

ADDRESS BY PROF. V.K.R.V. RAO, CHAIRMAN, COUNCIL
OF THE INDIAN INSTITUTES OF TECHNOLOGY TO THE 8TH
MEETING OF THE IIT COUNCIL ON 24-11-1969.

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I have great pleasure in welcoming you to this the Eighth Meeting of the Council of the Indian Institutes of Technology. As a member of the All-India Council for Technical Education for many years and also as Member-in-Charge of Education in the Planning Commission, I have been closely associated with the establishment and development of the Institutes of Technology. It is an honour to preside over this Council and to conduct its proceedings. I look forward to having your advice and guidance in planning and ensuring the development of the Institutes.

Since 1951, when the Kharagpur Institute was established, the family of IITs has grown steadily towards maturity. The present student-enrolment at the five IITs is about 7,300 in the first degree courses, 2170 in the postgraduate courses, and about 850 for research. So far, we have invested over Rs.48 crores on buildings and equipment in the Institutes. The annual recurring expenditure of the Institutes is over Rs.5.5 crores according to this year's budget provision. The first Institute was established in 1951; the four remaining Institutes were started only between 1959 and 1962. This is perhaps too short a period for us to make an objective assessment of their performance. The Institutes have, however, grown in stature in this short period and made a deep impress on higher technological education and research in our country. The graduates of the Institutes have earned a high reputation for themselves and for the Institutes in which they are working, in industry, in research and elsewhere. The Institutes have expanded facilities

for postgraduate courses and research in a wide range of subject-fields and are offering facilities to well over 3,000 scholars at this level. They have built up a first rate faculty, some of whom are specialists of international repute.

This is a record of which any institute may justifiably be proud. You will also be happy to know that the research activities of the Institutes have grown in a big way and that an increasingly large number of our best students are joining the Institutes for their advanced studies and research. You will agree that the stage has come when we should deliberate on the new directions in which the Institutes should move forward and the role that they should play to meet the challenges of our economic life today and tomorrow.

When the plan for the Institutes of Technology was formulated by the Sarkar Committee in 1946, we visualised for them a distinctive role in training high-grade engineers and technologists for the development of our country. At that time, there were in India only 30 engineering colleges with an admission capacity of about 3,000 students each year. Limited facilities existed for postgraduate studies and research in engineering. Since then, there has been a phenomenal expansion of technical education in India. Today, there are about 130 engineering colleges that are capable of admitting each year about 25,000 students to the first degree courses. In addition to the IITs, we have developed facilities for postgraduate courses and research at about 30 centres that can cater to about 2,000 students for the Master's Degree courses. It is in this situation that we must consider the new role of the Institutes of

Technology. It is not enough for the Institutes to function merely as centres where students of merit may go to study conventional degree programmes at the undergraduate or postgraduate levels. With their better resources, particularly in equipment and faculty, the Institutes must aim both at high academic excellence and at becoming a part of the total developmental structure of our country. They must also develop a social commitment and help to transform our society by applying their superior scientific and technological knowledge and skills to the many problems confronting us. The research work of the Institutes must reach out to help in the industrial process of our economic development. The faculty and students must respond meaningfully to the challenging situations in our changing social scene.

Each Institute, I fear, has tended to function in isolation from others. Isolationism is, to some extent, inevitable for an Institute in the initial stages of its establishment and development since it must experiment with its own ideas, establish its methodologies and find its individual level. Now that all the Institutes have reached maturity, it is important that they should collaborate with one another, and interact and cross-fertilise one another's ideas and experiences. To do this, the Institutes should establish long-range inter-institutional relationships in a variety of ways which are mutually beneficial. For instance, the Institutes should have a regular programme of faculty exchange. Selected members of the faculty of one Institute could spend stated periods at another Institute, participate in the programmes of teaching and research there, bring to bear upon that work their own experience and ideas and, in turn, absorb the

experiences and ideas of the faculty of the host Institute. I would go further: the Institutes should undertake cooperative research programmes in which their faculty and expertise may interact upon one another. Each Institute specialises in certain fields and if all adopt a collective approach and pool their resources and expertise, they can make an enduring contribution to technological research and development.

We have, in our country, two developing complexes: One an engineering education complex consisting of the Institutes of Technology at the apex, Regional and State Engineering Colleges and University Departments of Engineering. The second is a scientific complex of National Research Laboratories, Defence Research Laboratories and other research organisations. What precisely is the relationship between these two complexes and how do they complement each other in the total process of industrial development of our country? The other important issue is: Within the engineering education complex itself, how does each component interact with the others through its faculty, teaching and research programmes and other activities? I am anxious that a coherent and integrated system of science and engineering should be developed in our country, in which the complementary roles of engineering institutions and research laboratories are **clearly** identified. We must recognise that the role of our engineering institutions, particularly the Institutes of Technology, is not just to train engineers for employment. They must also participate effectively in the whole process of industrial development and technological advance by interacting with scientific research institutes. The Institutes of Technology and the National Research Laboratories should, it seems to me, establish immediately

cooperative relationships and undertake joint programmes of research, development and consultancy services in specific fields in which their resources could be pooled to the best advantage. The cooperation between the Institutes of Technology and National Research Laboratories should extend in other directions too. For instance, it should be possible for a research scholar of an Institute of Technology to work in a particular National Laboratory for stated periods in a specific field and supplicate his thesis for the Master's or for the Ph.D. Degree. Similarly, a research worker of a National Laboratory interested in working with the faculty of an Institute of Technology, should be provided with opportunities to do so. Only through a continuous exchange of faculty members and research workers, by pooling resources and expertise and working towards common objectives can the Institutes of Technology and the National Laboratories complement one another.

There are many problems of technological development in India for the solution of which the Institutes of Technology and the National Laboratories cooperating with one another, can render invaluable service. This can be done in the process-development and technical know-how for fertiliser production, metallurgical products, design and fabrication of manufacturing plants and equipment, electronics and radio engineering. I am told that although large fertiliser complexes have been set up, both in the public and in the private sectors, many plants are working far below their rated capacity affecting adversely the supply of much-needed fertilisers for agricultural development. There are many technical problems associated with the low productivity of our fertiliser factories. The Institutes of Technology, which have first-rate Chemical Engineering

Departments, should pool their expertise to study the problems of fertiliser production and to provide a comprehensive solution to the industry. If they undertake a major responsibility of this kind, they will make a deep impress on our industrial development. They will also gain much rewarding experience. Similarly, the Departments of Metallurgy and Mechanical Engineering of the Institutes of Technology, in cooperation with the National Metallurgical Laboratory, should carry out a comprehensive study of the problems of metallurgical production and processing to improve the efficiency and productivity of this industry. The Institutes of Technology and the National Laboratories should also collaborate in setting up pilot plants for the application and development of scientific research to industry.

Each Institute of Technology has acquired much specialised and expensive equipment for teaching and research and the total value of the equipment of all the Institutes is about 16 crores of rupees. As research activities of the Institutes expand, they need more equipment. I am anxious that some arrangement should be worked out to pool the equipment facilities available at all the Institutes and to share those facilities. With this objective, I would suggest that a consolidated list should be prepared of specialised equipment available at all the Institutes and the list be circulated to the faculty of all the Institutes. Wherever a research worker of an Institute needs a specialised item of equipment or instrument not available at his own Institute, he should be given every facility to use the equipment available at another Institute. A large proportion of the equipment for teaching and research should certainly be available uniformly at all the Institutes, but for highly specialised

and sophisticated equipment and instruments which are very expensive, we should avoid duplication and make them available on a sharing basis to all the Institutes. Similarly, a Union Catalogue of all the books and literature available in the libraries of the Institutes of Technology should be prepared and widely circulated. Each Institute should be free to utilise the library facilities of other Institutes and there should also be a free exchange of books and literature between the Institutes. The five Institutes of Technology should constitute one family conceptually and functionally. If any functional cell is required to be set up for the purpose, necessary funds will be made available as and when required.

There is another area in which our Institutes of Technology must play an urgent role. This is in the design and fabrication of laboratory apparatus and equipment. When I was in the Planning Commission as Member-in-charge of Education, I often emphasised the importance of this activity. As a member of the All-India Council for Technical Education, I pleaded for a big programme for indigenous design and manufacture of scientific equipment. I am happy to know that the Institutes of Technology have started work in this direction. Some have designed and fabricated a wide range of instruments and apparatus that are very useful for our engineering courses. Some have also decided to set up regular design and fabricating units. I cannot over-emphasise the importance of this activity. Unless we are effectively independent of imported equipment, we will not make much headway in the development of our engineering education. Now that this activity has been initiated and some progress made, I should like the Institutes to discuss with the representatives of scientific instruments industry how to develop this work on a planned basis and to manufacture the instruments and

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apparatus designed. They should also prepare a complete documentation of the scientific instruments and the apparatus designed by them on how they could be used by other institutions to replace imported equipment and widely circulate the documentation to all technical institutions. Each Institute engaged in this activity should set up a museum of scientific instruments and apparatus and other teaching aids that are useful for our engineering colleges and polytechnics. They should invite teachers from other institutions to visit the museum and study the exhibits. It will be advisable to hold a conference or conduct a seminar next year during the Parliament Session and also organise an exhibition in Delhi to enable the public to know about the work done by the Institutes and Engineering Colleges. A permanent museum of exhibits may also be set up in Delhi.

It is some time since we recognised the importance of bringing science and technology together and making them interact with our technical institutions. Yet, not much progress has been made in that direction except at the Institutes of Technology and at a few other institutes. Most technical institutions seem to be content with setting up Departments of Physics, Chemistry, and Mathematics and teaching these science subjects in the curriculum of the Five-Year Degree Courses. To my mind, this is not enough. Much more needs to be done to promote the interaction of science and technology. I should like the Institutes of Technology to play a leading role towards this objective. We must think of organising at the Institutes of Technology engineering degree programmes of a high standard for science graduates. One way of dealing with the organisational and other difficulties involved would be to get some Institutes to specialise in giving engineering education to high-level graduates in science and to give up the present Five-Year Degree Courses in which they find it difficult to fit in the science graduates. I am glad that a Special Committee has been appointed by the All-India Council for Technical Education under the Chairmanship of Dr. Kothari to examine

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all these aspects and make recommendations. Since the Committee includes the Directors of the Institutes of Technology, I hope that the Institutes will be the main centres where our new ideas in engineering education will be tried out and established.

The Institutes of Technology should assume a new responsibility for the improvement of engineering education in our country and that is to reach out to help other engineering institutions in their respective areas. Each Institute should undertake a comprehensive programme of faculty development and organise in-service training for serving teachers, summer institutes, short-term courses and so on. They should pool their resources and undertake programmes of curriculum development for engineering colleges, preparation of instructional materials including textbooks, and reorganisation of laboratory experience. This is a vast and vital field in which the Institutes of Technology with their large resources and first-rate faculty could play a crucial role. They should send out on secondment some of their senior faculty members to other engineering institutions to work with those institutions for stated periods and help them to set, raise and emulate the world's highest standards. If necessary, supernumerary posts may be created. In fact, I look forward to cooperate or "sisterhood" arrangement between each Institute of Technology and a group of engineering colleges in its region for the cross-fertilisation of ideas and experiences so as to establish a new relationship between them. In addition to serving industry through consultancy, research and other programmes, the Institutes should service other engineering institutions wherever their assistance is needed. Only by projecting their image to the large number of engineering colleges located in distant regions and developing with them inter-institutional

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relationships in teaching, research and faculty development can the Institutes of Technology fulfil their role as apex institutions. I would like the inter-institutional relationship to extend to students, too. Each Institute should invite a small group of top students from other engineering colleges to spend some time on its campus, look after those students in a special way and expose them to the academic and research atmosphere that is characteristic of the Institutes of Technology. The students will, I have no doubt, appreciate this experience and come to look upon the Institutes of Technology as centres of learning to which they may go as a reward for demonstrated merit. It will also enable the Institutes to mark out the best and the most talented among those students as prospective entrants to their postgraduate courses or research work.

The Institutes of Technology had proposed a total outlay of Rs.20 crores for their development during the Fourth Plan period. Unfortunately, because of a drastic cut made by the Planning Commission in the outlay for education as a whole, and in particular, for Central Schemes, we have had to limit the provision to the Institutes of Technology to Rs.10 crores. Understandably, the reduced provision has caused great concern at the Institutes but I would like the Directors and other authorities of the Institutes to understand the severe constraints under which our National Plan is being implemented. Though I will continue to plead with the Planning Commission for more funds for the Institutes, we should not pause in the analysis of our educational problems to comfort ourselves with the thought that if more money were available we would be better off educationally. We should not allow the pace and direction of the development of the Institutes to be wholly subordinated to money. As I explained earlier, we have already invested over Rs.48 crores on the Institutes

and reached an annual recurring expenditure of over Rs.5.5 crores. We must make this vast system, which has already been set up function effectively and yield the best results. I have no doubt that, with the fine record of work already done by the Institutes and with the great enthusiasm of the Directors and their faculty to face new challenges and responsibilities, the Planning Commission will agree to provide additional funds. I am glad that Dr. Nag Chaudhuri, who presides over Education and Science in the Planning Commission, is a member of this Council. I have no doubt that the Institutes will find in him a sympathetic friend and an indefatigable supporter of their cause in the Planning Commission.

As you know, the Institutes of Technology have received much generous and valuable assistance from other countries in their establishment and development. The Bombay Institute has received assistance from the USSR, the Madras Institute from West Germany, the Kanpur Institute from USA, and the Delhi Institute from the UK. The Kharagpur Institute, too, has received assistance from different countries through various aid programmes like UNESCO, USAID, Colombo Plan, etc.,. The assistance received by the Institutes is not confined to expensive and sophisticated equipment. A large number of experts from those countries have worked at our Institutes and helped to set up laboratories, develop courses and curricula, organise research work and train our own faculty. A large number of our Indian faculty members have gone abroad to those countries for advanced studies and training on fellowships offered by them. All these countries which have assisted our Institutes of Technology are famous for the technological and industrial

advancement achieved in different ways and the Institutes bear the imprint of the progress of the countries from which they have received assistance. Our Institutes of Technology, therefore, represent, a big venture in international cooperation and understanding in scientific and technological fields. Now that the Institutes have been fully established and developed, the assistance given by the countries concerned is tapering off. Even if no further assistance is needed, the intellectual contacts and the intellectual cooperation and understanding, which have been established between the Institutes of Technology and other countries, should not be broken. In fact, those contacts and cooperation should be maintained and further strengthened. When I visited the USSR last month and met Professor Elutin, the Minister for Higher Education, I was pleased to know of continuing interest of the USSR Government in the development of the Bombay Institute. The USSR Government wished very much to maintain its close association with the Bombay Institute. If proposals for any type of assistance are sent by the Institute, the Government of USSR will certainly consider the question of further assistance sympathetically. The Institutes should continue their contacts with the countries from whom they have received assistance. I have no doubt that other countries, too, like West Germany, USA, and UK, are keenly interested in maintaining their close contact with the Madras, Kanpur, and Delhi Institutes. We should all welcome these fine sentiments on the part of the authorities of these countries and reciprocate them in a meaningful way. I would suggest that some arrangement should be worked out whereby it would be possible for the Professors and other specialists of those countries to come to India and work for some time at our Institutes and, for the members of the faculty of the Institutes to go to those countries for advanced studies and research. Other means such as joint seminars, scientific conferences, cooperative research programmes should be explored to maintain and further strengthen cooperation between our Institutes and those countries.

Seminars on educational and technological developments and new things happening in the advanced countries should be conducted from time to time.

I would like to welcome the new members of the Council, Dr. BD Na_g Chaudhuri, Shri HVR Iengar, Dr. MN Dastoor, Shri Chelapati Rao, Dr. HN Sethna, Dr. SM Patil, Professor RP Mhatre and Shri SR Mehta. We will all have the benefit of their advice and guidance in the future development of the Institutes of Technology. I also take this opportunity to thank both, on your behalf, and on my own, the outgoing members : Dr. AL Mudaliar, Dr. Chandrasekhar, Prof. Damodaran, Prof. Mujeeb, Sir Lindsay and Dr. Bhagwantam. They have served on this Council for many years and helped its deliberations with their wise counsel. In particular, I wish to thank Dr. Mudaliar who, as Chairman of the Board of Governors of the Madras Institute, has been closely associated with this Council for nearly ten years. His services to the Madras Institute and to the Council have been invaluable. Now that he has retired from active work, I would wish to convey to him, on your behalf and on my own, our sincerest gratitude for all that he has done for the establishment and development of the Institutes of Technology.

May I welcome you again, and wish you a successful meeting?

No.F.10-10/69.T.6,
Government of India,
Ministry of Education
& Youth Services

New Delhi, the 21st Feb.'1970.

From

The Secretary to the Council of
Institutes of Technology.

To

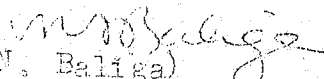
All the Members of the Council.

Subject:-Minutes of the Eighth meeting of the Council held
on 24th November, 1969-

Sir,

I am to forward herewith the minutes of the 8th meet-
ing of the Council of the Institutes of Technology held on
the 24th November, 1969 at New Delhi, for favour of your
comments, if any. The minutes have been approved by the
Chairman. If no reply is received by 31st March, 1970,
it will be presumed that you have no comments to offer.

Yours faithfully,


(M.N. Baliga)
for Secretary to the
Council of the Institutes
of Technology.

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MINUTES OF THE EIGHTH MEETING OF THE COUNCIL
OF INDIAN INSTITUTES OF TECHNOLOGY.

The eighth meeting of the Council of Indian Institutes of Technology was held in Committee Room 'A', North Block, New Delhi, on the 24th November, 1969, at 11 A.M.

The following were present :-

1. Dr. V.K.R.V. Rao, Education Minister - Chairman
2. Dr. B.D. Nag Chaudhuri
3. Shri Arjun Arora
4. Dr. Atma Ram
5. Shri G.K. Chandiramani
6. Dr. M.N. Dastoor
7. Shri K.V.R. Iyengar
8. Shri P.J. Madan
9. Shri G.L. Mehta
10. Shri G. Pandey
11. Dr. H.N. Sethna
12. Shri S.K. Bose
13. Shri R.N. Dogra
14. Dr. P.K. Kelkar
15. Shri R.P. Mhatre
16. Dr. A. Ramachandran
17. Dr. (Miss) Kaumudi in place of Shri S.R. Mehta - Secretary
18. Shri G.N. Vaswani

Shri L.S. Chandrakant was present by invitation.

The following regretted their inability to attend:

1. Shri Biren Mukherji
2. Shri Padampat Singhania
3. Prof. M.S. Thacker
4. Dr. D.S. Kothari
5. Prof. R. Choksi
6. Dr. S. Dhawan
7. Shri Chalapati Rao
8. Shri S.M. Patil
9. Shri Kartik Oraon
10. Shri Suraj Bhan

The Chairman welcomed and addressed the members.

He inter alia stated that the first Institute at Kharagpur was established in 1951 and the four remaining Institutes were started between 1951 and 1962. The family of I.I.Ts

has grown steadily towards maturity. It is too short a period to make an objective assessment of their performance. The Institutes have, however, grown in stature in this short period and made a deep impress on higher technical education and research all over the country. The alumni of the Institutes have earned a higher reputation for themselves, for the Institutes and also the places in which they are working. The Institutes have expanded facilities for post-graduate courses and research in a wide range of subjects and are at present offering facilities to well over 3,000 scholars. They have built up first rate faculties, and some of them are of international repute. This is a record of which any Institute may justifiably be proud. The research activities of the Institutes have grown in a big way and an increasingly large number of best students are joining the Institutes for advanced study and research. The stage has now come to deliberate on the new directions in which the Institutes should move forward and the role that they should play to meet the challenges of economic life today and tomorrow. When the plan for the Institutes of Technology was formulated by the Sircar Committee in 1946 a distinctive role in training of high grade engineers and technologists for the development of the country was visualised. At that time there were only 30 Engineering Colleges within an annual admission capacity of 3,000 students. Limited facilities existed for post-graduate studies and research in engineering. Since then there has been a

phenomenal expansion in technical education in India. There are now about 130 Engineering Colleges with admission capacity of about 25,000 students to first degree courses. Besides the I.I.Ts, facilities for post -graduate courses and research at about 30 centres have been developed with an annual intake capacity of about 2,000 students. In this situation the Institutes have to review their role. It is not enough for the Institutes to function merely as centres of study on conventional courses with better resources particularly equipment and faculty. The Institutes should aim both at high academic excellence and becoming part of the total developmental structure of the country. The research work of the Institutes should have an impact on the industrial processes and the economic development of the country. The faculty and students must respond meaningfully to the challenging situation in the changing social scene. Each Institute has tended to function in isolation from others. Isolation to some extent is inevitable for the Institutes in the initial stages. Now that all the Institutes have reached maturity it is important that they should collaborate with one another and interact and cross fertilize one another's ideas and experience. To achieve this the Institute should establish long range inter-institutional relationships in a variety of ways which are mutually beneficial. He stressed on faculty exchange, joint research, consultancy service to industry, cooperative research, relationship between the Institutes and the national research laboratories, problems of increased

fertilizer production, pilot plants for application and development of scientific research to industry, pooling of equipment facilities, designing and fabrication of laboratory apparatus/equipment, documentation of instruments available and designed by the Institutes to replace imported equipment, development and design of equipment, exhibition of equipment during Parliament session, setting up of a permanent museum of exhibits in Delhi, undertaking of programmes of curriculum development for engineering colleges and preparation of instructional materials, including text books and reorganisation of laboratory experiments.

A copy of his address is given at Annexure 'A'.

After the address a general discussion followed.

Prof. Bose stated that they welcomed the suggestions made by the Education Minister and they have already developed inter relationship and liaison with national laboratories and industries as proposed by the Chairman.

Shri Iyengar stated that while he appreciated Institutes undertaking the work of design, development and fabrication of equipment and also developing indigenous research and know-how, the Institutes should not insulate themselves from the modern developments taking place in advanced countries. He further stated that the Institutes should ensure that they do not remain behind with regard to the latest technological developments taking place outside the country. He felt that it was a good idea that the Institutes and National Laboratories should cooperate in solving problems of industry. He, however, hoped that the

Institutes will concentrate on educational and technological developments without interfering with the educational development. The Education Minister agreed with Shri Iyengar that it was a good idea that the Institutes should help in this field, but they should not be overburdened with the problems of industry at the cost of educational development.

Shri Mehta stated that the Institutes had been developing cooperation and liaison with industry and National Laboratories, but this collaboration needs to be developed much more vigorously in a more positive and concrete manner. He also stated that the main object of the Institutes was to provide highest technological education in the country so that Indian students do not go abroad. But in spite of good facilities being provided by these Institutes Indian students were going abroad. He, however, felt that it was not his intention to prohibit Indian students from going abroad but something should be done to see that more students take interest in going for higher studies within the country. Shri Mehta also stressed on the fact that aid was being received from all the advanced countries in the West, but no assistance was obtained from Japan which is highly advanced and their technology is far more superior and the country has to learn a lot from them. The Chairman suggested that an scheme of sending a team of experts to Japan may be considered.

Dr. Nag Chaudhri stated that on scrutiny of the annual reports of the Institutes he observed that

comparatively little work was done on applied research and not many problems of industry had been tackled. He also stated that applied research generally rolls over a period of time and the Institutes should attempt to develop research programmes on the basis of five years or ten years. If the programme in applied research are formulated on a long term basis, the felt need of the country for suitable interaction between the various I.I.Ts and other Institutions will be clearly known. The Institutes should also establish a framework of applied research activities through which the industries can come and seek assistance. He further stated that the Institutes had developed quite broad activities and it was necessary at this stage to examine the relevance of certain subjects in the present context and not grow traditionally.

Dr. Atma Ram stated that he had personally been stressing on his colleagues and friends about the greater collaboration between the Institutes and the National Laboratories. He also stated that arrangements existed under which Universities recognize National Laboratories for the award of research degrees. He felt that there should be some arrangements for giving a degree like M. Tech. for the persons who are engaged in the design and development of equipment and allied work. The Director, I.I.T., Madras stated that this matter was already under consideration and the Chairman welcomed the suggestion.

The Chairman also suggested that a note on the work done on the applied research and collaboration with

scientific institutions and laboratories may be prepared and circulated to all the Council members. Dr. Nag Chaudhuri suggested that this note should indicate the element of sponsorship and also the element of grants received by all the Institutes.

Dr. Sethna stated that the Bhabha Atomic Research Centre had collaboration arrangements with various universities specially with the University of Bombay and also Indian Institute of Technology, Madras. He agreed that there should be greater collaboration between the Institutes and National Laboratories and research institutions. He felt that there should be exchange of personnel and the Faculty of the Institutes should be able to come to their organisation and their personnel should also be able to go to the Institutes.

The Chairman inquired whether there was any academic body of the I.I.Ts which considered such problems. He stated that if there was no such body steps should be taken to set up such a body. This body can meet once or twice in a year to discuss the various problems, programmes, etc. Each I.I.T. can become host by rotation for such a body to meet.

The Chairman also inquired whether the Institutes had a Department of Industrial Relationships. He felt that each Institute should consider this and with a view to encouraging greater liaison between industry and Institutes such a Department should be established in each of the

Institutes as the subject of industrial relationships was becoming quite important in the country.

After the general discussions, the agenda was considered.

Item No.1 : To confirm the minutes of the 7th meeting held on 10th October, 1968.

The minutes were confirmed.

Item No.2 : To report the action taken on the minutes of the 7th meeting.

The report was recorded. The Council, however, suggested that before the work of costing per student is undertaken by the Institute of Applied Manpower Research, the Institute should consult the Directors about the details and general principles of costing. The Council also strongly recommended that the option of GPF-cum-pension-cum-gratuity scheme and CPF-cum-gratuity scheme be given to all the future employees also with a view to encouraging mobility between the staff of IITs, other educational institutions, National Laboratories, Industry etc. and the matter should again be taken up with the Government of India.

Regarding medium of examination, in Hindi and other regional languages the Council suggested that a Committee of the Directors should look into the matter thoroughly including the question of availability of books etc. and make recommendations to the Council keeping in view all the aspects of the matter.

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Item No. 3 : To report the following matters :-

- (i) Changes in the membership of the Council.
- (ii) Extension/appointment of Directors.
- (iii) To report the present constitution and composition of the Council.
- (iv) Amendments made in the Statutes and Schedules of the Institutes since the last meeting of the Council.

The reports were recorded.

Item No. 4 : To receive a report on admissions made in July, 1969.

- (i) As a result of JEE.

The report was recorded.

- (ii) Admission of Scheduled Castes/Tribes and backward classes candidates.

The Council recommended that besides the candidates qualifying in the examination, the candidates securing not less than the minimum qualifying marks and who do not fail in more than one subject by 5% marks may also be admitted. In the case of Group 'B', Physics and Chemistry may, however, be treated as separate subjects. Further the Council was of the view that merely admitting students on the basis of qualifying marks was not enough, but the Institutes should provide facilities for special coaching to weak students, besides giving concession in marks.

- (iii) Top Rank Students.

The report was recorded.

- (iv) Statewise distribution of students to 1st year of the 5 year course.

The report was recorded.

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- (v) Language-wise (i.e. medium of instructions at H. S. S. L.) Students to 1st year of the course.

The report was recorded.

- (vi) Other undergraduate, postgraduate courses and research.

The report was recorded.

Item No. 5 : Report on the employment of alumni of the Institutes.

The Council was of the view that the Institutes should take vigorous steps to collect the information regarding employment of their alumni in India and Abroad and ensure that full information is supplied to the Council regularly.

Item No. 6 : To consider the following matters regarding joint entrance examination.

- (i) Criteria for opening of new centres for J. E. E.

The Council recommended that the following criteria may be kept in view for opening of new centres:

- (a) the number of candidates to take the examination may not be less than 20;
- (b) the distance between the existing and the proposed new centre is not less than 100 Kilometers;
- (c) the Institute concerned should have the discretion to direct candidates when there are less than 20 candidates to appear at the nearest centre instead of one opted by them or at any other centre of the choice of the candidate.

Further the Institutes in the announcement should make it clear that in case sufficient number of candidates do not appear, at any centre the candidates be requested to give the second choice of the centre for appearing at the examination.

- (ii) Counting of marks secured in English for purpose of rank in the merit list.

The Council was of the view that each Institute should have a language laboratory as it is essential to have the functional ability to follow the lectures. Further, the Institutes should carefully examine the results of JEE and also the performance of students admitted for the last 3 years and submit a report. The report should be circulated to the Council members as early as possible.

- (iii) Inclusion/Exclusion of qualifying examinations.

The Council recommended that all the changes made at the JEE for admission to IIT's should be reported to the Council and any changes that affect the students should be made after getting approval of the Council. The Council also recommended that the Institutes should set up an independent machinery for recognising various qualifying examinations for the purpose of admission to the IITs.

- (iv) Minimum age limit for admission.

The Council recommended that there should be no minimum age limit for admission to the IITs, but maximum age limit of not more than 21 years should be prescribed for admission to undergraduate courses and that this should be given effect from the 1982-73 academic session.

Item No. 7 : To consider the scheme of merit-cum-merit scholarships.

The Council recommended that all the Institutes should

follow a uniform policy for award of scholarships. However all the Institutes should decide the minimum percentage of marks upto which scholarships may be awarded on the basis of the results of the Joint Entrance Examination every year. Prizes may be awarded every year on the basis of the results of annual examinations but the total expenditure should not exceed the expenditure incurred on 25% of the students admitted.

Item No. 8 : To report the annual progress of development of Institutes of Technology.

The reports were recorded. It was suggested that the Institutes in their reports should clearly indicate the division between pure and applied science research conducted at the Institutes.

Item No. 9 . To report the progress of development of Institutes and allocation in the IV Plan.

The report was recorded. It was, however, suggested that the Institutes should prepare a report in a broad perspective and indicate what they have achieved so far and what they propose to achieve. This will help the Planning Commission in determining the requirements during the Fourth Five Year Plan period and allocate funds accordingly. It was also agreed that the Directors should meet the Member (Education), Planning Commission and discuss with him the details of their requirements, etc. and apprise him of the position.

P.T.O.

Item No. 10 : To consider the R.E. 69-70 and B.E. 70-71 of the Institutes and to recommend to the Central Government the allocations to be made during 1970-71.

The Council noted the recommendations made by the Boards of Governors of the Institutes and also the grants proposed by the Government of India as revised estimates for 1969-70 and budget estimates for 1970-71 to the Institutes.

Item No. 11 : To consider a scheme of merit promotion and advance increments.

The Council was not in favour of having a regular scheme for merit promotions etc., but recommended that each case should be examined carefully by the concerned Board and wherever creation of higher posts is considered necessary, supernumerary posts may be created and all the eligible candidates be considered for promotion.

Item No. 12 : To consider the recommendation of Inter-University Board to refrain staff from participation in anti-secular or communal activity.

The Council endorsed the recommendations of the Inter-University Board that all the staff should refrain from participating in anti-secular and communal activities, but this cannot be made a service condition. The Institutes should, however, ensure that their staff do not participate in such activities.

The meeting terminated with a vote of thanks to the Chair.