MTTS—FAQ

The following is a list of some of the frequently asked questions (about the programme) and their answers.

How many years the programme had been conducted in the past?

The programme is being conducted every summer since 1993.

What is the basis of selection for participating in the programme?

The selection depends mainly on the following two criteria: (i) a consistent academic record and (ii) the recommendation letter of the teacher. The selection is very much influenced by the specifics rather than by the general recommendations in the letter.

How are the participants assigned the centres?

Based on geographical reasons and exam schedules of the students. The applicant should mention the tentative dates of the examinations, if he wants us to consider this aspect while assigning him the centre.

Can we get the list of all selected candidates? This will help us in planning our trip to MTTS.

You can visit the MTTS Homepage at the end of March where the list will be posted.

Is there any fee to be paid by the students?

Absolutely none. In fact, the programme will reimburse their travel (sleeper/2nd class railway fare by the shortest route) and also gives free lodging and food during the period of the programme.

Where will the participants be accommodated?

The participants are usually accommodated in the hostels of the host institution. There will be separate hostels for boys and girls.

Is there any scholarship available for the participants (after the programme) for pursuing higher studies in mathematics?

No, there will not be any scholarship for the students after their successful completion of the programme. However, there may be a follow-up programme for students whose performance and participation in the course are very good. Those students will be assigned an institute where they can pursue a subject of their choice under an expert's guidance for a period of two to four weeks. They will also be given a stipend to cover their travel and living expenses during this period.

Will the participants receive any certificate at the end of the programme?

Yes, all participants who attend the programme for the entire period will receive a certificate of participation.

Will the programme help the students in getting jobs? getting admissions in good institutions?

The main aim of the programme is to train the students so that they can work independently, achieve a high level of confidence in the learning/understanding mathematics and to give them a global perspective about Mathematics. This programme is not meant to be a job-training programme. However, the knowledge and attitude acquired during the programme, if further cultivated by the participants, seem to help them achieve better goals in academic career. It is also envisaged if the participants choose the teaching profession, they will be able to impart mathematical knowledge in a more interactive manner and motivate students for further study.

Can you say something about the way the training is carried out? How are the courses different from the ones we have at the colleges?

Radically different. In fact, it takes about three days for the participants to get used to our way of doing things.

The faculty is from various leading institutions of the country and is not confined to the institute of the venue. People who are experts in the field, who are known for their teaching and have a commitment towards high quality mathematics in India are chosen to give the courses. As a rule each course is taught by a single expert. This paves the way for better interaction (over a period of 4 weeks) between the faculty and students and also imparts a perspective of the field among the students. The faculty is requested to be present for all the sessions — not for their sessions only! In the problem sessions all students are asked to do problems. All the four teachers of a level will actively help the students during the problem sessions. The teachers identify the difficulties of the individual students. Giving individual attention is one of the unique features of this programme. Some reading material is also provided.

The teacher keeps on asking questions, sometimes well-formulated, sometimes vague, to give you a taste of how mathematics is discovered. He most often develops a proof from the ideas given by the students and asks them to write in the way a text book will present it. There will be a great deal of pressure on you to think on your own and take active participation in the course.

Unless you are really keen and ready to work **very hard**, please do not apply for the programme. For, in the past, many students were totally shaken by our approach and were unable to cope with the pressure. But if you are seriously interested in pursuing higher mathematics, this programme will be immensely useful to you.

The programme also provides a platform for students with (linguistically, culturally and mathematically) varied back-ground to come together and interact with peers and experts in the field. This serves two purposes: i) the participants come to know where they stand academically and what they have to do to bring out their full potential and ii) they establish a rapport with other participants and teachers which help them shape their career in mathematics.

Are there tests at the end of the programme?

It is our belief that one should learn mathematics for its own sake and for the love of it rather than focusing one's attention on the tests. Till 2001, there were no tests for the participants.

Can you say something about the student seminars?

The participants interested in giving seminars should talk to a teacher of their level. Depending on the interest of the participants, the teacher will suggest some topics and reading material. The participant may discuss the topic with the teachers to acquire more insight before giving the seminar. Usually, such seminars are of 15-30 minutes' duration.

Is it possible to change the Levels after joining the Programme?

Yes. In fact, we offer even more flexibility. If a participant of a particular level knows and is good at a particular of his level he may be allowed to go for the same subject at a higher level. Similarly, if he lacks either the background and finds a particular subject, he may attend the same subject at a lower level. To facilitate this, the time table is drawn up. For example, Algebra will be taught at the same time for Levels 1 and 2.

What subjects are taught? Are they pure or applied?

The emphasis is on the so-called pure mathematics. The courses are on algebra, analysis, geometry, number theory, topology. The medium of instruction is English. **It is very essential that the participants should be able to communicate in English, at least in mathematics.**

Do we have to have a great deal of back-ground in mathematics?

No. The courses are usually designed in such a way that 50% of the concepts may be already familiar to most of the students. The main aim of the course, as was mentioned above, is to promote thinking. As a matter of fact, it was observed in the previous programmes that the students who learn a topic for the first time in the programme have performed well as the courses progressed. It is not our aim to introduce a lot of jargon to the students. (You cannot master any language by learning th dictionary by heart!) In stead, we introduce the very basic concepts and train the students thoroughly.

Can we join the programme a few days after the inaugural day?

As mentioned earlier, it takes about three days for the students to get used our method of teaching. Anybody who joins the programme after the third day is at a distinct disadvantage, as the other participants would be in a better position to participate in the discussions. He will also feel miserable due to his inability to participate actively. Hence, as a rule, nobody is allowed to join the programme after th third day. The only exceptions would be former participants who performed well in a previous camp.

A question less frequently asked: *How can we help MTTS Programme?*

In many ways. To start with, you may inform your juniors and others who exhibit a certain amount of motivation and who have an aptitude for mathematics about this programme and encourage them to apply. You will be in a better position to judge which of your college students will be suitable for this activity more than the teachers, who may not have any idea of this programme. You may distribute copies of the application and recommendation form to those interested.

Secondly, you may donate the copy of the Souvenir to a teacher of your college who is a motivated teacher. This will enable him to encourage suitable students to the Programme in future.

Thirdly, you may offer seminars at your institute along the way we teach. Your friends will also have a taste of the way mathematics is practiced in real life.

Fourthly, you may inform us of teachers who are likely to be interested in this mode of teaching. We are constantly on the look-out for motivated teachers who will be ready to sacrifice their vacation and offer training in this programme. We also allow teachers to participate in this programme if they want to know how training is imparted. For this purpose, interested teachers may visit for a week or two during the Programme. They should write to the Programme Director about this. Such participation is only by invitation. Those invited by us will be reimbursed the travel expenses and provided the local hospitality.