

Minutes of the ninth meeting of the Council
of Indian Institutes of Technology.

The Ninth meeting of the Council of Indian Institutes of Technology was held in the Conference Room of the Ministry of Education and Youth Services, Shastri Bhavan, New Delhi, on the 11th November, 1970 at 11.00 A.M.

The following were present:

1. Dr. V.K.R.V. Rao - - - Chairman
2. Dr. B.D. Nagchaudhuri
3. Prof. R. Choksi
4. Shri G.K. Chandiramani
5. Shri H.V.R. Tengar
6. Dr. D.S. Kothari
7. Sir Biren Mukherjee
8. Shri K.K. Nayar
9. Shri G. Pande
10. Shri Padampat Singhania
11. Dr. H.N. Sethna
12. Prof. M.S. Thacker
13. Dr. S. Dhawan
14. Shri S.K. Bose
15. Shri R.N. Dogra
16. Prof. N.R. Kamath (in place of Dr. P.K. Kelkar)
17. Dr. M.S. Muthana
18. Dr. A. Ramachandran
19. Shri O.P. Mohla (in place of Shri R.S. Mehta)
20. Shri G.N. Vaswani - - - Secretary

Shri L.S. Chandrakant was present by invitation.

The following regretted their inability to attend the meeting :

1. Shri Arjun Arora
2. Dr. Atma Ram
3. Prof. P.J. Madan
4. Shri G.L. Mehta
5. Shri S.M. Patil
6. Shri C. Chalapathi Rao
7. Shri V.N. Jadhav

The Chairman welcomed and addressed the members. He stated that at the last meeting of the Council in November, 1969 he had spoken at great length and shared his ideas on the future development of the Institutes of Technology. He therefore did not propose to go over the whole ground again but would confine to a brief review of the progress of the Institutes since the last meeting and the immediate issues that needed examination. He stated that according to the annual reports the Institutes had made good progress in consolidating the under-graduate courses and developing programmes of post-graduate studies and research. The ratio of under-graduate to post-graduate enrolment had nearly reached 2:1 or will reach that ratio in the near future. He felt that this was a viable ratio for each Institute since the Institutes were intended primarily for advanced studies and research in engineering and technology. He thanked Dr. B.D. Nag Chaudhuri for his valuable help in increasing the allocation to the Institutes

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from Rs. 10 crores to Rs. 14 crores, when he was Member (Education) Planning Commission. Even the increased allocation will not meet the full requirements of the Institutes, but since the Fourth Five Year Plan is being implemented in difficult conditions he hoped that the Institutes will make every effort to utilise the available resources to the maximum extent possible, wisely and economically. He also impressed upon the Institutes to clearly identify the lines along which they must develop vis-a-vis national needs and utilise the allocation strictly for inescapable aspects of the development programme.

The Chairman requested the Institutes to undertake comprehensive programmes of faculty development and organise inservice training programmes for serving teachers, summer institutes, short-term courses etc. He suggested that 10% of the budget of the Institutes should be earmarked for quality improvement programmes for engineering colleges in their respective regions. He also suggested that the Directors should meet under the Chairmanship of Prof. Thacker to draw up a comprehensive programme and also to formulate proposals for the exchange of teachers and students between the Institutes. He was glad to note that the Institutes had made ^a good beginning with curriculum development, preparation of instructional materials, and reorganisation of laboratory experience. He also emphasised the importance of faculty exchange and suggested that certain broad guidelines should be evolved to facilitate such exchange between one Institute and another, for short or long periods.

Whenever a faculty member wishes to spend a short period, say, upto six months at another Institute to work in collaboration with the staff of that Institute in his area of interest, the sending Institute should bear his full salary and allowances. The receiving Institute should bear his travel expenses and give him a per diem allowance to enable him to bear the additional expenditure. Where longer periods are involved, the sending Institute, the Chairman suggested, should treat the faculty member as on deputation and the receiving institute should offer him the same terms of salary and allowances, housing facilities etc. as he was entitled to at his own institute. The Chairman also suggested that the guidelines must be flexible enough to provide for satisfactory arrangements through negotiations between two institutes.

The Chairman informed the Council that he had discussed the question of instituting two alternative retirement benefit schemes, namely (i) Pension-cum-Gratuity and (ii) Contributory Provident Fund-cum-Gratuity with the Prime Minister and the proposal had since been approved by the Government. He hoped that the scheme will be finalised at an early date and implemented. He also pointed out that during the last 12 years the Institutes of Technology had made a deep impress on advanced engineering education and research in our country. The graduates of the Institutes were among the best engineers trained in our country and

valued highly by employing organisations. He suggested that the Institutes should, however, encourage their graduates to set up small and medium scale industrial units on their own where they can utilise their professional knowledge and skills, contribute to the industrial development of the country and open up avenues of gainful self-employment. To reach this objective, the Institutes should carry out market surveys for various products, advise and assist their graduates with design of products, manufacturing techniques, quality control and so on and encourage them to enter this expanding field of small industry.

A copy of the full address of the Chairman is given at Annexure 'A'.

At the request of the Chairman the Directors gave a resume of the activities of their respective Institutes and explained the action taken by them on the suggestions of the Chairman as well as on the decisions taken by the Council at its last meeting.

The Chairman congratulated the Directors upon the good work done by the Institutes.

Shri Tengar pointed out that though the Institutes were doing good work in various directions, they should not forget their primary objective of education. The Institutes have been established to provide the best possible higher education in our country so that Indian students do not have to go abroad for further studies. He felt that the

Institutes should strike a correct balance between this primary objective and other activities like collaborative research with or Consultancy for Industry, quality improvement for other engineering colleges etc. The Chairman pointed out that the graduates of the Institutes were still going abroad in large numbers and the position needed a careful study. Dr. Kothari suggested that a Committee may look into the question of how many students were going abroad and the reasons for it.

Dr. Dhawan pointed out that the present recruitment procedures appeared to give preference to persons with foreign qualifications for employment. Unless that attitude of employers towards foreign qualifications is changed, students, he felt, will continue to go abroad. The Chairman suggested each Institute instead of generally duplicating post-graduate courses and research in the same fields as the other Institutes should try to distinguish itself in certain selected fields and concentrate its resources on developing those fields to the highest level. He felt if this approach was adopted all the Institutes could form an integrated complex. He was of the view that there should be a co-ordinated distribution of advanced studies in research among the Institutes.

After the general discussion the agenda was considered.

Item No. 1: To confirm the minutes of the 8th meeting of the Council held on 24th November, 1969.

The minutes were confirmed.

Item No. 2: To report the action taken on the minutes of the 6th meeting held on 24th November, 1969.

The report was recorded. The Council, however, suggested that the reports on research schemes should give broad details so that one can understand the type of research work being done at each Institute. The Council agreed to the broad guidelines for faculty exchanges as suggested by the Chairman in his opening remarks and decided that a committee under the chairmanship of Prof. Thacker should formulate a detailed scheme with sufficient flexibility.

The Council also appointed a Committee of the Directors of the Institutes conducting Aeronautical Engineering Courses, Director, Indian Institute of Science, Bangalore, and Director, National Aeronautical Laboratory, Bangalore, under the chairmanship of Dr. B.D. Nag Chaudhuri to review the whole question of Aeronautical Engineering courses in the light of current and future requirements.

Item No. 3: To report the following matters:

- (i) Changes in the membership of the Council.
- (ii) Appointment of Directors of Indian Institutes of Technology at Bombay, Delhi and Kanpur.
- (iii) Appointment of Reviewing Committee for IITs.
- (iv) Amendments carried out to the Statutes and Schedules since the last meeting of the Council.

The reports (i) to (iv) were recorded.

Item No. 4: To receive a report on admissions made by the Institutes of Technology in July, 1970.

- (i) Joint Entrance Examination.
- (ii) Admission of scheduled Caste Candidates.
- (iii) Admission to rank holders.
- (iv) Statewise distribution of students to 1st year of the 5 year course.
- (v) Language-wise (i.e. medium of instructions at I. S. S. I.) students to 1st year of the course.
- (vi) Subject-wise statement of admissions.
- (vii) Other undergraduate, post-graduate courses and research.
- (viii) Foreign nationals and Indian nationals residing abroad.
- (ix) Admission of Durgapur students.
- (x) Student strength.

The reports (i) to (ix) were recorded.

While considering the statement of State-wise distribution of students the Chairman suggested that students from Nagaland seeking admission to IITs may be given special consideration.

He also referred to the admission of students of the Durgapur Regional College to the IITs and thanked the Institutes for their co-operation in solving the problem of the students of the Regional College.

As for the subject-wise admissions Dr. Dhawan pointed out that there was need for diversification of under-graduate programmes, as for instance, in Ceramics

Engineering, Control Engineering etc. The Directors pointed out that most of the new programmes for which there was a demand were being covered at the post-graduate level and not at the under-graduate level. The under-graduate courses were being provided in the basic fields like Civil, Electrical, Mechanical, Chemical Engineering and so on. Further, a number of elective subjects were offered in the Under-graduate courses to meet the requirements in different specialised fields.

Item No. 5: To consider relaxation of maximum age limit in favour of Scheduled Castes/Tribes candidates and foreign nationals for admission to 1 year of the B.Tech. course.

The Council decided that relaxation upto three years may be allowed in the maximum age limit in favour of Scheduled Castes/Tribes candidates and also foreign students.

Item No. 6: To consider the recommendation of Directors Committee on holding entrance examination in Hindi and other regional languages.

The Council appointed a Committee of the following to consider the matter:

Dr. D. S. Kothari - - - Chairman

Dr. B. D. Nag Chaudhuri

Prof. B. Choksi

and Directors of all the Institutes of Technology.

Item No. 7: To consider uniform policy in respect of the Indian Institutes of Technology staff going abroad.

The Council was of the view that all the Institutes

should follow a uniform policy and the Directors should formulate a detailed scheme for the purpose.

Item No. 8: To consider the recommendation of the Directors for revising scales of pay of the following posts:

- (a) Accounts Officer,
- (b) Audit Officer,
- (c) Senior P.T.I.,
- (d) Stenographer,
- (e) Overseer,
- (f) Senior Assistant Librarian.

The Council recommended that wherever rationalisation is considered necessary the pay scales may be revised in consultation with the Ministry of Finance. The Directors may review the position and send their proposals to the Government of India.

Item No. 9: To report the annual progress of development of the Institutes.

The reports were recorded.

The Council suggested that the format of the progress reports should be uniform. Further that adequate information on research schemes/projects should be included in the reports.

Item No. 10: To consider the R. E. 1970-71 and B. E. 1971-72 of the Institutes and to recommend to the Central Government the allocation to be made during 1971-72.

The Council recommended that the Institutes may be allocated funds according to the provision made in the Fourth Five Year Plan. The Director, IIT Madras pointed out that the Madras Institute did not have adequate housing accommodation for the academic staff. The Chairman suggested

that the matter should be examined and if possible additional funds provided from out of the P.L. 480 funds or other sources.

Item No. 11: To consider the recommendation of the Directors to raise the amount of scholarship for Ph.D. students and Post-Doctoral fellowships in science subjects equivalent to Engg./Tech. subjects.

The Council recommended that the post-doctoral fellowships in sciences and other subjects should be the same as for engineering and technology i.e. Rs. 500/- as against Rs. 400/- p.m. at present. As for the value of scholarships for the Ph.D. to M.Sc. degrees in science and other non-engineering subjects the Council decided that a Committee of the following members should examine the matter and make recommendations:-

1. Dr. D. S. Kohari
2. Dr. B. D. Nagchaudhuri
3. Dr. A. Ramachandran

Item No. 12: To consider a proposal for exemption from payment of tuition fee by the members of IIT staff pursuing post-graduate courses.

The Council decided that the members of staff of the Institutes joining post-graduate courses on part-time basis should not be exempted from payment of tuition fees but that they be granted study leave to undergo the post-graduate courses on full-time basis.

Item No. 13: To consider the grant of House Building Advance to the employees of the Indian Institutes of Technology.

The Council decided that a Committee consisting of

Prof. M. S. Thacker as Chairman and all the Directors may consider the question of tackling the housing problem and also the various sources which may be tapped for loans etc. to the staff of the IITs for construction of houses.

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

Chairman's speech delivered on the occasion of the 9th meeting of the Council of Institutes of Tech.

Annexure A

I welcome you to this the Ninth Meeting of the Council of the Institutes of Technology. When we met last in November 1969, I spoke to you at great length and shared with you my ideas on the future development of the Institutes of Technology. I, therefore, do not propose to go over the whole ground again at this meeting. I will confine myself to a brief review of the progress of the Institutes since November, 1969 and the immediate issues that need to be examined and settled.

As the annual reports of the Institutes indicate, all the Institutes have made good progress in consolidating undergraduate courses and developing programmes of postgraduate studies and research. The Institutes are generally restricting their enrolment to about 1250 to 1300 students to be able to concentrate their resources on postgraduate studies and research. The ratio of undergraduate to postgraduate enrolments has nearly reached 2:1 or will reach this ratio in the near future. To my mind, this is a viable ratio for each Institute since the Institutes are intended primarily for advanced studies and research in engineering and technology. The Institutes have also done well in developing Departments of Basic Sciences and establishing good reputation for advanced studies and research in Physics, Chemistry and Mathematics in close association with engineering disciplines.

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When the draft Fourth Five Year Plan was formulated by the Planning Commission, a sum of Rs. 10 crores only was allotted for the development of the Institutes during the Plan period. This was found to be grossly inadequate and the Institutes made strong representations for additional allocation. This was discussed in detail with the Planning Commission and thanks to the keen interest of Dr. Nag Chaudhuri, the Planning Commission has now agreed to an allocation of Rs. 14 crores. I know that even this increased allocation will not meet in full the needs of the Institutes but you will agree that we are implementing the national Fourth Five Year Plan under extremely difficult conditions. We must make every effort to utilise the available resources to the maximum extent possible, wisely and economically. We must clearly identify the lines along which the Institutes must develop vis-a-vis our national needs and utilise the allocation strictly for the inescapable aspects of the development programme. I have no doubt that we will have the wholehearted cooperation of the staff of all the Institutes in implementing the Plan within the resources available.

At the last meeting, I suggested that the Institutes of Technology should assume a new

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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 inservice 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 and reorganisation of laboratory experience. I am glad to tell you that the Institutes have made a good beginning in this direction. Each Institute has offered a number of places specially for serving teachers from engineering colleges in the M.Tech. and Ph.D. programmes. The Central Government has agreed to give to each serving teacher joining the Institutes of Technology under this programme fellowships of a suitable value to help them in improving their qualifications and experience. All the engineering colleges have welcomed the programme and are taking advantage of it in improving the standard and quality of their faculty. The Institutes of Technology have agreed to assist

respective areas, a series of in-service training courses of 6-8 weeks duration in different aspects of engineering education. These courses will make for interaction between the faculty of the Institutes of Technology and the faculty of engineering colleges and they will ultimately lead to cooperation between all these institutions in improving the standard of technical education in our country. The Institutes of Technology have also initiated action on the setting up of curriculum development units for the first degree courses and I hope that in the course of next 2 to 3 years the curriculum materials developed by the Institutes will be available for tryouts at selected engineering colleges.

I am happy to inform you that all the Institutes have agreed to set apart upto 10 per cent of their budget for various programmes of quality improvement to be undertaken for the benefit of other engineering institutions in their respective areas.

At the last meeting, I also suggested that the Institutes should not continue to function in isolation from one another but should establish long-range inter-institutional relationships in a variety of ways which are mutually beneficial, as for instance, faculty exchange, exchange of students, cooperative research programmes and consultancy services

to industry. Though the Institutes have started exploring ways and means of reaching this objective and will come up with a concrete plan, I feel that this is an important issue and we must discuss it further at this meeting. I feel that faculty exchange is particularly important and we must evolve certain broad guidelines to facilitate selected faculty members moving from one Institute to another for short or long periods. My own suggestion is wherever a faculty member wishes to spend a short period, say, upto six months at another Institute to work in collaboration with the staff of that Institute in his area of interest, the sending Institute should bear his full salary and allowances. The receiving Institute should bear his travel expenses and give him a per diem allowance to enable him to bear the additional expenditure. Where longer periods are involved, the sending Institute should treat the faculty member as on deputation and the receiving Institute should offer him the same terms of salary and allowances, housing facilities etc. as he was entitled to at his own Institute. The guidelines must be flexible enough to provide for satisfactory arrangements through negotiations between two Institutes.

As you know, the Council, at its last meeting, agreed that the Institute of Applied Manpower Research should examine the pattern of expenditure at the

Institutes of Technology and prepare a report on the per capita expenditure. The Institute has since prepared a draft report and sent it to the Directors for their comments on the methodology and other details. I hope that the Directors will give their comments quickly and that the Institute will be able to finalise the report at an early date.

As suggested by the Council at its last meeting, I took up with the Prime Minister the question of instituting two alternative retirement benefits, namely, Pension-cum-Gratuity and Contributory Provident Fund-cum-Gratuity to the employees of the Institutes and giving them the option of choosing one or another of these benefits. I am glad to tell you that the Prime Minister has agreed to the proposals and the schemes will be implemented with effect from 1.11.1970. We are also formulating sabbatical leave rules for the staff of the Institutes on the same lines as the scheme in operation at the Indian Institute of Science, Bangalore, and hope that these rules will be brought into effect from the next academic session.

In the last 10-12 years, the Institutes of Technology have made a deep impress on advanced

engineering education and research in our country. The graduates of the Institutes are among the best engineers trained in our country and valued highly by employing organisations. They apparently do not have much difficulty in finding gainful employment. It would, however, like the Institutes to go further. With their vast laboratory and workshop facilities and expertise in the faculty, the Institutes should encourage their graduates to set up small and medium industrial units on their own where they can utilise their professional knowledge and skills, contribute to the industrial development of our country and open up avenues of gainful self-employment.

To do this, the Institutes should carry out market surveys for various products, advise and assist their graduates with design of products, manufacturing techniques, quality control and so on and encourage them to enter this expanding field of small industry. They must also develop during the course entrepreneurial skills and talents in their students. The Central Government Department of Small-Scale Industry has drawn up a comprehensive programme to assist engineering graduates in setting up small and medium industrial units of their own. Under this programme, valuable assistance in the form of capital assets, machinery and tools, materials

are proposed to be extended. Our financial institutions too like the nationalised banks have liberalised their credit and loan policies to encourage technically qualified personnel in starting their enterprises. All the conditions necessary for promoting a big industrial movement in our country are very favourable at present and the Institutes of Technology would do well to exploit this opportunity. This will be a rewarding activity too for the faculty of the Institutes since it will underscore the social and economic relevance of the Institutes of Technology. I hope very much that the Institutes in cooperation with the Department of Small-Scale Industry will start this new line of activity as an integral part of their programme of development. I look forward to the day when around each Institute of Technology a big industrial complex has grown through the efforts of their graduates and the faculty of the Institutes.

MINUTES OF THE MEETING OF THE COMMITTEE APPOINTED
BY THE IIT COUNCIL UNDER THE CHAIRMANSHIP OF
PROF. M. S. THACKER HOLD ON THE 28TH JANUARY
1971 AT THE INDIAN INSTITUTE OF TECHNOLOGY, DELHI.

The following were present :-

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| 1. Prof. M. S. Thacker | Chairman |
| 2. Shri S. K. Bose | |
| 3. Shri R. N. Dogra | |
| 4. Dr. P. K. Kelkar | |
| 5. Dr. M. S. Muthana | |
| 6. Dr. A. Ramachandran | |
| and 7. Shri G. N. Vaswani | |

The Chairman welcomed the members and also congratulated ~~Dr. M. S. Muthana on his appt.~~
Dr. M. S. Muthana on his appointment as regular Director of the

Indian Institute of Technology, Kanpur. Thereafter the

Committee considered the following items :-

- 1) Exchange of teachers/experts,
- 2) Exchange of students, and
- 3) Provision of housing loans for the staff of IITs.

The recommendations made by the Committee in respect of each of the item are given below :

1) Exchange of teachers/experts between IITs, other educational Institutions/Universities, National Laboratories such other Institutions and also Industry.

1) The Committee recommended that for short-term assignments upto a semester/term but not exceeding six months, the parent Institute should meet the expenditure on salaries and the host Institute should meet the cost of TA as well as 25% for the period of assignment at full rates payable to the staff of the same status.

2) Regarding long-term assignments exceeding a semester/term or over six months it was recommended that the host Institute besides the salary (including allowances, GPF, etc.) should pay an honorarium not exceeding Rs. 500/- P.M.

iii) The Committee also recommended that there should be a provision for 5 special fellowships of Rs. 2000/- per month in each Institute to enable distinguished professors, research workers etc. to be able to work at the Institutes for one academic session.

iv) Fellows and all the persons under the long-term assignments should be provided free accommodation. Wherever free accommodation is not provided the host Institute may help in locating/providing the accommodation. Wherever the Institute is not required to provide free accommodation, and the Institute is able to provide accommodation, rent may be charged at the appropriate rates.

v) Expenditure on T.A. in respect of Fellows and all the persons under long-term assignments including their families should be met by the host Institute.

vi) Further the host Institute should treat all such persons on par with the members of their academic staff.

The detailed rules for the scheme as recommended by the Committee are given in the annexure.

2) Exchange of students:

The Directors indicated that the exchange of students at the post-graduate level was being allowed to a limited extent but it will be further strengthened after gaining more experience in the matter. The exchange of post-graduate students was not only between the IITs, but between the IITs and other institutions of higher education also.

3) Providing housing:

The members were strongly of the view that facilities

Rules for the Scheme of Exchange of Teachers/Experts between IITs, other educational Institutions/Universities, National Laboratories, Industry, etc.

1. Purpose of the Scheme

The broad objectives of the Scheme are :-

- (i) to enable the Institutes to invite distinguished teachers/experts in various fields of academic work from other Universities, institutions of higher learnings, National Laboratories, such other Institutions and also Industry.
- (ii) to utilise as widely as possible the services of talented personnel in the Institutes, Universities, other centres of learning etc.
- (iii) to provide opportunities for the staff and students engaged in advanced studies to come into close and fruitful contacts with distinguished persons in various fields of knowledge, and to make expert advice and guidance available to research workers.

The teachers/experts invited under the Scheme may deliver a course of lectures, conduct seminars, participate in discussions, research etc.

2. Selection of Personnel:

The personnel to be invited under the Scheme may be selected by the host Institute.

3. Duration of visit:

The duration of the visit of a teacher/expert will depend on the nature of the assignment and the time for which the visiting teacher/expert can be spared by the parent institution. He will carry his own substantive designation with him to the visiting institution. The duration of the assignment will be as follows:-

- i) Short-term: Upto one term/semester but not exceeding six months.
- ii) Long-term: Mutually agreed between the parent and host institutions.
- iii) Fellows: One academic session.

4. Facilities, remuneration, etc.

i) All such persons should be treated on par with the regular members of the staff of the host Institute.

ii) T.A.

First class railway fare both ways (by the shortest route) from the place of the parent Institute to the host Institute. In case travel by air is necessary, the specific approval of the head of the host Institute should be obtained and daily allowance at normal rates be paid for the period spent in travel to cover incidental charges.

NOTE: In case of Fellows and long-term families will also be eligible for the aforesaid allowance.

iii) D.A.

For short-term: Daily allowance at the full rates for the period of assignment payable to the staff of the same status.

iv) Honorarium:

The visiting teacher/expert may be paid by the host Institute upto Rs. 50/- per lecture or Rs. 200/- for conducting a seminar lasting 3 days or more. The maximum honorarium for an assignment under this Scheme may be limited to Rs. 500/- p.m.

v) Salary:

- a) Short-term: Parent Institute to pay the salary, C.P.F. etc.
- b) Long-term: Host Institute to pay the salary, C.P.F. etc.
- c) Fellows: Rs. 2000/- p.m. by the host Institute.

d) Accommodation:

Short-term: If provided by the host Institute rent chargeable at the appropriate rates.

Long-term: Rent free accommodation to be provided by the host Institute.

for housing loans should be provided to the employees of the Institutes as it is being done in the case of Central Government employees. The Committee therefore requested the Chairman to meet the Secretary, Department of Works and Housing to consider the question of providing necessary funds for housing loans to the employees of the Institutes. The Chairman suggested that he would meet the Works and Housing Secretary around March, 1971. In the meantime he requested the Directors to send to the Ministry of Education & Youth Services the estimates of requirements of the employees of the IITs for housing loans giving full details.

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