B, i.e., Rs 15 per student enrolled for IOQM to MTA(I).

   b. For both IOQS and IOQM, the amount of Rs A per subject per student will be remitted by IAPT to HBCSE in due time for payment to the Agency for its services. Any balance amount left with HBCSE after making the payment to the Agency (due to the rounding off) will be utilized towards HBCSE's expenses incurred in the conduct of IOQS and IOQM.

10. HBCSE shall be, if required, putting a minimum guarantee of total 100,000 enrolments for IOQS and 50,000 for IOQM, i.e., a total of 150,000 enrolments in the contract to the Agency. Thus the amount of Rs (A x 150,000) (minus the rounding off amount) will have to be paid to the Agency at a minimum. In the event that the total number of enrolments falls below 150,000 the shortfall amount will be shared equally between IAPT and HBCSE for shortfall in IOQS enrolments and between MTA(I) and HBCSE for shortfall in IOQM enrolments.

11. In the event that the IOQS and/or IOQM examinations have to be either cancelled completely or partially at a late stage due to the pandemic situation, it is possible that a certain amount has to be still paid to the Agency as a penalty for cancellation. To cover such eventualities, a certain fraction C% of the amount A (to be negotiated during finalisation of the contract with the Agency) plus D% of the amount B (ref. para 8 above) will be together declared as a non-refundable "processing fee" as part of the registration fee for IOQS/IOQM. The former (C% of A), will be paid to the Agency in case of a cancellation, and the latter (D% of B) will be retained by IAPT to cover its administrative expenses. The remaining amount of ((100-C)% of A plus (100-D)% of B) per subject per student, termed as "examination fee" part of the registration fee, shall be refunded to the student by IAPT in case of cancellation. Some adjustment in the percentage D may be necessary for rounding off purposes. The Parties have agreed that the percentage D (to be retained by IAPT) shall be as close as possible to 80%, but not less than 80%, i.e., Rs 24 per subject per student. In such a case, IAPT shall transfer 50% of the retained amount (i.e., Rs 12 (or slightly more) per student) to MTA(I) for enrolments in IOQM (ref. para 9(a) above).

12. The academic responsibility of the IOQS and IOQM constitutes of several components. The overall academic responsibility for IOQS Part I is with IAPT and that of IOQS Part II is with HBCSE. The overall academic responsibility of IOQM is with MTA(I). The specific

components are listed below along with tentative deadlines and the respective responsibilities of the Parties involved.

Task	Tentative deadline	Responsibility for		
	Time counted from date of exam (D0)	IOQM	IOQS Part I (NSE)	IOQS Part II (INO)
Preparation of question paper in English	D0 -8 weeks	MTA(I)	IAPT	HBCSE
Preparation of Hindi translation of question paper	D0 -8 weeks	MTA(I)	IAPT	HBCSE
Preparation of OMR sheet	D0 -4 weeks	Agency	Agency	NA
Preparation of answerscript	D0 -8 weeks	NA	NA	HBCSE
Preparation of answer key and their publication	D0 +3 days	MTA(I)	IAPT	NA
Preparation of model solutions and their publication	D0 +3 days	NA	NA	HBCSE
Addressing queries and complaints regarding question paper and answer key/solutions and publication of frozen versions of the same	D0 +10 days	MTA(I)	IAPT	HBCSE
Scanning of OMR and evaluation of OMR	D0 +2 weeks	Agency	Agency	NA
Evaluation of detailed answers	D0 +5 weeks	NA	NA	HBCSE
Preparation of list of students selected for IOQS Part II and INMO and publication of the same	D0 +3 weeks	MTA(I)	IAPT	NA
Preparation of merit list and list of students selected for next stage (OCSC/IMOTC) and publication of the same	D0 +8 weeks	NA	NA	HBCSE

13. It is possible that the dates of all or some of the examinations (IOQS and/or IOQM) and the deadlines mentioned in para 12 above may need to be changed due to unavoidable circumstances. The decision to that effect will be taken by HBCSE with intimation to IAPT and MTA(I), and a minimum notice of two weeks will be given to students.
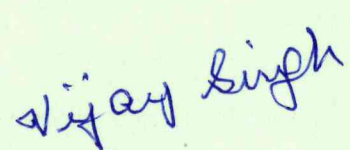
14. The question papers and solutions of IOQS (only answer keys for Part I and model solutions for Part II) and IOQM examinations will be made available on the HBCSE (for both IOQS and IOQM), IAPT (for IOQS only) and MTA(I) (for IOQM only) websites within 3 days of conclusion of the respective examinations. Members of the public may post their feedback on the websites on possible ambiguities in the questions and errors in the solutions within a time window of at least 3 days and at most 5 days. After this period, all the feedback received will

be considered by MTA(I) (for IOQM only), IAPT (for IOQS Part I only), and HBCSE (for IOQS Part II only) and the solutions will be adjusted, if necessary, by the respective Parties. The finalized solutions will be published on the HBCSE, IAPT and MTA(I) websites and used for evaluating the IOQ examinations. No further appeal regarding change in the solutions will be accepted.

15. The Agency, which will be responsible for the scanning of OMR sheets and their evaluation (for IOQS Part I and IOQM), will provide the full data, including raw answers, preferably in the format specified by IAPT for IOQS Part I and preferably in the format specified by MTA(I) for IOQM.

16. The IOQS roll numbers, names and contact information of all students who qualify for IOQS Part II, as collected during IOQ registration, will be passed on by IAPT to HBCSE. The IOQM roll numbers, names and contact information of all students who qualify for the next stage of the Mathematical Olympiad, as collected during IOQ registration, will be passed on by MTA(I) to HBCSE.

17. IAPT will provide HBCSE with the scores in IOQS Part I of the qualified students. MTA(I) will provide HBCSE with the scores in IOQM of the qualified students. HBCSE will provide IAPT with the scores in IOQS Part II of the qualified students.

18. IAPT may issue certificates of merit to students based on their performance in Part I of IOQS in accordance with its norms and procedures.

19. This Agreement is effective from 1 October, 2020 (hereinafter referred to as the "Effective Date").

20. This Agreement shall be valid till 30 June, 2021 unless extended by mutual agreement.

21. The Parties may terminate this Agreement by mutual consent.

22. Any dispute or differences arising in respect of this Agreement or its provisions or with respect to arrangement of IOQS or IOQM shall be resolved within 7 days through discussion and dialogue between the representatives appointed by each party. Each party agrees and undertakes that the process of conducting the exams and of selection for Olympiads shall not be affected due to any such differences or disputes.

23. In the event of any legal proceedings being instituted or any dispute/claims being raised by third parties with regard to the IOQS and/or IOQM, the Parties shall cooperate and provide
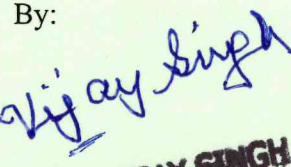
all requested assistance to the Party against whom the proceedings have been instituted or against whom the dispute or claims are made. The Parties against whom proceedings have been instituted shall ensure that they appear before the concerned forum through duly appointed Advocates.

24. MTA(I) and IAPT agree to cooperate with HBCSE and provide it with all available records to enable HBCSE to respond to applications/appeals made under Right to Information Act, 2005 with respect to IOQM and IOQS. All the Parties agree that they shall store the records related to IOQM and IOQS at least until the final team is selected for the International Olympiads 2021.

25. This Agreement shall be governed by the laws of India.

IN WITNESS WHEREOF the Parties hereto have duly executed this Agreement on the day, month and year first above written.

For and on behalf of	For and on behalf of	For and on behalf of
Homi Bhabha Centre for Science Education	Indian Association of Physics Teachers	Mathematics Teachers' Association of India
By:	By:	By:
Prof. K Subramaniam	Prof. Vijaya Singh	Prof. S. G. Dani
Centre Director, HBCSE	President, IAPT	President, MTA(I)
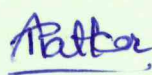
PROF VIJAY SINGH
PRESIDENT IAPT

WITNESS:-

1. Signature *Raul*

Name (V. P. Raul)

2. Signature *Bamne*
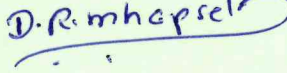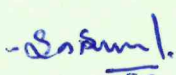
Name Mahesh B. Bamne

WITNESS:-

1. Signature *Rasam*

Name S. L. Rasam

2. Signature *Patkar*

Name Tilottama A Patkar

WITNESS:-

1. Signature D. R. mhapsel

Name Devendra mhapseker

2. Signature Smita Busli

Name Smita N. Busli