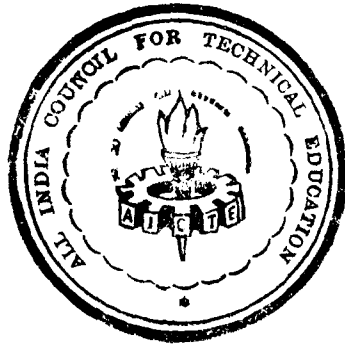


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**ALL INDIA COUNCIL FOR TECHNICAL EDUCATION**

# **Agenda**

## **23rd Meeting**

10.00 A.M. 23rd May, 1976

**VIGYAN BHAVAN, NEW DELHI**

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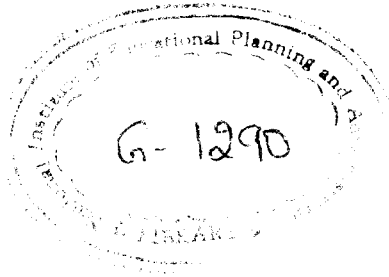
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Government of India  
MINISTRY OF EDUCATION & SOCIAL WELFARE  
NEW DELHI

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ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

23RD MEETING

DATE:- 21st May, 1976.

Place:- Commission Room 'H'  
Vigyan Bhavan,  
New Delhi.

Time:- 10.00 A.M.

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(ii)

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<u>Item No. 13:-</u>	To consider a note on the introduction of Diploma courses in Agricultural Engineering.	101 - 104
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Item No. 1.

Confirmation of the minutes of the  
22nd meeting of the Council held on  
17th May, 1974.

The minutes of the last meeting of the Council held on 17th May, 1974, were circulated to the members. Comments were received from only one member suggesting minor changes in one paragraph of the minutes which were made and communicated to the members. The proceedings may, therefore, be deemed to have been confirmed by circulation.

A copy of the minutes is placed at  
Annexure-I.



Item No.2 To report the progress of action taken on the recommendations/décisions made by the Council at its last meeting.

Recommendations/Decisions

Action Taken

1. Revised tenure of the Coordinating Committee and its membership

of

The Council noted that the revised tenure of the Coordinating Committee and its membership and decided that the Director Institute of Applied Manpower Research New Delhi, should also be an ex-officio member of the Coordinating Committee.

Director, Institute/Applied Manpower Research has been nominated on the Coordinating Committee.

2. Membership of the All India Board of Technical Studies and Regional Committees.

While noting the membership of the All India Boards of Technical Studies and the reconstituted Regional Committees, the Council authorised its Chairman to examine the existing functions of the Boards and the Regional Committees and to revise them wherever necessary, in accordance with the major responsibilities to be entrusted to them, in consultation with the Chairman of these Bodies.

Necessary action has been taken and the matter is placed before the Council under Item Nos. 11 and 12 of the Agenda.

3. Revision of Pay Scales of teachers in Engineering Colleges and Polytechnics

The Council noted the progress of action taken on the recommendations/decisions made at its last meeting.

While noting the decision taken by the Central Government on the

In pursuance of the recommendation made by the Council, the Union Education Minister in his capacity as the Chairman, All India Council for Technical Education appointed a Special Committee under the

....contd

Recommendations/Decisions

the revised pay scales of teachers in universities and colleges, the Council recommended that these revised scales be made applicable to teachers in engineering colleges and polytechnics. The Council, however, felt that before implementing the decision on the revised pay scales of teachers in engineering colleges and polytechnics, the details of qualifications, experience and other requirements prescribed for various categories of teaching posts in technical institutions should be examined, vis-a-vis, those recommended by the University Grants Commission for teachers in Universities and colleges for whom the revised pay scales are applicable. The Council authorised its Chairman to obtain the views of the State Governments and appoint a Committee to examine all these questions and take a decision on the revised scales of all teachers in engineering colleges and polytechnics, on the recommendations of this Committee.

Action Taken

Chairmanship of Dr. B.D.Nag Chaudhuri, Vice Chancellor, Jawaharlal Nehru University to examine in detail the question of qualifications, experience and other requirements prescribed for various categories of teaching posts in technical institutions. The Committee took note of the views expressed by the State Governments and the Union Territories and after taking all aspects of the matter into account submitted the report. These recommendations have been approved by the Chairman of the Council. A copy of the report is placed at Annexure, II.

As the Committee recommended that Government of India may offer to the State Governments financial assistance to the extent of 80 per cent of the additional expenditure involved if they wish to adopt the revised scales recommended by the Committee, therefore, before circulating the revised pay scales the matter has been examined by the Government of India. The Government has agreed that revised scales adopted by the State Governments for teachers in university Departments in their States should be made applicable to the teachers in Engineering Colleges. A circular in this regard has been issued to all State Governments on 30.9.1975 for implementation of revised

....contd.



Recommendations/Decisions

Action Taken

Scales. The question of revision of salary scales for teachers of polytechnics is presently under consideration of Government of India.

4. Technical Education in  
Draft 5th Five Year Plan

The Council noted that the revised funding arrangements recommended by it earlier are under the consideration of the Planning Commission and that the Planning Commission is hopeful that the new funding arrangements could be brought into effect during the Fifth Plan. The Council reiterated that for the effective implementation of the programmes of technical education in the next five years, it is necessary that all the programmes, at present included in the draft plan, should be grouped into schemes of consolidation and development of the existing institutions and schemes for the improvement of quality and standard. Provision for these two groups of schemes should be made in the Central and State Sectors of the Plan in accordance with the recommendations made by it and Central assistance should be extended to the State Governments for their implementation over and above the State Plan Ceilings. For this purpose the Council recommended that the Planning Commission be requested to take up the question of

The revised funding arrangement was taken up by the Planning Commission with the State Governments and Union Territories, and the State Governments were not willing to divert their plan funds to the Central Sector. However, in the meantime, Planning Commission has provided Rs.150.00 lakhs in the Central Sector for 1976-77 for providing Central Assistance to Technical Institutions for qualitative improvement. The details of the programme are to be worked out in consultation with the Planning Commission. The Council may authorise its Chairman to appoint an Expert Committee to work out the details.

Recommendations/Decisions

readjusting the plan provision between the Central and State Sectors with the State Governments.

The Council also expressed the view that the effective implementation of the programmes of consolidation and Development and also improvement of quality is crucial since, as a core sector, technical education will have to play an important role in industrial and economic development. The inputs into the technical education system during the current plan will have an impact on the manpower available for the 6th plan period and, therefore, it is necessary to take a long-range view of the problem of development in technical education. The Council, therefore, strongly recommended that the Planning Commission be requested to ensure that adequate provision for the implementation of these programmes is provided during the 5th plan period, and that the existing outlay for technical education may be increased to at least Rs.220 crores.

The Council further recommended that each Regional Committee should formulate the detailed programmes to be implemented during the next five years in each State, in close consultation with the State

Action Taken

The 5th Five Year Plan has not been finalised so far. However, the actual expenditure in the First two years of the plan and plan provision made for the year 1976-77 is as under :-

	Central Sector UGC	State Sector U.Ts.	(Rs. in lakhs) (excluding U.Ts.)
	1	2	
1974-75	901.46 (Actual)	591.73 (Actual)	
1975-76	1336.81 (Anticipated)	827.47 (Anticipated)	
1976-77	1558.00	1014.05	
Total	3796.27	2433.25	

The Regional Committee have been requested to formulate programmes of technical education in consultation with the State Governments in their regions to be implemented during the 5th Plan. Since the 5th Five Year Plan has

.....contd.

<u>Recommendations/Decisions</u>	<u>Action Taken</u>
Governments, and that these detailed plans should be integrated into a National Plan for Technical Education.	not yet been finalised, the proposals of the State Governments are being discussed in Annual Plans.
The Council also felt that technical institutions should be encouraged to initiate innovative programmes which are relevant to industrial and economic development. To enable these institutions to do so, the Council recommended that the concept of autonomy to technical institutions, at degree and diploma levels, should be supported and the State Governments and Universities requested to make suitable provisions in the relevant Acts and Statutes for the grant of such autonomy.	The University Grants Commission has finalised a detailed scheme for granting academic autonomy to the affiliated colleges within the university system. All the State Governments and universities which have Engineering Colleges have been asked the Secretariat of All India Council for Technical Education to make suitable provisions in the relevant Acts & Statutes for grant of such autonomy to selected engineering colleges and polytechnics in accordance with the broad pattern recommended by the University Grants Commission. The details about the institutions which have been granted autonomy is being ascertained.

5. Restoration of admission in technical institutions and diversification of training at the diploma and post-diploma level

The Council noted that the supply of technical manpower in the Fifth Plan is more or less predetermined by the admissions that have already taken place into engineering colleges and polytechnics. As any increase in the present level of admissions, particularly in engineering colleges, will have an impact on the supply of engineers during the 6th

The matter was examined in a meeting taken by the Education Secretary with the representatives of Institute of Applied Manpower Research, Planning Commission and Directors of Indian Institutes of Technology on 16th November, 1974. When it was decided that (i) Any realistic study to assess the technical manpower requirements should await the emergence

.....contd.

Recommendations/Decisions

Action taken

Plan only, the Council recommended that the manpower requirements during the 6th plan period should be more carefully assessed, on a disaggregated basis, after taking into account the specific requirements, discipline-wise, state-wise and region-wise. The Council further recommended that selected institutions in the country may be assigned the responsibility to assess the manpower requirements, in all principal sectors of employment. These studies should encompass all the major disciplines including Agricultural Engineering and the requirements of personnel at the degree and diploma level. The Council also recommended that each Regional Committee should also appoint its own Study Team to assess the manpower requirements at the technician level

of a clearer picture of the Fifth and Sixth Plans. In the meanwhile and for the next year or two, the actual admissions to technical institutions should be regulated within the existing total sanctioned admission capacities and in accordance with the instructional facilities available in each institution. The level of admissions should be left flexible enough so that all eligible students are admitted, within the existing sanctioned admission capacities. (ii) A meaningful and comprehensive assessment of manpower requirements on a long term basis as recommended by the All India Council for Technical Education has to be undertaken only after the Fifth Plan has been finalised and also adequate indications of the size and scope of the sixth Plan are available. Meanwhile, however, the Institutes of Technology should actively involve themselves in studies on manpower planning and development in special areas which are of significance to their teaching and research activities. They should also apply some of their own resources, including faculty to those studies. The details of the studies to be undertaken, methodology, procedures etc. should be settled in consultation with the Institute of Applied Manpower Research.

.....contd.

Recommendations/Decisions

Action taken

The Council further recommended that the reports of such studies should be made available before the end of the current financial year and the admission policy in technical institutions in the remaining years of the 5th Plan should be decided on the basis of the findings of these studies.

The Council also suggested that since there is serious underemployment among engineering personnel at present, it is necessary to undertake a special study of the job requirements for various categories of technical personnel to determine the employment pattern of engineering graduates and diploma holders. The Council recommended that the Planning Commission be requested to initiate this study.

The Council also recommended that the elimination of wastage in technical education is also equally important. However, to enable this question to be considered in depth, the secretariat should collect the basic data on admissions, out-turns, drop outs etc. over a period of time so that a view can be taken on this problem. For this purpose the services of a statistician may be secured by the Secretariat.

Later on two Groups were also appointed to estimate the manpower potential. The Groups were headed by Dr. Malathi Bolar (Miss), Director, Institute of Applied Manpower Research and Dr. Jagdish Shanker of University Grants Commission. The report of the two sub-Groups were discussed in a meeting of the Group to survey the national manpower needs of the country which was held under the Chairmanship of Union Education Minister on 10th March, 1976. The Group decided that it would be necessary that a national Survey of manpower needs be undertaken. The Ministry of Education will provide necessary financial resources and the IAMR would be entrusted with the responsibility to act a nodal point of the entire survey. The estimated expenditure of the project is Rs. 1.50 crores. A sub-Committee has been formed to go into the details of the two reports and to prepare a detailed programme of work and also to scrutinise the financial resources required for the work.

The Secretariates of the Regional Committees were requested to collect the basic data and to prepare consolidated and comprehensive reports in respect of their regions. On receipt of their report the matter will be further examined by Secretariat of the Council.

Recommendations/Decisions

Action Taken

6. To receive the report of the Review Committee for Regional Engineering Colleges.

The Council generally endorsed the recommendations of the Review Committee for Regional Engineering Colleges and noted that the report had already been circulated to the State Governments, all the Regional Engineering Colleges and the University Grants Commission for their comments. The Council, however, recommended that the composition of the Board of Governors of these colleges may be modified to provide adequate representation for the Central Government and that the existing character of these colleges both in regard to admissions and recruitment policies should be maintained.

Action taken is being reported separately under item No.6 of the agenda.

The Council also endorsed the views of its Secretariat that it may not be desirable to establish a Council with statutory powers for the management of the Regional Engineering Colleges as visualised by the Review Committee. The Council, however, recommended that, as proposed by the Secretariat, an Advisory Committee for all these colleges to advise the Union Minister of Education on all policy matter and laying down guidelines in respect of these colleges may be constituted. The composition of the Advisory Committee should include all concerned interests, including industry and the engineering profession.

...contd.

Recommendations/Decisions

Action Taken

The Council recommended that the Recommendations made by the Review Committee with the modifications suggested above should be further considered for appropriate decision and action by the Central Government in the light of the comments that may be received from the State Governments, UGC, Planning Commission and the Institution concerned.

7(i) Degree courses in Pharmacy

The Council noted that several universities have already set up separate departments of pharmacy and therefore it was not necessary to attach departments of Pharmacy either to the Technological Departments or to the Departments of Science.

The recommendation has been communicated to all Regional Committees for further the necessary action and guidance.

7(ii) Rationalisation of Courses and their levels

The Council noted that the programmes of vocational and technical courses, proposed for implementation during the Fifth Plan, visualised a flexible structure for the programmes of vocational courses. In view of this, the Council felt that it will not be correct to insist on any rigid and uniform pattern for all technical courses.

The recommendation has been communicated to all Regional Committees for their information and guidance.

7(iii) New equipment list for Polytechnics suggested by the curriculum Development Cell, Technical Teachers Training Institute, Bhopal.

The Council recommended that the guidelines formulated by Curriculum Cell at the

The recommendation to equip the Polytechnics in accordance with the guidelines suggested by Technical

....contd.

Recommendations/Decisions

Action Taken

<p>Technical Teachers Training Institute, Bhopal for revising the existing list of equipment for polytechnic diploma courses may be circulated to the State Governments for adoption. The Council also recommended that the State Governments be requested to finance the purchase of equipment according to the new list from the provision made by them for the consolidation and development of polytechnics and diversification of diploma courses.</p>	<p>Teachers Training Institute, Bhopal has been circulated to all State Governments/Union Territories. They have also been requested to meet the expenditure involved in implementing the recommendation from out of the provision for "Consolidation and developments" during the 5th plan.</p>
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7. (iv) Revision of Staff Structure

<p>The Council recommended that in determining the work-load of staff, no distinction need be made between the tutorial and laboratory work on the one hand and lecture classes on the other. The guidelines for revising the staff structure in the technical institutions may be modified accordingly.</p>	<p>The modification recommended by the Council for determining the work-load of staff in technical institutions has been brought to the notice of all the Regional Committees for their information and guidance.</p>
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7. (v) Constitution of the Regional Committee

<p>The Council reiterated its earlier decision that the existing procedure under which the Chairman of the Regional Committee is elected from amongst the members need not be revised.</p>	<p>The recommendation has been brought to the notice of all the Regional Committees.</p>
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7. (vi) Degree course in Metallurgy

<p>The Council reiterated its earlier recommendations that in view of the large surplus among metallurgical engineering/up new centres of study in this branch should be carefully examined graduates at present the proposal to set</p>	<p>The State Governments of Andhra Pradesh, Karnataka, Kerala, Tamil Nadu have been requested to keep the recommendations of the Council in view while considering the proposals</p>
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Recommendations/Decisions

Action Taken

by the State Governments. If the State Governments concerned are anxious on the basis of the established manpower needs, such course should be started and agree to make the necessary provision for introducing the courses in their plans, the Council recommended that the Chairman may consider such proposals on merit.

to open new centres for training in Metallurgical Engineering.

7. (vii) Multipurpose Halls, Air Conditioning of Laboratories and Book Bank

The Council recommended that provision of these facilities in technical institutions should be considered as an integral part of their consolidation and development programmes and should be financed in the Fifth Plan on the basis of the funding arrangements finally accepted for such schemes.

All the Regional Committees have been informed that the provision for multipurpose halls, Air-Conditioning of libraries and establishment of Book Banks in technical institutions should be considered as an integral part of development of the institutions and financed from the provision made for the purpose in the State Plans. According to the information available with the Secretariat of the Council, most of the institutions/State Governments have established Book Banks. This is also one of the items of the 20 point programme,

7. (viii) Revision of the list of equipment for Engineering Colleges.

The Council felt that any ad-hoc/expenditure for purchase of equipment in engineering colleges, on account of increase in prices, may not be an appropriate solution in the present context. The Council, therefore, recommended that the Curriculum Development Cells,

Curriculum Development Centres under Quality Improvement Programme have been requested to revise the list of equipment as recommended by the Council. The matter is under their examination.

increase in the ceiling of

....contd..

Recommendations/Decisions

Action Taken

while revising the existing curriculum for engineering degree courses, should also lay down the detailed guidelines, according to which the laboratory and Workshop in engineering colleges should be equipped. The detailed list of equipment can then be prepared by the institutions concerned in accordance with these guidelines and after taking into the requirements of their course-content etc. The Council also recommended that the State Governments be requested to make necessary provision available to the engineering colleges to equip their laboratories and Workshops in accordance with these guidelines.

Account

7. (ix) Quality Improvement Programme

The Council recommended that the State Governments be requested not to insist on the execution of bond by teachers who are sponsored for participation in various short-term training programmes with a duration of three months or less, organised by various centres under the Central programme of Quality Improvement.

A letter has been sent to all State Govts. and Directors of Technical Education emphasising the importance of the Quality Improvement Programme. They have been requested to do away with the condition of bonds as its imposition only impedes the progress of the scheme. The replies received so far indicate that almost all the State Governments have not provided for any bond, except in very few cases where the matter is under consideration.

7. (x) Swimming Pools in Technical Institutions

The Council recommended that in present context it will not be advisable to include provision for swimming pools in all technical institutions as

The recommendation of the Council has been circulated to all State Governments, Union Territories and Regional Committees for necessary action.

Recommendations/Decisions

Action Taken

an integral part of students' amenities and to extend financial assistance for the purpose. The Council, however, recommended that State Governments may consider the possibility of providing such facilities to individual institutions on merit and extend necessary financial assistance from their own resources.

7.(xi) Agriculture-Oriented Technological Courses

The Council recommended that the Scheme and syllabi for the 3-year diploma on the sandwich pattern and one year post-diploma course in Agriculture Technology, formulated by the Eastern Regional Committee, may be approved. The Council, further recommended that these schemes may be circulated to the State Governments and they be requested to introduce these courses in their polytechnics under the programmes of diversification of diploma courses for which provision has been made in the State Plans.

The Scheme formulated by the Eastern Regional Committee has been brought to the notice of the State Governments.

7.(xii) State Directorates of Technical Education

The Council noted that the Ministry of Education has already set up a Committee to evolve suitable norms for a model structure for the State Directorates of Technical Education. The Council recommended that this model structure should be finalised as soon as possible and made available to all the State Governments.

Detailed information on the existing organisation and functions of the Directorates in various States has since been received and will be considered by the Committee shortly.

....contd.

Recommendations/Decisions

Action Taken

7. (xiii) Duration and Structure of First Degree Courses

The Council noted that one of the terms of reference of the Committee appointed by the Council jointly with University Grants Commission is to examine the duration and structure of the first degree courses. The Council, therefore, recommended that a final decision on the duration and structure of first degree courses in engineering may be taken in the light of the recommendations to be made by the Joint Committee.

The matter is placed before the Council separately under item No. 9 of the Agenda.

7. (xiv) Air-conditioning of Stack Rooms of Libraries in Technical Institutions

The Council felt that the recommendation for airconditioning of stack rooms of libraries in Technical institutions need not be supported in the present context.

The recommendation of the Council that the proposals in this regard received from the State Governments need not be supported in the present context, has been brought to the notice of the Regional Committee.

7. (xv) Post-Graduate Diploma courses

The Council recommended that the Board of Post-graduate studies may be requested to lay down a definite procedure for sanctioning and financing post graduate diploma courses.

The matter has been referred to the Post Graduate Board and is being reported under item No. 8 of the Agenda.

....contd..

Recommendations/Decisions

Action Taken.

7. (xvi) Norms of maintenance expenditure

The Council recommended that the existing norms for calculating recurring expenditure in engineering colleges and polytechnics may be revised as under :-

<u>Item</u>	<u>Engg. Colleges</u>	<u>Polytechnics</u>
Staff Salary	Actual as per sanctioned posts.	Actual as per sanctioned posts
Library	Rs.50,000 for an intake of 180 and (Recurring) Rs.75,000 for higher intakes.	Rs.15,000 for an intake of upto 120 and Rs.20,000 for higher intakes.
All Other expenditure.	Rs.550/- per student per year for an intake upto 180 and Rs.500/-for higher intakes.	Rs.350/-per student per year for an intake of upto 120 and Rs.300/- for higher intakes.

The revised norms for calculating the recurring expenditure in Engineering Colleges and Polytechnics have been circulated to all State Governments/Union Territories and Regional Committees for their guidance.

The Council further recommended that the State Governments may be requested to sanction suitable grants-in-aid to meet the recurring expenditure on a net deficit basis under the provisions of their grant-in-aid code, on the basis of the revised norms mentioned above.

7. (xvii) Merit-cum-Means Scholarships

The Council noted that there is, at present in adequate coverage of students in engineering colleges under various types of scholarship schemes in operation. The Council recommended that in view of this, it is not necessary, at present to formulate any separate scheme of Merit-cum-Means scholarships for engineering college students.

The decision of the Council has been communicated to the Regional Committees.

....contd..

<u>Recommendations/Decisions</u>	<u>Action Taken</u>
<u>8. (1) Applied Art Board</u>	
<u>(i) Establishment of Regional Schools of Industrial Design</u>	

indus-  
trial

The Council noted that the draft Fifth Five Year Plan does not make any provision for establishment to separate Regional Schools of Design. The Council, therefore, recommended that the possibility of introducing first degree course in industrial design in appropriate engineering/art institutions on a regional basis may be considered and the expenditure on such courses met out of the provision made for consolidation and development of engineering colleges in the 5th Plan

Recommendations have been communicated to all the state Governments for necessary action.

(ii) Quality Improvement of Teachers

The Council noted that teachers in Art Institutions are already covered by the Programme of Summer Institutes etc. organised under Quality Improvement Programme. The Council recommended that the principles for revision of staff structure already recommended by the Council under which provision has been made for appointment of training reserves should be made applicable to Art Institutions also.

Recommendations have been communicated to the State Governments for necessary action.

(iii) Upgrading of existing Schools of Arts.

The Council noted that the upgrading 30 existing schools would require an outlay of about Rs.5 crores, for which adequate provision is at present not available in the draft Fifth Plan. The Council, therefore,

Recommendations have been communicated to the State Governments for necessary action.

....contd.

Recommendations/Decisions

Action Taken

recommended that the State Governments may consider the possibility of making suitable provision available to existing Art Institutions to Improve their quality and standards from out of the provision made for consolidation and development of existing institutions in the 5th Plan.

2.(iv) Establishment of Postgraduate and Research Departments

The Council felt that provision for postgraduate courses and research work in applied art is important and necessary, but before such activities are initiated the existing institutions should be enabled to consolidate their programmes and activities. It is only after appropriate facilities and adequate staff have been provided in these institutions, that any postgraduate activities can be initiated. The Council felt that the institution of National Professorship in Applied Art will not be a suitable means for this purpose.

Recommendations have been communicated to the State Governments for necessary action.

2.(v) Scholarship for the development of Traditional Arts and Crafts

The Council recommended that the development of traditional arts and crafts shall appropriately find a place in the proposed programme of vocationalization of courses, and the scholarship scheme for students in vocational stream should also be extended to students of Arts Schools.

Recommendations have been communicated to the State Governments for necessary action.

Recommendations/Decisions

Action Taken

.(vi) Educational Development Centre  
for Applied Art

The Council recommended that the State Governments be requested to formulate a comprehensive development programme of art education.

For this purpose, each State Directorate of Technical Education / Art Education should undertake a survey of facilities and potential for development and prepare the necessary educational materials including text books etc. The Council also recommended that the establishment of Art Museums, wherever possible, may be considered.

Recommendations have been communicated to the State Governments for necessary action.

.(vii) Graphic Communication Workshop  
for Educational T.V. Broadcast

The Council recommended that this proposal may be examined in consultation with the Educational Technology Centre of the National Council for Educational Research and Training and also the Institute of Industrial Design, Bombay.

Industrial Design Centre of Indian Institute of Technology, Bombay and National Council of Educational Research and Training, New Delhi have been requested to work out the Project Report/details of the proposal. National Council of Educational Research and Training proposes to organise a workshop on graphics to train Staff for certain complicated graphics work needed for animation and Graphic purposes in T.V./ Films.

.(viii) Research and Development Centre  
in Printing Technology

The Council recommended that the proposals formulated by the Applied Art Board for the establishment of a Research and Development Centre in Printing Technology may be examined

The Ministry of Industry & Civil Supplies is setting up an institute of Graphic Arts Research, Machinery development and Training at Hyderabad. The scope of the project is to be carefully



Recommendations/Decisions

Action Taken

by the Central Government and steps initiated in the Fifth Plan to establish the Centre.

defined, however, the term of the institute will not be limited to improving and updating the technology but also aid in reducing the imports and increasing exports where feasible.

(ix) Development of Regional Schools of Printing Technology

The Council recommended that the courses in printing technology may be organised at the Regional Schools of Printing Technology on the pattern recommended by the Board and that the expenditure on it met by the State Governments from the provision made for these schools in the 5th Plan.

Recommendations have been communicated to the State Government for necessary action.

3. (2) Architecture Board

(i) 2-year part-time post-graduate courses in Town Planning at the Bengal Engineering College, Howrah.

The Council endorsed the recommendation of the Architecture Board that the present two-year part-time course in Town Planning at the Bengal Engineering College, Howrah should be discontinued and that, in its place, a two year full time course leading to Master's degree should be introduced. The Council also suggested that after the full time course has stabilised during a period of two to three years, a three year part-time post-graduate course may be introduced, if the need for such a course is fully established. The Council also recommended that the

The State Government has been advised to organis a 2-year full-time Post-graduate course in Town Planning. The question of providing financial assistance to Post-graduate Course in Town Planning has been considered by the Post-graduate Board and reported under Item No.8 of the Agenda.

<u>Recommendations/Decisions</u>	<u>Action Taken</u>
Central Government should examine whether any assistance can be provided for the full-time course, including stipends for students, in consultation with the Board of Post-graduate Studies.	
(ii) Revised Curriculum and Syllabus for 6-year full-time diploma course in Architecture on Sandwich pattern	
The Council recommended that the revised curriculum and syllabus for six year full-time diploma course in Architecture on sandwich pattern prepared by the Architecture Board be approved and that the sandwich course may be introduced on an experimental basis at selected centres where facilities for practical training are available both in government department and architectural firms. The students under this programme should also be offered stipends under the programme of sandwich courses. After this course has been introduced successfully at selected centres, it could be extended to more centres where suitable practical training facilities can be organised. The curriculum and syllabus of the existing courses in other institutions will, however, continue.	Revised syllabus and curriculum has been circulated for adoption to the State Governments and Institutions concerned.

....contd..

Recommendations/Decisions

Action Taken

(iii) Revised Scheme and Syllabus  
for diploma course in  
Architectural Assistantship

The Council recommended that the revised scheme and syllabus for diploma course in architectural assistantship be approved and brought to the notice of all institutions conducting this course.

Revised Scheme and Syllabus has been circulated for adoption to all State Governments and institutions concerned.

8.(3) Commerce Board

(i) Inclusion of Commerce subjects in  
All India/State Services Examinations

with

The Council recommended that the Central Government and the State Governments may be requested to take up the concerned Public Service Commissions the question of inclusion of commerce subjects in the All India/State Services Examinations.

Recommendations have been communicated to all State Governments/Union Public Service Commission.

(ii) Continuation of B.Com (Ed) and  
introduction of M.Com (Ed)  
course at the Regional Colleges  
of Education.

The Council recommended that the National Council for Educational Research and Training may be requested to continue the course of B.Com (Ed.) offered by the four Regional Colleges of Education.

National Council for Educational Research and Training has been requested to continue the B.Com (Ed.) course and organise M.Com. (Ed.) course.

The Council also recommended that the National Council for Educational Research and Training may be requested to introduce M.Com (Ed) course in these colleges.

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Recommendations/Decisions

Action Taken

8. (4) Textile Board

(i) Consolidation and Improvement of existing Courses

The Council noted that teachers of textile technology can avail of the facilities for training under the faculty development programmes implemented by the Ministry, and recommended that institutions offering courses in Textile Technology should sponsor their teachers under the various short-term and long-term programmes. As for curriculum development the Council recommended that when the programme of quality improvement being implemented by the Ministry is expanded during the 5th plan, the possibility of setting up at least one Cell for textile technology may be considered.

The recommendations of the Council have been included in the revised Quality Improvement Programme and the same is placed at Item No. 10 of the Agenda.

The Council further recommended that the existing courses offered by institutions may be converted into the sandwich pattern wherever effective cooperation with textile industries can be arranged.

The recommendations has been brought to the notice of Regional Committees for guidance.

9. (1) Role of Technical Education Institutions in the context of the Fifth Plan Strategies for

(i) Terminal Vocational Education

The Council welcomed the proposal made by the Secretariat for introducing a big programme of vocational and technical education during the 5th Plan period. The Council

The Recommendation has been referred to concerned organisations for taking appropriate action in respect of the programmes of education falling within their Jurisdiction.

...contd.

Recommendations/Decision

Action Taken

recommended that a meaningful programme of vocationalisation of education should be formulated and that it should have a flexible structure with suitable provision for inter-changeability among technical vocational and general streams. Provision should also be made for students enrolled in any of these streams to join the degree or diploma courses at the appropriate stage and for the transfer of credits for the course they have already undergone. The Council further recommended that for a proper review and coordination of policy and programmes of vocational and technician education, and to provide effective linkages between them and also programmes of vocational and apprenticeship training.

National Council for Vocational Education should be set up by the Central Government with corresponding State/Boards/Council in all the States. The National Council should consist of representatives, among other of the NCTVT, NCERT, AICTE, UGC, CIBE, ICAR and NCTE and similar organisations.

The question of setting up a National Council for Vocational Education is under consideration of the Central Government.

... (ii) Non-Formal and Continuing Education

The Council also recommended that facilities for Non-formal and Continuing Education be organised in an extensive scale. For this purpose, all educational institutions should fully utilise their existing facilities to offer a variety of programmes of non-formal education

The University Grants Commission and the National Council for Educational Research and Training have been requested to formulate details of programmes of non-formal and continuing education including part-time and correspondence courses in respect of

<u>Recommendations/Decisions</u>	<u>Action Taken</u>
including part-time and correspondence courses. The details of such programmes to be organised in various institutions should be formulated by the appropriate agencies like the Board of Technicians Education, National Council of Vocational Education, UGC, etc. The Council further recommended that these agencies should also examine the question of providing multiple points of entry to the courses within their jurisdiction.	programmes which fall within their jurisdiction. The National Council for Educational Research and Training has formed a Working Group for developing the curriculum for the vocationalised Higher Secondary course. The first meeting of the Working Group took place on May 7 and 8, 1975 in which decision on the guidelines for the approach paper of the above was taken.

10. Interlinking Technical Education and Research with Industry.

The Council also recommended that the Secretariat should place steps for early compilation of a basic directory setting out, institution-wise, the expertise and capabilities which the different institutes of technology, the engineering colleges and polytechnics have so far provided and what each can provide hereafter, in terms of consultancy functions for and liaison with industry. Like-wise industry should compile another documentation on its own part setting out the problems and purposes for which different undertakings may need consultancy and liaison	All the Technical Institutions, Directors of Technical Education, FICCI, and other similar organisations have been requested to furnish the required information for compilation of the basic directory by the secretariat of the council. Some information has been received and the work will be taken in hand.
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....contd.

Recommendations/Decisions

Action Taken

with the institutions of Technology and technical institutions. Based on these individual compilations, both from the side of industrial undertakings and the institutions, the Secretariat should compile, as early as possible, a comprehensive compendium of the information so collected. Copies of the documentation should be made available for bringing about better linkages between industry and the institution of technology and technical education members of the Council, the State Governments and the Central Ministries, the various educational and technological institutions and industrial undertakings as well as others interested in the subject. The compendium can be refined and brought upto date as time goes on, but the initial compilation should be brought out without delay.

The Council also recommended that the technical institutions should accept the responsibility within the limitations of the resources and the range of expertise and experience available with them to initiate concerted efforts by organising co-operative programmes like apprenticeship training sandwich courses and practice schools, reviewing the course-content from time to time to meet the operational and design requirements of the industry,

The Indian Institutes of Technology, other Central Institutes and the Regional Engineering Colleges have been requested to organise the programmes.

State Governments have also been requested to permit consultancy practice to teachers in engineering institutions.

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Recommendations/Decisions

Action Taken

organising short-term programmes including non-formal education for serving personnel from industry, assigning specific projects "live problems" of industry to students and organising special seminars/symposia etc. with participants drawn from institutions and industry.

11. Better Coordination between the University Grants Commission and the All India Council for Technical Education for the development of Technical Education

The Council recommended that there should be better and more effective coordination of the activities between the University Grants Commission and the Council in the programmes of engineering education. The Council also recommended that the procedure for processing development programmes should be streamlined and that there should be an integral assessment of the needs of engineering and technological departments in the Universities alongwith that of the other departments. The Council authorised its Chairman to forward a panel of names of experts in engineering and technology to the UGC from which the Commission could draw the personnel of its Visiting Committee.

A panel of experts who are presently associated with the Regional Committees has been supplied to the UGC from which they could draw up experts for their Standing Committees.

The Council also recommended that a Joint Committee of the Council and UGC, consisting/15 members may be appointed to suggest suitable guidelines for assessing the requirements

A Joint Committee of the All India Council for Technical Education and University Grants Commission consisting of 15 members under the Chairmanship of Prof. A.N. Bose, Vice-Chancellor



Recommendations/Decisions

Action Taken

for engineering and technological departments and the Institutions during the 5th Plan period. The Council authorised its Chairman to nominate the members to represent Council on this Committee.

Jadavpur University was constituted by Union Education Minister in his capacity as Chairman of the Council to lay down the guidelines for assessing the requirements of the Engineering and Technological Departments and institutions.

The Drafting Committee of the Joint Committee has laid down the following guidelines:

**\*\* Departments/Institutes** the additional funds on developmental work should be considered on the basis of past performance rather than on premise.

1. It is necessary that some funds must be set apart for the development of Undergraduate courses in the University Department and that each University must have an idea of the allocation that it is likely to receive during the Plan period, so that they can be asked to prepare the specific plan for consideration of the Visiting Committee. For existing **\*\***

2. During the Fifth Five Year Plan the main thrust should be on consolidation and development of the existing courses including rationalisation and diversification of the courses. Introduction of new courses should get the second priority.

3. It would be appropriate that only one Visiting Committees goes to the University Departments which should take an integrated view of the Undergraduate and Postgraduate courses, as well as of the facilities available in other Departments of nearby affiliated institutions. However, for any special require-

...contd.

Recommendations/Decision

Action Taken

ments a separate Committee may have to visit a particular University. It was also felt that the Visiting Committee constituted for the purpose should be broad-based and should include experts from industry and research.

4. The Visiting Committee after taking note of the utility of a particular course, should be able to suggest the closure of that course, if in their opinion the course has no utility.

The draft guidelines have been circulated to the members of the Joint Committee for their comments.

12. Report on the Quality Improvement Programme implemented by the Ministry of Education.

The Council noted the progress made in the implementation of the various Quality Improvement Programmes during the Fourth Plan Period. The Council recommended that these programmes may be expanded and strengthened, within the provision made for them, in the Fifth Plan.

A revised scheme of Quality Improvement Programme has been prepared and is placed before the Council under Item No. 10 of the Agenda.

The Council welcome the suggestion to reorganise the programme of industrial training for teachers and recommended that the proposal to convert the present programme into industrial residences for a period of six months to one year, should be accepted and implemented. The Council recommended that the Ministry of

.....contd.

Recommendations/Decisions

Action Taken

education should consider and sanction the various proposals made for implementing these and professional support for their implementation.

13. Education of Scheduled Castes and Scheduled Tribes

The Council recommended that apart from the reservation of seats and provision of scholarships to students belonging to Scheduled castes and Scheduled Tribes, Technical institutions should make determined efforts by organising special coaching and other methods to improve the performance of these categories of students. In this connection the successful efforts already being made in the Institutes of Technology particularly at Madras were mentioned. The Council recommended that all State Governments may be urged to ensure that similar efforts are made in the institutions under their control.

A detailed report on facilities provided by IIT Madras for the education of Scheduled Castes and Scheduled Tribes students has been circulated to all State Governments and Union Territories for making similar efforts to improve the performance of these categories of students in the technical institutions under their control. The matter is under their consideration. The Osmania University and Chandigarh Administration have already agreed to arrange special classes for the students of these categories.

14. Flexibility in the Choice of Branch of study

A suggestion was made that the present procedure under which the students have to choose a particular discipline at the point of entry, needs to be modified. The Council recommended that this suggestion should be referred to the Joint Committee appointed to review undergraduate education, for examination.

The matter is under consideration of the Joint Committee of All India / the Council for Technical Education and the University Grants Commission.

Item No. 3: To report the changes in the membership of the Council.

The Constitution of the All India Council provides for the nomination of one representative of each of the State Government including Union Territories.

Consequent upon the incorporation of Sikkim as one of the State of the Republic of India, one seat to its representative was to be provided on the Council. Accordingly, the State Government of Sikkim was requested to nominate their representative on the Council. The State Government have nominated Shri L.B. Chhetri, Divisional Engineer, S.P.W.D., Gangtok.

An up-to-date list of members of the Council is placed at Annexure-III.

The matter is placed before the Council for information.

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Item No. 4 To report on development schemes approved by the Chairman, All India Council for Technical Education Since the last meeting of the Council

With the commencement of the 4th Five Year Plan, all programmes of development of technical education in the States are undertaken through the concerned State plans. According to this procedure, programmes of development, introduction of diversified courses, expansion of facilities in any particular field etc. have to be fully provided for by the State Govts. concerned in their plans and Central assistance for the implementation of these programmes is given to the State Governments concerned in the form of block grants and loans on the basis of their plan outlays as a whole.

The specific programmes of development which the State Governments wish to implement are referred by them to the Regional Committees concerned for examination and assessment. The Regional Committees examine these programmes and make recommendations to the Council. The Council had decided some time back that the recommendations made by the Regional Committees on the implementation of specific programme of development should be examined by its Secretariat and sanctioned with the approval of the Chairman and a report made on such programmes to the Council later. Since the last meeting of the Council held on 17.5.1974, the Chairman, All India Council for Technical Education has approved the following programmes of development for technical education on the recommendations of the Regional Committees :

Schemes approved on the recommendations of the Eastern Regional Committee

1. Introduction of 5-year Degree Course in Ceramic Technology with an annual intake of 30 student-s in place of the existing 4-year B.Sc. (Tech) Course in Ceramic Technology at the College of Ceramic Technology, Calcutta.

Non-Recurring (Addl) Grant :

- |   |                |
|---|----------------|
| 1. Accommodation-Workshop<br>3220 Sq. Ft. | Rs 1,28,800/-  |
| 2. Equipment & Furniture                  | Rs 16,55,500/- |

....contd.

3. Library	Rs 25,000/-
4. Students Hostel	Rs 5,70,000/-
5. Staff Quarters	Rs 1,10,000/-
<hr/>	
Total	Rs 24,89,300/-
<hr/>	

Recurring Grant

1. Staff Salary	Rs 7,34,800/-
2. Contingency	Rs 82,500/-
3. Library	Rs 5,000/-
<hr/>	
Total	Rs 8,22,300/-
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Approved on 24.6.1975.

2. Introduction of diploma course in Agricultural Engineering at the Government Polytechnic, Bhagalpur.

1. Duration and Pattern	3½ years, Sandwich pattern.
2. Annual intake	20 to be gradually increased to 30.
3. Curriculum and Syllabus	As recommended by the Expert Committee.
4. <u>Estimates of Cost :</u>	
A. <u>Non-Recurring :</u>	
1. Equipment including Library and Tractor	Rs 5,57,000/-
2. Staff Quarters	Rs 5,38,000/-
3. Students Hostel for 45 students	Rs 2,70,000/-
Total	Rs 13,65,000/-

.... contd.

B. Recurring

1. Staff Salary	Rs	1,78,320/-
2. Contingency	Rs	31,500/-
3. Library	Rs	10,000/-
4. Stipend during training period 150X60X6	Rs	54,000/-
Total		Rs 2,73,820/-

Approved on 2.9.1975

3. Introduction of a post-diploma course in Automobile Engineering at the U.R.H, the prince of Wales Institute of Engineering & Technology, Jorhat.

1. Duration 1½ years (including 6 months of practical training)
2. Annual Intake 15 only
3. Scheme & Syllabus On the lines specified by the AICTE.

Non-Recurring

i) Laboratory and Workshop Buildings	Rs	1,97,500/-
ii) Equipment	Rs	1,25,000/-
iii) Furniture including work-benches etc.	Rs	10,000/-
iv) Books and Journals for Library	Rs	15,000/-
Total		Rs 3,47,500/-
Say		Rs 3,50,000/-

.....contd.

Recurring

1. Staff Salary	Rs	91,800/-
2. Allowance etc.	Rs	10,000/-
3. Contingency including Library Grants, grant-in-aid etc.	Rs	10,000/-
		<hr/>
Total	Rs	1,11,800/-
Say	Rs	1,12,000/-
Staff Quarters	Rs	2,65,000/-

Approved on 25.3.1975. The scheme has already been implemented.

4. Introduction of diploma course in Printing Technology at the New Government Polytechnic, Patna.

1. Intake 15 to be gradually increased to 20.
2. Duration and pattern 3½ years, Sandwich pattern
3. Curriculum and Syllabus As prescribed by the Regional Committee.

A. Non-Recurring

i) Building 140 Sq, M.	Rs	56,000/-
ii) Factory type sheet 560 sq.m.	Rs	1,68,000/-
iii) Equipment including furniture	Rs	22,26,000/-
iv) Library	Rs	30,000/-

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Total Rs 24,80,000/-

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B. Recurring :

i) Staff Salary	Rs	1,72,340/-
ii) Library	Rs	10,000/-
iii) Contingency	Rs	21,000/-
Total		Rs 2,03,340/-
<hr/>		
C. Hostel for 45 students	Rs	2,70,000/-
D. Staff Quarters	Rs	3,51,000/-
Total		Rs 6,21,000/-
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Approved on 21st February, 1976.

Schemes approved on the recommendations of the Northern Regional Committee.

1. Introduction of part-time Diploma Course in Electrical Engineering at Central Polytechnic, Chandigarh with an annual intake of 15 students at its initial stage.

Approved in principle on 29th June, 1974  
The estimates of the cost have yet to be worked out by the Regional Committee. The Scheme has been implemented.

2. Development Programmes for Engineering and Technical Education - Aligarh Muslim University, Aligarh.

Introduction of new courses at Zakir Husain College of Engineering and Technology, Aligarh Muslim University, Aligarh.

...contd.

A. Degree Course in Electronics Engineering  
with an annual intake of 30 students.

Non-Recurring

i) Building (5600 Sq.Ft. plinth @ Rs.40/- per sq. ft.)	Rs	2,24,000/-
ii) Equipment	Rs	6,60,000/-
iii) Furniture	Rs	30,000/-
iv) Library	Rs	50,000/-
Total		Rs 9,64,000/-

Recurring

i) Salary of staff (Teaching, Tech. supporting & Non-Teaching)	Rs	2,20,340/-
ii) Library	Rs	30,000/-
iii) Maintenance	Rs	67,500/-
Total		Rs 3,17,340/-
Say		Rs 3,18,000/-

B. Degree Course in Chemical Engineering  
with an annual intake of 30 students.

Non-Recurring

i) Building (16,800 sq.ft. plinth @ Rs. 40/- per sq.ft)	Rs	6,72,000/-
ii) Equipment	Rs	5,50,000/-
iii) Furniture	Rs	40,000/-
iv) Library	Rs	75,000/-
Total		Rs 13,37,000/-

Recurring

i) Salary of the staff (Teaching, Tech, Supporting & Non-Teaching)	Rs	2,20,340/-
ii) Library	Rs	30,000/-
iii) Maintenance Expenditure	Rs	67,500/-
<hr/>		
Total	Rs	3,17,840/-
Say	Rs	3,18,000/-
		with

The new courses may be introduced with an annual intake of 30 students in each course but the total intake of the colleges should not exceed 240.

II. Introduction of new Courses at University Polytechnic, Aligarh Muslim University, Aligarh.

- A. Diploma Course in Electrical Communication Engineering with an annual intake of 30 students to be adjusted within an annual intake of 240 students of the Polytechnic

Non-Recurring

i) Building (2520 Sq.Ft. Plinth area)	Rs	1,01,000/-
ii) Equipment	Rs	2,52,000/-
<hr/>		
Total	Rs	3,53,000/-

Recurring

i) Salary of staff. (Teaching, Tech, Supporting & Non-teaching)	Rs	52,200/-
ii) Maintenance Expenditure	Rs	27,000/-
<hr/>		
Total	Rs	79,200/-
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....contd.

B. Post Diploma Course in Television Engineering of one year duration with an additional annual intake of 30 students.

Non-Recurring

i) Building (2520 Sq.ft. plinth area)	Rs	1,01,000/-
ii) Equipment	Rs	3,28,000/-
Total	Rs	<u>4,29,000/-</u>

Recurring

i) Salary of Staff (Teaching, Tech. Supporting & Non-Teaching)	Rs	52,200/-
ii) Maintenance Expenditure	Rs	9,000/-
Total	Rs	<u>61,200/-</u>

C. Common Facilities for the new courses

Non-Recurring

i) Bus	Rs	80,000/-
ii) Library	Rs	20,000/-
iii) Furniture	Rs	10,000/-
Total	Rs	<u>1,10,000/-</u>

Recurring

i) Salary of Training & Placement Officer	Rs	11,700/-
ii) Library recurring for both the courses	Rs	4,000/-
iii) Maintenance Expenditure for bus	Rs	4,000/-
Total	Rs	<u>19,700/-</u>

...contd.

III. Consolidation Programme of Engineering College  
Polytechnic and Girls Polytechnic

A. Z.H. College of Engineering & Technology,  
A.M.U. Aligarh

Consolidation Programme :

a) Building		
(i) RCC type construction	0	
15,000 Sq. ft. @ Rs.40 per	0	
sq. ft. Rs.6,00,000/-	)	
	)	7,25,000/-
ii) Workshop type Construction	)	
5,000 sq. ft. @ Rs.25/- per	)	
sq. ft. Rs 1,25,000/-	)	
	)	
b) Equipment	Rs	16,00,000/-
c) Furniture	Rs	75,000/-
d) Library	Rs	50,000/-
e) Water Cooler	Rs	10,000/-
		<hr/>
	Rs	24,60,000/-

Recurring

a) Salary of staff	Rs	2,26,000/-
(Teaching technical supporting & non-teaching)		
b) Maintenance	Rs	1,44,000/-
		<hr/>
Total	Rs	3,70,000/-
		<hr/>

...contd.

B. University Polytechnic, A.M.U. Aligarh

Consolidation Programme

a) Building (2000 Sq.Ft. plinth area)	Rs	80,000/-
b) Equipment	Rs	1,53,000/-
c) Furniture	Rs	10,000/-
d) Students amenities	Rs	10,000/-
e) Hostels		
i) Cost of students hostel...Rs 13,44,000/-	) Rs	14,07,000/-
ii) Hostel furniture Rs 63,000/-	)	)
<hr/>		
Total	Rs	16,60,000/-

Recurring

a. Staff Salary (Teaching, Tech., & Supporting & Non-Teaching)	Rs	1,25,576/-
b. Maintenance grant	Rs	1,08,000/-
Total	Rs	2,33,576/-
Say	Rs	2,83,600/-

C. Girls Polytechnic, A.M.U. Aligarh

New Courses

- i) 3-year Diploma Course in Electronics Engineering.
- ii) 3-year Diploma Course in Costume-Design and Dress Making.
- iii) 2-Year Diploma Course in Office Assistantship and Secretarial Practice.

...contd.

Non-Recurring

a.	Modernisation of Equipment in the Costume Design and Dress Making Section	Rs	10,000/-
	Total	Rs	<u>10,000/-</u>

Recurring

a.	<u>Maintenance Expenditure</u>		
i)	Constume Design and Dress Making (40X3= 120X300)	Rs 36,000/-)	
ii)	Office Assistantship & Secretarial Practice (20X2=40X300)	Rs 12,000/- )	48,000/-
iii)	Grant already available	(-) Rs	19,000/-
	Total	Rs	<u>29,000/-</u>

Approved on 7th May, 1974. The UGC has advised the Aligarh Muslim University to include these Schemes in their Fifth Five Year Plan proposals for consideration of the UGC.

3. Development Programme of M.M.M. Engineering College, Gorakhpur

- i) Increase in admissions to Civil Engineering Course from 20 students per annum to 50 students per annum (The total intake for the existing three branches will be 120 per year)
- ii) Introduction of degree course in Electronics with an annual intake of 30 students per year, which should be restricted to 20 in the initial period (The intake to this course will be over and above the existing admission capacity of 120 per annum).

Non-Recurring

i)	Buildings (12,600 Sq.Ft. plinth)	Rs	5,67,000/-
ii)	Equipment	Rs	6,33,000/-
iii)	Furniture	Rs	40,000/-
iv)	Library	Rs	<u>75,000/-</u>
	Total	Rs	<u>13,15,000/-</u>

.... contd .

Recurring

i) Staff Salary (only as per sanctioned posts)	Rs	2,41,660/-
ii) Library recurring grant	Rs	7,500/-
iii) Other recurring expenditure for an intake of 30 students	Rs	66,000/-
		<hr/>
Total	Rs	3,15,160/-

Approved on 25.7.1974.

Schemes approved on the recommendations of the Southern Regional Committee

1. Introduction of Electronics and Communication Engineering Courses at (i) P.S.G. College of Technology, Coimbatore (ii) Coimbatore Institute of Technology, Coimbatore (iii) Govt. College of Technology, Coimbatore and (iv) A.C. College of Engineering and Technology, Karaikudi.

Additional facilities for each Centre

Non-Recurring

Building (6000 Sq.ft. plinth area)	Rs	1,50,000/-
Equipment, Furniture and Library	Rs	6,56,000/-
		<hr/>
Total	Rs	8,06,000/-
Recurring(per annum)	Rs	2,34,000/-

Approved on 17.5.1974.

The scheme had already been implemented.

...contd.



2. Introduction of Diploma Course in Electronics at the S.V. Government Polytechnic, Tirupathi with an intake of 30 students per year.

Non-Recurring

Building (7,760 Sq.Ft. of Plinth area)	Rs	1,50,000/-
Equipment, Furniture and Library	Rs	3,33,000/-
Total	Rs	4,88,000/-

Recurring (per annum)

Staff Salaries	Rs	70,800/-
Maintenance	Rs	13,500/-
Total	Rs	84,300/-

Approved on 7th May, 1974. The Scheme was implemented from the academic year 1975-76.

3. Development of the P.E.S. College of Engineering, Mandya.

Non-Recurring

Buildings (53250 sq.ft. area plus a cycle shed for 300 cycles)	Rs	11,52,880/-
Equipment, Furniture & Library	Rs	27,77,000/-
Total	Rs	39,29,880/-

Recurring (per annum)

Staff Salaries	Rs	3,32,450/-
Maintenance	Rs	97,100/-
Students Amenities	Rs	7,200/-
Total	Rs	4,36,750/-

Approved on 10th September, 1974. The Scheme has already been implemented.

...contd.

4. Introduction of Diploma Course in Electronics at the Government Polytechnic, Gulbarga with an intake of 30 students per year to be adjusted in the overall sanctioned intake of the Polytechnic.

Non-Recurring

Buildings (7,760 sq.ft. of plinth area)	Rs	1,50,000/-
Equipment, Furniture and Library	Rs	3,38,000/-
Total	Rs	4,88,000/-
Recurring (per annum)	Rs	84,000/-

Approved on 1st May, 1974. The scheme has already been implemented.

5. Establishment of a School of Printing Technology in Mysore City with an admission of 30 students each in Letterpress and Lithography.

Non-Recurring

Building	Rs	6.65 lakhs
Equipment	Rs	21.49 lakhs
Library Books, Furniture and Library Equipment	Rs	0.25 lakhs
Furniture	Rs	0.37 lakhs
Total	Rs	28.76 lakhs

Recurring expenditure per year

Staff Salaries	Rs	1,53,000/-
Periodicals and Journals	Rs	9,000/-
Consumable Stores	Rs	20,000/-
Contingencies	Rs	15,000/-
Total	Rs	1,97,000/-

Approved on 1st June, 1974. The scheme was implemented from the academic year 1975-76.

6. Introduction of Part-time degree courses in Civil, Mechanical and Electrical Engineering at the B.M.S. College of Engineering, Bangalore with an annual intake of 120 students.

Non-Recurring

Building(5250 Sq.ft. plinth area)	Rs	1,05,000/-
Library and Furniture	Rs	1,00,000/-
Total	Rs	2,05,000/-

Recurring (Per annum)

Staff Salaries	Rs	2,54,800/-
& Maintenance/Contingencies	Rs	78,000/-
Total	Rs	3,32,800/-
Less income from tuition fees	Rs	1,44,000/-
Total Net Expenditure or say	Rs	1,88,800/-
	Rs	1,89,000/-

Additional Staff

Professors	4
Asstt. Professors	5
Lecturers	13
Total	<u>22</u>

Approved on 22nd July, 1974. The Scheme has already been implemented.

7. Introduction of Diploma Course in Polymer Technology at Karnataka Polytechnic, Mangalore with an annual intake of 20 students (10 each in Rubber and Plastics technology)

.....contd

Non-Recurring

Buildings (10,500 Sq. Ft. plinth)	Rs	3,67,500/-
Equipment	Rs	11,00,000/-
Library	Rs	30,000/-
Furniture & Fixture	Rs	30,000/-
Total		Rs 15,27,500/-
or say		Rs 15,28,000/-

Recurring (per annum)

Staff Salaries	Rs	1,39,440/-
Honorarium for guest Professors/		
Lecturers from Industry	Rs	6,000/-
Maintenance	Rs	50,000/-
Total		Rs 1,95,440/-

Approved on 26th September, 1974. The scheme was implemented from the academic year 1975-76.

8. Introduction of 3 year Diploma Course in Metallurgy at the Government Polytechnic, Bellary with an additional intake of 30 students per year.

Non-Recurring

Building (15,550 Sq. Ft. (Plinth)	Rs	3,11,000/-
Equipment	Rs	5,00,000/-
Furniture	Rs	30,000/-
Library	Rs	30,000/-
Total		Rs 8,71,000/-

....contd.

Recurring

Staff :

Head of the Department	1
Lecturers	2
Sr. Instructors	<u>2</u>
Total	<u>5</u>

Salaries of teaching staff	Rs	50,000/-
Salary of Workshop staff and Office staff	Rs	20,000/-
Library Books	Rs	7,500/-
Maintenance @ Rs.150 per student	Rs	13,500/-
Total	Rs	<u>91,000/-</u>

Approved on 30th September, 1974. The scheme has been implemented from 1975-76.

9. Introduction of part-time Degree Course in Civil Engineering at the National Institute of Engineering, Mysore with an annual intake of 40 students.

Non-Recurring Nil

Recurring (per annum)

a. Staff salaries	Rs	52,000/-
b. maintenance	Rs	20,000/-
Total	Rs	<u>72,000/-</u>

Approved on 3rd March, 1975. The scheme has been implemented.

.....contd.

10. Increased Central assistance for the purchase of equipment at Government Polytechnic for Women, Madurai.

Name of Course	Amount Sanctioned earlier (Rs. in lakhs)	Amount now sanctioned (Rs. in lakhs)
Civil Engineering	4.28	5.46
Commercial Practice	0.45	0.45
Library Science	0.75	0.75
General furniture & Office Equipment etc.	1.21	1.32
Total	6.69	7.98

or say Rs.8.00 lakhs

Approved on 21st February, 1976.

Schemes approved on the recommendations of the Western Regional Committee.

1. Introduction of 5 years degree course in Chemical Engineering at L.D. College of Engineering, Ahmedabad with an annual intake of 30 students.

Non-Recurring

Building (plinth area of 33,180 sq. ft.)	Rs	11,61,300/-
Equipment	Rs.	12,00,000/-
Furniture	Rs	1,00,000/-
Library	Rs	1,00,000/-
Total	Rs	25,61,300/-
Recurring (ultimate per annum)	Rs	4,51,500/-

Approved on 1st August, 1974. The scheme has been implemented.

....contd.

2. Introduction of Diploma Course in Auto Engineering on sandwich pattern at Govt. Polytechnic, Ahmedabad with an annual intake of 30 students to be adjusted within an overall intake capacity of the Institute.

Non-Recurring

Building (7500 sq.ft. plinth area)	Rs 1,87,500/-
Equipment	Rs 3,00,000/-
Furniture	Rs 15,000/-
Library	Rs 10,000/-
Total	Rs 5,12,500/-

Recurring (per annum) Rs 1,34,000/-

Approved on 2nd August, 1974. The Scheme has been implemented.

3. Introduction of 2 years Diploma Course in Pharmacy at Government Polytechnic, Rajkot with an annual intake of 60 students.

Non-Recurring

Building (9800 sq.ft. of plinth area)	Rs 2,94,000/-
Equipment	Rs 2,00,000/-
Furniture	Rs 30,000/-
Library and Aids	Rs 20,000/-
Total	Rs 5,44,000/-

Recurring (per annum) Rs 1,47,000/-

Approved on 3rd August, 1974.

....contd.

4. Introduction of part-time Degree Courses in Civil Mechanical and Electrical Engineering at the Faculty of Engineering and Technology at the M.S. University of Baroda.

Non-Recurring

1. Library (Additional Books)	Rs	30,000/-
2. Furniture (Lockers etc.)	Rs	10,000/-
3. Electrification of Class Rooms, Drawing Halls, Library etc.	Rs	15,000/-
		<hr/>
Total	Rs	55,000/-

Recurring

1. Pay & Allowance & TA of staff	Rs	1,36,135/-
2. Contingencies @ Rs.170/- per student	Rs	40,000/-
		<hr/>
Total	Rs	1,76,935/-
or say	Rs	1,77,000/-

Approved on 23rd October, 1974.

5. Shifting of diploma course from L.E. College of Morvi to the Government Polytechnic, Rajkot

Non-Recurring

Building (3,000 Sq.ft. @ Rs.35 per sq.ft.)	Rs	1,05,000/-
Equipment	Rs	1,90,000/-**
Furniture	Rs	15,000/-
Library Books	Rs	25,000/-
		<hr/>
Total	Rs	3,35,000/-

\*\* The amount for the purchase of equipment should be provided from the funds already sanctioned.

.....contd.



Recurring

Contingencies @ Rs.170/-  
per student for additional  
students 300X170 Rs 51,000/-

No additional staff has been suggested since  
the staff will be gradually transferred from  
Morvi to Rajkot.

Approved on 31st October,1974. The scheme is  
being implemented.

6. Increase in admission in Civil Engineering  
Degree Course from 80 to 120 at the L.E.  
College of Engineering, Morvi.

Non-Recurring

Building (3,000 Sq.Ft.  
@ Rs.35 per sq.ft.) for  
setting up a new Hydraulic  
laboratory. Rs 1,05,000/-

Equipment Rs 87,000/-

Library (Additional books) Rs 15,000/-

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Total Rs 2,07,000/-

Recurring

Pay and Allowances of  
staff (one Lab.Assistant  
in scale of Rs.120-240) Rs 4,500/-

Approved on 12th November,1974.

.....contd.

7. Introduction of diploma course in Plastic Engineering at Government Polytechnic, Ahmedabad with an annual intake of 30 students to be adjusted within the overall sanctioned intake of this Polytechnic.

Non-Recurring

Building	Nil
Equipment	Rs 8,00,000/-
Library	Rs 20,000/-
Furniture & Fixture	Rs 15,000/-
	<hr/>
Total	Rs 8,35,000/-
Recurring (Per annum)	Rs 1,73,000/-

(this also includes stipends of Rs.150 P.M. per student for 30 students for 6 months).

Approved on 2nd July,1975. The scheme has been implemented.

8. Introduction of 4-year part-time degree course in Electronics and Communication Engineering at L.D. College of Engineering, Ahmedabad with an annual intake of 15 students to be adjusted within the existing sanctioned intake of 100 students for part-time degree courses of the college.

A. Non-Recurring

i) Library (additional books)	Rs 5,000/-
ii) Lockers, Cabinets etc.	Rs 8,000/-
iii) Small Equipment	Rs 7,000/-
	<hr/>
Total	Rs 20,000/-
	<hr/>

....contd.

B. Recurring

i) Appointment of one full time lecturer	Rs	15,000/-
ii) Honorarium to experts from industries for taking classes	Rs	10,000/-
iii) Honorarium to staff members for theory and practical classes	Rs	20,000/-
iv) Travelling allowances	Rs	2,000/-
v) Honorarium to the Lab. Assistant	Rs	1,600/-
vi) Honorarium to the Machine Attendants, Peon, Hamals etc.	Rs	2,400/-
vii) Contingencies @ Rs.170/- per student (15X4=60)	Rs	10,000/-
		<hr/>
Total	Rs	61,000/-
		<hr/>
Less income by way of fees @ Rs.200/- per year per student for 60 students	Rs	12,000/-
		<hr/>
Net Deficit	Rs	49,000/-

The scheme was approved on 1st April, 1976.

Item No. 5 : To report the Model Bill for setting up State Boards of Technical Education as Statutory Bodies.

The Council at its 21st meeting held on 22.4.1972 considered the report of the special committee on Reorganisation and Development of Polytechnic Education (Damodaran Committee). The Council approved the plan of action and emphasized the importance of various measures included in the Plan of Action for the development of Polytechnic Education. One of the measures was the setting up of a State Board of Technical Education in each State as a statutory body for coordinated development of Polytechnic Education in the State, continuous evaluation of standards, holding of examinations and award of diplomas and recommended that the Ministry should prepare a Model Act for the guidance of the State Governments for establishment of State Board of Technical Education as statutory bodies.

The Model Bill, prepared in consultation with committee appointed by the Chairman, A.I.C.T.E., was finalised in consultation with the Ministry of Law and Justice has already been forwarded to all State Governments for adoption, and is under their consideration. A copy of the Model Bill may be seen at Annexure \_\_\_\_\_

The Model Bill is placed before the Council for information.

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Item No.6: To report the action taken on the recommendations of the Review Committee for the Development of Regional Engineering Colleges.

The Report of the Review Committee for Regional Engineering Colleges was considered by All India Council for Technical Education at its last meeting held on the 17th May, 1974 at New Delhi. The Council generally endorsed the recommendations of the Review Committee for Regional Engineering Colleges and noted that the report had already been circulated to the State Governments, all the Regional Engineering Colleges and the University Grants Commission for their comments. The Council, however, recommended that the composition of the Board of Governors of these Colleges may be modified to provide adequate representation for the Central Government and that the existing character of these colleges both in regard to admissions and recruitment policies should be maintained.

The Council also endorsed the views of its Secretariat that it may not be desirable to establish a Council with statutory powers for the management of the Regional Engineering Colleges as visualised by the Review Committee. The Council, however, recommended that, as proposed by the Secretariat, an Advisory Committee for all these colleges to advise the Union Minister of Education on all policy matters and laying down guidelines in respect of these colleges may be constituted. The composition of the Advisory Committee should include all concerned interests, including industry and the engineering profession.

The Council recommended that the recommendations made by the Reviewing Committee, with the modifications suggested above, should be further considered for appropriate decision and action by the Central Government in the light of the comments that may be received from the State Governments, University Grants Commission, Planning Commission, and the institution concerned.

In consultation with the State Governments, it was decided to provide for the following composition for the Board of Governors in the Regional Engineering Colleges:-

- (1) Chairman to be appointed by the State Government with the approval of the Central Government.
- (2) to (4) Three nominees of the State Government.
- (5) to (7) Three nominees of the Central Government.
- (8) A representative of the A.I.C.T.E.
- (9) Vice-Chancellor or a University Professor nominated by the Vice-Chancellor of the University to which the College is affiliated.
- (10) & (11) Two industrialists/technologists (non-official representatives) in the region to be nominated by the Central Government in consultation with the State Government.

Contd/-

- (12) A nominee of the IIT in the Region.
- (13) A nominee of the University Grants Commission.
- (14) to (15) Two representatives of the Faculty of the College.
- (16) Principal of the College as ex-officio Member-Secretary.

All the Regional Engineering Colleges have been requested to re-constitute the Board of Governors according to the above revised composition.

The Council may like to suggest a suitable date by which the Regional Engineering Colleges should re-constitute their Board of Governors according to the above revised composition. The Council may also like to suggest the action to be taken in case some Colleges do not reconstitute their Board of Governors by the prescribed date.

The matter of constitution of an Advisory Committee for all the Regional Engineering Colleges to advise the Union Education Minister on all policy matters and laying down guidelines in respect of these Colleges, (as recommended by the All India Council for Technical Education) will be taken up after the Boards of Governors of these Colleges are reconstituted according to revised composition.

The Chairman of the AICTE set up a Development Committee consisting of the following members to consider the proposals made by the Regional Engineering Colleges to the Review Committee and to suggest which of the proposals required more detailed examination in the context of the needs of the country and the capacity of the individual Colleges taking into consideration the facilities that are already available in the respective Institutions:-

1. Dr. Jai Krishna, --- Chairman  
Vice-Chancellor,  
Roorkee University.
2. Dr. P.K. Kelkar, --- Member  
Ex-Director,  
IIT, Bombay.
3. Prof. G.S. Laddha, --- Member  
Director,  
A.C. College of Technology,  
Madras.  
(Nominee of UGC).

Contd/-

4. Prof. T.R. Anantaraman, --- Member  
Professor of Metallurgy,  
Banaras Hindu University  
(Nominee of UGC).
5. Shri H.S. Shahani, -- Member-Secretary  
Joint Educational Adviser (T),  
Ministry of Education & S.W.

The Development Committee met at New Delhi on the 24th March. 1976. The Committee examined in detail the proposals made by each College and recommended as follows:-

(a) Consolidation of equipment facilities in laboratories and workshops

Each College may be provided a grant of Rs. 5 lakhs for the modernisation of and replacement of obsolete equipment. (The College at Silchar does not attract this recommendation as it is still in the process of establishment as per the original norms.)

(b) Provision of computer facilities

Due to standard of work in the Colleges and increasing academic activities in these Institutions, the Committee desired that normally each of these Colleges should be provided with a small computer (TDC-12). However, if because of the non-availability of funds some priority has to be indicated, the Committee suggested that the following Institutions could be provided immediately with these computers, with the other Colleges to be followed up later:

- (1) Warangal
- (2) Surathkal
- (3) Tiruchirapalli
- (4) Allahabad
- (5) Nagpur
- (6) Durgapur

(c) Provision of additional funds for the development of College library

An additional grant of Rs. 2 lakhs be made for the development of library for each College.

(d) Provision of amenities on the campus

Keeping in view the financial constraints

contd.

at the present moment, the Committee recommended that each College may be provided only following amenities at present:-

- (1) An open-air auditorium at an estimated cost of Rs.1 lakh.
- (2) Audio-visual equipment for each College (consisting of Epidiascope, 16 mm projector etc. costing about Rs.50,000/-).
- (e) Development of existing Courses/starting of new Courses

The Committee recommended that the Visiting Committees may be appointed for each of the following Colleges, for the purpose indicated to examine the proposal or proposals for development at undergraduate level:-

- (1) Regional Engineering College, Calicut  
Provision of Electronics as an elective in the Undergraduate Course in Electrical Engineering, as against the proposal of the College for the starting of a separate undergraduate Course in Electronics.
- (2) Srinagar.  
To consider in general the consolidation and development of the College.
- (3) Kurukshetra  
To consider the consolidation and development of the College.
- (4) Jaipur  
To consider the starting of Electronics as an elective in the Undergraduate Course in Electrical Engineering as against the proposal of the College in starting a separate Course in Electronics Engineering.
- (5) Allahabad  
To consider the starting of Electronics as an elective in the Undergraduate Course in Electrical Engineering as against the proposal of the College to start a separate Course in Electronics Engineering.
- (6) Bhopal  
To consider the requirement for the Architecture and Electronics Courses conducted by the College.

Contd.



- (7) Surat  
To consider the consolidation and development of the College.
- (8) Rourkela  
To consider the introduction of a Degree Course in Production Engineering.

(f) The Committee desired that the proposals of the following Colleges as indicated may be considered by the Board of Postgraduate Studies in Engineering Research:-

- (i) Srinagar  
The College is offering a P.G. Course in Chemical Engineering with only five students. The matter of continuing this Course will have to be examined.
- (ii) Kurukshetra  
The College is offering a one-year Postgraduate Diploma Course in Scientific Instrumentation. Whether this Course could be replaced by a two-year M.Tech. Degree Course in Scientific Instrumentation may be examined.
- (iii) Rourkela  
The College is offering a Postgraduate Diploma Course in Chemical Engineering with only five students. The matter of replacement of this Course by a two-year M.Tech. Degree Course may be examined.

The above recommendations of the Committee have been approved by the Chairman of the AICTE.

The matter is reported to the Council for information.

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Item No. 7: All India Boards of Technical Studies.  
(A) MATTERS FOR REPORT  
(B) MATTERS FOR DECISION

I. ALL INDIA BOARD FOR TECHNICIANS  
EDUCATION.

Since the last meeting of the Council, the Board met once on 31st July, 1975.

(B) MATTERS FOR DECISION

i) Present status of polytechnic education in the country and steps to improve the quality of diploma holders.

The Board noted that the technicians trained by educational institutions are not able to accept the responsibility of the shop floor and are not able to meet the challenges of the industry and fast changing technology. The diploma holders have neither developed the skill, nor the desired academic competence. The Board further noted with regret the very low expenditure per student on consumable and raw materials and also that the bulk of equipment in polytechnics was purchased in 1950s and 1960s and it has not been possible for the institutions to replace the obsolete equipment. Taking these deficiencies into consideration the Board made the following recommendations:-

- (1) That the students before admission should be screened for their aptitude and potential.
- (2) Efforts should be made to increase per capita expenditure on raw materials and consumables as recommended by the AICTE.
- (3) The obsolete equipment should be replaced.

Secretariat Note:

For purposes of ascertaining the aptitude of the prospective students of the technician courses, it is necessary to devise certain well formulated aptitude tests which bring out clearly not only the potential of the individual concerned but also his capacity and enthusiasm for the proposed course which he is to take. While a preliminary screening certainly is to be made by the authorities concerned with the admissions to the technicians' courses in respect of the minimum

Contd/.....

entry requirements depending upon the marks obtained at the qualifying examinations, perhaps a flexible/sliding scale in respect of different groups of candidates taking into account their background, environment, etc. has also to be formulated. While the students from the qualifying examinations from the urban centres might be in a position to take one set of tests, it is necessary for those with semi-urban or entirely rural background to have a different set of tests so that not only their potential and later competence for successful completion of the technician course is evaluated, but also even in the beginning certain remedial/supplemental courses could be devised for such of those students to come up to an acceptable common minimum standard of entry for the technician courses. Again, sufficient attention has also to be given to first generation learners and other weaker sections of the society. The Technical Teachers' Training Institutes in the respective regions will be able to help the concerned State Governments for preparing different aptitude tests, both practical and written, to suit various situations.

- ii) Proposal of the State Government of Madhya Pradesh for relaxation in experience in admission qualifications to part-time degree courses for diploma holders.

The State Government of Madhya Pradesh had appointed a State level Committee to consider the demands of polytechnics students. One of the demand which the State Committee recommended for consideration is that the pre-condition of two years experience for admission to part-time degree courses should be reduced to one year.

The Board did not agree with the proposal of the Government of Madhya Pradesh for relaxation in the duration of experience prescribed for admission to part-time degree courses for diploma holders.

Item No. 7-II.

II. MANAGEMENT BOARD

Since the last meeting of the Council the Management Board held one meeting on 28th July, 1975.

(A) MATTERS FOR REPORT

- i) Proposals for organising full time M.B.A. course at universities of Gauhati, Surat and Ahmedabad.

The Board considered the report of the Visiting Committee set up to examine the proposals of the Universities of Gauhati, South Gujrat and Gujrat, for organising 2-years full-time M.B.A. programme. A copy of the Report of the Visiting Committee is placed at Annexures V.

In this context, the Board reviewed the norms for the Faculty approved by the Board at its meeting in July, 1972 and incorporated in the Reports of the Visiting Committee. It was decided that the pattern of teaching staff for full-time M.B.A. Course with a student intake of 30 per year should have three Professors of whom one could be designated as the Director of Head of the Department. A member of the Faculty, at or above the level of the Reader, will have to be incharge of placement functions and he will be assisted by a Placement Officer on a scale approved by the University Grants Commission in consultation with the University concerned. The Expenditure on staff for the library and the secretarial support would be provided within 10% of the total expenditure on teaching staff, depending upon the needs of the Department. The Board agreed that this pattern would continue till the Board's July, 1972 pattern is reviewed taking into consideration the observations already made by the University Grants Commission on the pattern approved by the Board at that time. The Board also agreed that the institutions which had started their full-time M.B.A. Course before this revised pattern of staff was accepted by the Board, could also take advantage of this revised pattern and appoint additional staff provided the positions earlier recommended have already been filled up. It was recommended that in such cases of additional staff assistance to an extent of 50% of the expenditure involved may be offered.

The Board accepted the report of the Visiting Committee and recommended the starting of a full-time M.B.A. Course at Gauhati University with an annual intake of 30 students and the following financial assistance for providing physical facilities for the purpose.

NON-RECURRING

Buildings	Rs. 6.00 lakhs
Equipment including laboratory & Furniture	Rs. 1.60 lakhs
	<hr/>
Total	Rs. 7.60 lakhs
	<hr/>

RECURRING (ANNUAL)

Staff salaries, Library and Contingencies.	Rs. 4.19 lakhs (Ultimate)
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The Board also recommended that the possibility of the course approved at Gauhati University serving as a regional centre should also be considered.

As regards the proposals of South Gujrat University, Surat and Gujrat University, Ahmedabad the Board noted that the Visiting Committee had approved the starting of full time M.B.A Course at both the centres. The Board also noted that while Surat, which had been conducting part-time course since 1970, with the approval of the Board had successfully built up the Department, the centre at Ahmedabad had been assured of substantial support from the business and industrial community at Ahmedabad. The Board observed that as a long-term measure, with the growing needs of the country for small scale entrepreneurs, the experiment and experience of Surat is considerable. The additional input required for the centre at Surat to start the full-time M.B.A. Course was comparatively less than that required for the proposed centre at Ahmedabad. If the Board did not at this stage support the Centre at Surat which had started working with the earlier approval of the Board, not only the centre might languish in course of time but also the investment made therein will become infructuous. In view of this, the Board recommended that the proposal of the South Gujrat university to start the full-time M.B.A. Course with an annual intake of 30 should be given first preference.

The Board was also aware that the centre at Ahmedabad had immense potential and considerable local financial support. In view of the special circumstances of the State like Gujrat which is industrially advanced and therefore could sustain more than one centre for a full-time M.B.A. Course, the Board recommended that in case Central Government (U.G.C.) could consider the possibility of extending financial support to a second centre in Gujrat, the proposal of the Gujrat University for a full-time M.B.A. Course at Ahmedabad may also be accepted.

The Board recommended the provision of the following physical facilities for organising the full-time M.B.A. Course at both the centres.

SOUTH GUJRAT UNIVERSITY, SURAT.

I. NON-RECURRING

Buildings:

- |  |                |
|--|----------------|
| i) An additional plinth area of 4000 Sq. ft. | Rs. 1.60 lakhs |
| ii) Equipment & furniture (lump Grant)       | Rs. 0.55 lakhs |
| iii) One Mini Bus                            | Rs. 0.65 lakhs |

Rs. 2.80 lakhs

II. RECURRING

Teaching Staff

- |   |   |                 |
|---|---|-----------------|
| i) Professor  | 2 |                 |
| ii) Assistant Professor/Reader  | 2 |                 |
| iii) Teaching/Research Associates and case Analysts.                          | 5 |                 |
| iv) Placement Officer   | 1 |                 |
| v) Guest Speaker, Part-time staff equivalent to about 300 hours. (Lump Grant) |   | Rs. 0.20 lakhs. |

Non-Teaching Staff

- vi) Staff for library and Secretarial support to be provided within a ceiling of 10% of the expenditure on teaching staff depending upon the need of the Deptt.

Library

- |  |                |
|--|----------------|
| vii) Lump provision of Rs. 20,000/- per annum  | Rs. 0.20 lakhs |
| viii) Contingencies and other expenditure @ Rs. 200/- per student per annum (lump provision) | Rs. 0.06 lakhs |

Contd/-

GUJRAT UNIVERSITY, AHMEDABAD

I. NON-RECURRING

Building

- i) For laboratories, staff-rooms, class-rooms, library and Administrative (Additional) Plenth area of 4000 sq.ft.) Rs. 1.60 lakhs.
- ii) Education & Research equipment for Laboratories, Library, Office Machines and furniture. Rs. 1.30 lakhs

Total Rs. 2.90 lakhs

II. RECURRING

Staff (Academic)

- i) Professor 3
- ii) Asstt. Professor/  
Readers 4
- iii) Teaching/Research-  
Associates includ-  
ing case analysts 6
- iv) Placement Officer  
(As decided in  
consultation with  
the UGC) 1

Non-teaching staff

- v) Staff for library and secretarial support within a ceiling of 10% of the expenditure on teaching staff depending upon the need of the Departments
- vi) Library (Lump provision per annum) Rs. 0.20 lakhs
- vii) Contingencies and other expenditure @ Rs. 200/- per student per annum Rs. 0.06 lakhs

The above recommendations of the Board were considered and approved by the Chairman on behalf of the Council.

ii) Training programme for executives for Public Enterprises.

The Board at its meeting held in April, 1974 considered the suggestion that all Indian Universities/Institutions offering traditional courses in Management should consider the need for organising suitable training programmes for Junior Executives for Public Enterprises as many of the organisations and enterprises engaged in production of essential goods and services did not have any facility for providing management training to their personnel. The Board expressed the view that institutions may organise suitable programmes even apart from the existing traditional course.

The views of the Board were communicated to all the institutions. In response, the university of Jammu requested assistance for organising a training programme for Public Sector personnel.

In the meantime, the Bureau of Public Enterprises Government of India sent a communication emphasising the importance of this facet of Management training which had already been noted by the Board also. The Bureau of Public Enterprises suggested a syllabus for the training course which is placed at Annexure VI.

The Board at its last meeting considered the matter and agreed to bring to the notice of the institutions conducting management course, their earlier recommendation for organising suitable programmes for Executives from Public Sector Undertakings. The Board also agreed to bring to the notice of the institutions, the syllabus prepared by the Bureau of Public Enterprises for such a course so that the response from the institution may be considered by the Board through its courses Committee.

The Board was also of the view that no special assistance need be extended to any institutions/organisations for the conduct of such courses which should form an integral part of their normal programme.

iii) Proposals for organising M.B.A. Course.

Proposals for organising M.B.A. degree course were received from the following institutions/universities.

Contd/-



1. Indian School of Mines, Dhanbad.
2. Bhagalpur University, Bhagalpur.
3. Bihar Institute of Technology, Sindri.
4. Shri Guru Singh Sabha, Bihar.
5. Berhampur University, Berhampur.
6. College of Accountancy & Management Studies, Cuttack, (Through Government of Orissa).
7. Institute of Business Management & Commerce, Shillong (Through Government of Meghalaya)
8. Venkateswara University, Tirupati.
9. Awadesh Pratap Singh University, Rewa.
10. Indore University, Indore.
11. Punjabi University, Patiala.
12. University of Calicut, Calicut.
13. Udaipur University, Udaipur.
14. R.A. Poddar Institute of Management (University of Rajasthan), Jaipur.
15. Vikram University, Ujjain.
16. Nagpur University, Nagpur.
17. Indian Institute of Social Welfare & Business Management, Calcutta.
18. Jadavpur University, Calcutta.

The Board observed that there were a large number of proposals from institutions/universities in the same State/Region. Keeping in view the limited financial resources available for development of management education, during the Fifth Plan period and the earlier decision of the Board that in order to provide for consolidation of the existing courses; only one centre in each State/Region should be considered for the starting of a management course, the Board was of the view that proposals now made need to be examined in detail to locate one university centre in each Region where there did not exist any such facility. The Board has set up Regional Task Forces to examine these proposals in consultation with the State Governments concerned and make recommendations for organising M.B.A. degree course in selected centres in States/Regions.

The State Governments concerned are being consulted before the visit of the Task Forces.

iv) Development of Training in Foremanship & Supervision.

The Board requested its Committee on Foremanship & Supervision to review the aims and objectives of the training centres in Foremanship & Supervision.

The Committee held its meeting on 28th July, 1975 and recommended as under:-

1. The aim of the Foremanship & Supervision course should be to train person for supervisory positions in industry in the general principles of work and labour management as well as to develop the capacity to work through the problems they meet from day to day.
2. Refresher programmes and Advanced training in specific areas of management also could be arranged for further advancement of those aspiring to have the ability for the same.
3. While the courses as at present framed, are academically sound, more stress should be laid on human relations and behaviour pattern of workers in the programmes.
4. There should be an element of flexibility in the courses offered with reference to different topics covered under the programme. With a core content, there should be provision for varying emphasis to be given in the additional components depending upon the level and type of group that is being trained.
5. If necessary, instruction in regional languages should also be resorted to. Necessary instructional materials in the regional languages, therefore, have to be produced.
6. To obviate organisational problems generally the courses should be only for those sponsored by the industry and it should be made obligatory on the part of the employer to train adequate number of persons under the Foremanship and Supervision programme.
7. Generally the courses should be conducted only as an in-service training programme and expenditure on organising the course should be treated as an essential in-house training programme.

The Board accepted the report of the Committee. The course for the Foremanship & Supervision is being revised by the Committee.

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(B). MATTER FOR DECISION

i) Centre for Faculty Development

The Board set up a Committee to prepare a scheme for the establishment of a Faculty Development Centre for Management Education. The report submitted by the Committee was considered by the Board at its meeting held on 28th July, 1975. A copy of the report is placed at Annexure VII.

The Board accepted in general the report of the Committee on Faculty Development for Management Education. The Board decided that faculty training should be offered for a period of 3 months for other members of the Faculty on the general pattern of three modules suggesting of broadening knowledge, offering specialisation and subsequent field work.

The Board recommended that the universities institutions which sponsor candidates for training at the Faculty Development Centre should appoint a substitute and also pay the full salary and other emoluments to which the sponsored candidate is entitled. The Board further recommended that a monthly Fellowship of Rs. 250/- per month per candidate should be offered to these sponsored candidates, in addition to affording free accommodation at the training centres. The Board noted that the University Grants Commission have certain norms whereby the sponsoring institution is reimbursed the salary of the sponsored candidate and for the substitute. This could be adopted for the Management programme also.

The Board was of the view that this Multi Centre approach would facilitate the faculty to have effective training in the areas of their specialisation and choice and also contribute to a multiplier effect in providing them with sufficient case studies and other literature for preparation of teaching material.

Taking this into consideration the Board recommended an annual expenditure of Rs. 5 lakhs for this purpose.

ii) Consolidation of Management Educational programme in selected institutions.

The Board has been recommending for quite sometime the need to consider the approved M.B.A. programmes in the various institutions on a par with the post-graduate courses in Engineering and Technology for Central assistance, by extending 100% grants both

at the level of professors and for a period of 3 months

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for the approved recurring and non-recurring estimated cost of expenditure. The Board's recommendation, however, could not be accepted by the Government, primarily because of the inadequacy of available funds. The Board at its meeting held on the 11th April, 1974, while noting the decision of the Government on this matter also observed that the Board's Evaluation Committee which had visited the various Centres conducting approved management courses, had selected 3 Departments/institutions who are doing good work for special support. These are :-

- (a) Department of Commerce and Business Management, Punjab University, Chandigarh.
- (b) Department of Management Studies, Delhi University, Delhi and
- (c) Jannalal Bajaj Institute of Management Studies, Bombay.

The Board accepted the observations of the Evaluation Committee and recommended that these three institutions/Departments should be extended special assistance by the Government of India for their management courses.

The Board reiterated its recommendations for special support for these institutions at its last meeting held on 28th July, 1975. The Board also suggested that institutions in the Eastern and Southern regions also might be identified for similar special support.

The matter is placed before the Council for its consideration. Details about the quantum of assistance to be made available to these institutions will be considered by the Board as and when the same are finalised in consultation with the institutions/Departments.

- iii) To review the manpower requirement in the field of Management and provision of adequate educational facilities for training of personnel.

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The Management Board at its meeting held on 28th July, 1975, authorised the Chairman to set up a Committee to consider the proposal of the All India Management Association to organise a two-year correspondence course in Management.

The Committee met under the Chairmanship of Shri K. T. Chandy, Chairman of the Management Board and examined the proposal of the All India Management Association in detail. A copy of the report of the Committee is placed at Annexure VIII. The Committee was of the view that in order to meet the ever-increasing demand for trained managers, it is good that an organisation like the All India Management Association is offering to help, to whatever little extent that may be, those who cannot have an approach to the scientific management education in the approved Cent-res by other institutionalised and formal means. This makes it incumbent upon the Association to have its course to be of a recognised standard comparable to any conducted at the present approved centres offering M.B.A. course. The Association may, therefore, think in terms of making its course more rigorous with sufficient in-built provision for case-studies, internship, regular and periodic contact with the faculty, project work etc. Candidates for the course should also be taken on a selective basis so that with all the changes suggested, the standard of the final attainment of a candidate for this course is the same as that of the M.B.A. now offered by various approved management education centres. Because of the additional components now suggested by the Committee, the duration of the course will have to be increased to 3-year corresponding to the part-time degree/diploma courses conducted at the universities/institutions. Selection of faculty positions and preparation of course material has also to be made cautiously and judiciously from business and industry and management educators of acknowledged standing.

In this context, the Committee also agreed that there was a need to review the whole situation of manpower requirements in the field of management, availability of management educational facilities and streamline the formal and institutionalised as well as non-formal courses in management education programmes being offered all over the country so that while on the one hand the growth of management movement is encouraged, on the other hand, adequate facilities are created and opportunities provided for all those who have the potential for becoming competent managers to contribute to the nation's economy and growth. This issue has many facets which have to be studied in all their aspects and it is desirable for the Board/All India Council for Technical Education/the Government to appoint a Highpower Committee to look into this matter and make appropriate recommendations in this regard.

The recommendations of the Committee were accepted by the Chairman of the Board.

The matter is placed before the Council for consideration.

- iv) Award of Degree or diploma to students undergoing Part-time Diploma Course in Management.

The Management Board at its meeting held in April, 1974, authorised its Chairman to appoint a Committee to examine whether a degree or a diploma should be awarded to the students undergoing 3-year part-time diploma course in Management. The Chairman of the Board appointed a Committee under the Chairmanship of Prof. S.C. Kuchhal to examine the matter and make recommendations.

The Committee held its meeting in August, 1975 and considered the matter in all its aspects and submitted its report. A copy of the report is placed at Annexure IX.

The Committee was of the view that in case the procedures of selection/admission, the course content and other processes of learning in the part-time courses were comparable with full-time course so as to lead to the same standard of academic attainment and development of skills, then a distinction between these two types of courses does not appear to be necessary. The Committee therefore, recommended that the type of award, whether a degree or diploma to the students, should be left to the authorities concerned.

The Committee also felt that for conversion of a part-time 3-year diploma course into a degree course the following conditions should be ensured :-

- i) Selection of students for the part-time course should be careful and rigorous as in the case of full-time students. (Due consideration should be given to their work-experience.
- ii) Contents of the Part-time course, scheme of study and other aspects of curricula should normally be similar to the full-time course.
- iii) Standard attained by the part-time students should be comparable to the standard attained by students of the full-time degree course.

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The Committee recommended that in order to ensure that the above mentioned criteria are followed, all proposals received for the conversion of a part-time diploma course into a full-time degree course should be examined by the Board in the light of the observations of a Visiting Committee specifically appointed for the purpose.

The above recommendations of the Committee have been approved by the Chairman of the Management Board.

The matter is placed before the Council.

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III. BOARD OF POST GRADUATE ENGG. STUDIES & RESEARCH.

(A) MATTER FOR REPORT

i) Scholarships

As already reported to the Council at its last meeting, the Board had appointed a Task Force under the Chairmanship of Dr. Jai Krishana, to review the whole structure of technical education at the Postgraduate level. The Task Force completed its work in June, 1974 and its recommendations were considered by the Board at its last meeting held on 7th August, 1974.

The Board recommended that the value of Post Graduate Scholarship may be increased from Rs.250/- to Rs.400/- P.M. On the recommendations of the Task Force/Board the value of Post Graduate Scholarship has been enhanced to Rs.400/- P.M. with effect from 1st July, 1974.

ii) Research Scholarships

The Board recommended that the value of Doctoral fellowship should be increased to Rs.500/- in the first year and Rs.600/- P.M. in the subsequent years plus Rs.1500/- per fellow per annum for contingent expenditure. The Post Doctoral associateship should be instituted and its value should be between Rs.700/- to 1100/- P.M. depending upon experience and qualifications. In addition to this a grant of Rs.2000/- per annum should be given for contingent expenditure. The Chairman of the Council has already approved the enhancement in the value of above scholarship.

iii) Consolidation of P.G. Courses.

It is absolutely necessary that first preference may be given to the consolidation of the existing courses, and therefore new P.G. courses should be established only in relevant areas depending on their demand and within the resources available. Proliferation of existing courses should be avoided.

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iv) NEW P.G. COURSES APPROVED.

The Board recommended the following centres for Post Graduate Studies:-

<u>Name of the Institution</u>	<u>Course Approved</u>	<u>Intake</u>
1. Assam Engg. College, Gauhati.	P.G. degree course in Water shed Management including Flood Control.	10
2. Govt. College of Pharmacy, Bangalore.	<u>M. Pharm.</u> i) Pharmacognosy ii) Pharmacology iii) Pharmaceutical Chemistry.	30 (not exceeding 10 in each field)
3. S.V. Regional College of Engg. & Technology, Surat.	P.G. degree course in Public Health Engineering.	10

The approval of the Chairman of the All India Council for Technical Education has already been conveyed for introduction of these courses.

v) FINANCIAL ASSISTANCE TO P.G. COURSES IN TOWN PLANNING ON 100% BASIS LIKE OTHER P.G. COURSES IN ENGG. & TECHNOLOGY.

The Board recommended that P.G. Courses in Town Planning should be considered as equivalent to other P.G. courses in Engineering and Technology and it should come under its purview and should be entitled to 100% assistance. Past cases need not be opened and they should be continued to be financed from the same source from which they are approved in respect of Non-recurring item of expenditure but for Recurring items the central assistance may be provided from the beginning of the 5th Five Year Plan as for other P.G. courses. The Board further recommended that new P.G. courses in this field should be sanctioned only on its recommendations. The Chairman of the All India Council for Technical Education has already approved the above recommendations of the Post Graduate Board.

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(B) MATTERS FOR DECISION

i) Teaching Staff

The Staff student ratio at the undergraduate and post-graduate levels should be 1:10 and 1:5 respectively. The Teaching Staff for P.G. Courses should be calculated on this basis. The Institutions may be permitted to invite visting professors wherever deemed necessary and the expenditure met on them against the provision available for sanctioned P.G. Courses.

ii) Supporting Staff

The financial provision of supporting staff may be increased from 15% to 25%.

iii) Percentage of marks for award of scholarship.

The percentage of marks required in the first degree examination in Engg./Technology for the award of this scholarship should be raised from 55% to 60%.

Note:- Since under examination reforms, the universities are being asked to give grades and not percentage of marks, it is for consideration if this recommendation be accepted.

iv) Library (Recurring)

Rs.10,000 per year should be provided as the recurring library grant including journals and library equipment for the first course and Rs.5,000/- for every additional course.

v) Consultancy work

Students may be associated in consultancy work within the campus, computer services, documentation etc. and should be adequately paid for the services rendered.

vi) Building equipment and library (Non-Recurring)

No facilities for construction of building should be provided for postgraduate courses and the provision for equipment and library (non-recurring) may be made at the rate of Rs.2 lakhs per P.G. Course.

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vii) New Courses

New Post Graduate courses should be established only in relevant areas depending on their demand and within the resources available. Proliferation of existing courses should be avoided.

viii) P.G. Diploma course

P.G. Diploma course should be sanctioned only in those institutions where P.G. Degree course in the relevant subject field has already been approved. However, in special circumstances if an institution has developed facilities of a high order in a subject field and there is an established demand for P.G. Diploma courses in that field, such proposal can be considered on its merit on the clear understanding that if a P.G. Diploma course is approved it did not automatically establish a claim for starting a P.G. Degree course in future.

ix) Qualifications for teaching posts

The Board has recommended to the council that a Post graduate degree in appropriate field should be made an essential qualification for fresh recruitment to teaching posts in all engineering colleges.

x) Duration of the course

Well established centres may be allowed to conduct parallel stream of post graduate courses for working engineers on the basis of established demand. The duration of such courses should also be two years of which 15 months should be spent in the institutions/universities and the remaining 9 months may be allowed to be spent by the engineers in their parent organization for preparation of dissertation, subject to facilities and expertise being available in the organizations.

The matter is placed before the Council for consideration.

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Item No. 8(a): To consider the matter of duration of the first degree course in engineering and technology as a sequel to the revised pattern of school education.

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The matter regarding the duration of degree course in engineering and technology as a sequel to the revised pattern of school education of 10+2 has been engaging the attention of the Joint Committee of the A.I.C.T.E. and U.G.C. for some time past. The Joint Committee asked the Study Group under the Chairmanship of Dr. C. S. Jha, Director, IIT, Kharagpur to study the question in depth. At present, the duration of the degree course is four years in some institutions with Intermediate Science as admission qualification, and five years at other with Higher Secondary as qualification for admission.

The matter regarding duration of the degree course in the light of the new pattern of secondary education is to be considered by the above Joint Committee of the A.I.C.T.E. and the U.G.C. at its meeting to be held on 5th May, 76 under the Chairmanship of Prof. Satish Chandra, Chairman, University Grants Commission. The recommendations of the Joint Committee will be circulated to the members as soon as the same are available.

The Council may consider the matter in the light of the recommendations made by the Joint Committee.

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Item No. C(b): To consider the matter of duration of the diploma courses in Engineering and Technology as a sequel to the revised pattern of school education.

Most of the diploma courses in Engineering and Technology at the Polytechnic level are of 3 year duration. In case they are based on sandwich pattern with alternative institutional and industrial training, the duration of the course is between  $3\frac{1}{2}$  to 4 years. The Damodaran Committee on Reorganisation of Polytechnic Education has also recommended this minimum duration taking into account the present pattern of entry qualification which is secondary or higher secondary school course.

In view of the introduction of changed education pattern of 10+2, the duration of the diploma courses also has to be considered and revised. The All India Board for Technicians Education at its last meeting held on 31.7.1975 considered the matter in great detail and felt that this problem should be examined at depth after taking into consideration the curriculum of a high school and higher secondary school. The Chairman of the Board accordingly appointed a committee under the Chairmanship of Prof. G.R. Damodaran. The committee met on 20th October, 1975 and made the following recommendations :-

1. The minimum admission qualification for entry into Technicians Course (Diploma level) be the completion of 10 years school stage.
2. The duration of the full time Technicians Course (Diploma level) be normally three years.
3. A one year advanced Post Diploma Course may be provided for whatever speciality according to the requirements.
4. A  $3\frac{1}{2}$  years sandwich course be provided with the same minimum admission qualification of 10+
5. A part time Technicians Diploma Course of 4 years also be provided for those working in various industries subject to specifying the minimum qualification for entry i.e. 10+

The report of the Committee may be seen at Annexure \_\_\_\_\_

The matter is placed before the Council for consideration.

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Item No. 9: To consider the revised scheme of Quality Improvement Programme.

The Council at its 20th meeting held on September, 23, 1969, recommended a major programme of Quality Improvement for technical education. On the recommendation of the Council, the programme for Quality Improvement was approved by the Government of India in 1970-71. The programme consisted of Fellowships for M.Tech. and Ph.D., Short-term courses for Engineering Colleges and Polytechnic teachers, Curriculum Development for Degree and Diploma Courses, Summer Institute Programme for Colleges and Polytechnic Teachers and training in Industry for College and Polytechnic teachers. The expenditure on this programme since its introduction has been as indicated below:-

<u>Year</u>	<u>Expenditure</u>
1971-72	Rs. 58.34 lakhs
1972-73	Rs. 61.15 lakhs
1973-74	Rs. 63.37 lakhs
1974-75	Rs. 75.78 lakhs
1975-76	Rs. 77.66 lakhs

During this period, the total number of teachers who joined M.Tech. and Ph.D. Programmes was 863. The total number of teachers trained under the Short-term courses is about 7,000. The Summer Institute Programme covered about 1200-1400 teachers every year. Under the training in industry programme, a total number of 2250 teachers have been trained. While sanctioning these programmes for implementation, the Government of India had also decided that the programmes should be assessed and evaluated and if necessary, the services of professional and academic experts may be secured for such evaluation. A review of the programme was accordingly carried out by the ISTE and was considered by the All India Council for Technical Education at its last meeting. The Council decided that the Ministry of Education and Social Welfare should examine the various recommendations made by the ISTE and introduce appropriate modifications in these programmes as well as to expand the programmes during the Fifth Plan period.

The recommendations of the Council have been considered by the Ministry of Education and Social Welfare and the following suggestions have been made for revising and expanding the existing Quality Improvement Programme:

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I. M.Tech./Ph.D. Programmes

(i) Number of Fellowships:

This programme is at present offered at the five Institutes of Technology, Indian Institute of Science, Bangalore and the Roorkee University. Presently, about 125 teachers are being admitted to M.Tech. programme and about 80 for Ph.D. every year. However, during the last 3 or 4 years, demand for places at the Ph.D. level has been considerably more than that for M.Tech. This is mainly due to the fact that large number of people with Masters level qualifications are available for appointment as lecturers. In these circumstances there is a strong case for increasing the number of Ph.D. level places, if necessary, with a corresponding reduction in the M.Tech. fellowship. It is, therefore, proposed that the number of places for Ph.D. be increased from 80 to 100 and that for M.Tech. programme be reduced from 125 to 80 per year. This programme will also include a small provision for science teachers working in Engineering Colleges who are sponsored for Ph.D. programme.

(ii) New Centres:

As mentioned earlier, these programmes were being restricted to seven Institutions mentioned above. There has been a strong demand to extend these programmes to some more well-established institutions, at least in such specialities in which they have fully developed facilities. This matter was accordingly examined by a Committee appointed by the Chairman of the Council under the Chairmanship of Dr. Jai Krishna, Vice-Chancellor, Roorkee University, Roorkee. On the basis of their recommendation it has been decided that the following centres should be included under this programme:

1. Regional Engineering College, Allahabad, (Department of Mechanical Engineering)
2. Regional Engineering College, Warangal, (Department of Civil Engineering).

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3. Visvesvaraya Regional Engineering College, Nagpur (Department of Electrical Engineering).
4. Indian School of Mines, Dhanbad, (Department of Mining).
5. A.C. College of Technology, Madras, (Department of Chemical Engineering)
6. Jadavpur University (Department of Electronics).
7. P.S.G. College of Technology, Coimbatore, (Department of Electrical Engineering)

The response received for these new Centres has not been encouraging. In order to consider de novo the identification of Centres of Excellence for the promotion of Quality Improvement Programme activities, the Development Committee at its 2nd meeting held on 19.4.1976 proposed the following norms:-

- (1) The Department should have produced at least 25 M.Tech.s and 5 Ph.D.s during the last 5 years.
- (2) The Department should have at least 12 faculty members of whom not less than four must have Ph.D. qualification.

(iii) Value of Fellowship:

At present the value of M.Tech. and Ph.D. fellowship is Rs.300/- and Rs.400/- p.m. respectively. In addition, contingent grants of Rs.500/- and 1,000/- per annum respectively are also being paid to each Fellow to meet expenses on visits to industry and other incidental expenses. The value of normal M.Tech. and Ph.D. fellowship which was Rs.250/- for M.Tech. Courses and Rs.400/- for Ph.D. fellowship has since been increased by the Government of India to Rs.400/- p.m. and Rs.500/- p.m. for first 2 years and Rs.600/- p.m. for next two years respectively. In view of this decision of the Government there was a demand from Quality Improvement Programme Fellows and Quality Improvement Programme Centres to raise the amount of fellowship under this programme also. The matter was accordingly taken up with the Ministry of Finance, who desired that this matter may be considered in an inter-ministerial meeting consisting of the Ministry of Education, Ministry of Finance and Planning Commission. A meeting was accordingly held

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and in this meeting it was unanimously decided that the programme should continue and that the amount of fellowship should be decided in consultation with the Ministry of Finance. That Ministry has now suggested that this amount should be reduced to Rs.250/- p.m. as out-of-pocket allowance only to those M.Tech. and Ph.D. scholars who have to pursue their course at a station other than their place of duty. Contingent grants may, however, be paid to all. Since the Ministry of Finance had suggested reduction in the amount of fellowship instead of increasing the same, they have been persuaded to keep the status quo for the year 1976-77. For future years they were informed that since the scheme is being reviewed by the Council, we may await their recommendation. The reduction in the fellowship as suggested by the Ministry of Finance will be a great setback to the programme, which has gone a long way in improving the qualifications of the existing teaching faculty of our Engineering Colleges. It is suggested for consideration of the Council that the value of M.Tech. and Ph.D. fellowship under this programme should be the same as for normal programme.

(iv) Polytechnic Teachers for M.Tech. and Ph.D.

There have been suggestions that the programme of M.Tech. fellowship should be extended to cover teachers in Polytechnics. The main reason for this suggestion is that in some States teachers in engineering colleges and polytechnics are inter-transferable. However, since the main emphasis in polytechnic teaching is on practical experience, an academic programme of the Master's degree level may not be appropriate instrument to improve the quality of polytechnic teachers. Further, the Technical Teachers' Training Institutes already established in the four Regions are offering a long-term training programme for improving the professional competence of polytechnic teachers. Since the need for polytechnic teachers is special one, it is proposed that the M.Tech. and Ph.D. programme under the Quality Improvement Programme need not be extended at present to cover polytechnic teachers.

(v) Extension in the tenure of Ph.D. Fellowship:

The present tenure of Ph.D. Fellowship is three years. There have been several requests

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recently to extend the duration of the Ph.D. fellowship for periods ranging between 3 months to one year. These requests were supported by the Quality Improvement Programme Centres. The main reason for recommending extension has been non-completion of the work. On the other hand, several institutions which had sponsored their teachers found it difficult to spare their teachers for periods longer than three years. In fact, this question was raised at one of the meetings of the Eastern Regional Committee and the recommendation was that the total duration of the Ph.D. programmes should be reduced to less than three years. In these circumstances, it is necessary that the Quality Improvement Programme Centres should be requested not to insist on residential requirement of more than three years on the part of any serving teacher during his Ph.D. Extension upto six months may, however, be granted in exceptional cases provided the nature of work requires the presence of the teachers at the Quality Improvement Programme Centres. In all other cases, the programme should be completed within three years, and whenever possible, after the fulfilment of the minimum residential requirements, teachers may be permitted to go back to their own institutions and complete the work including preparation of the thesis.

There have been suggestions that provision should be made under Quality Improvement Programme for teachers to do Ph.D. at their own institutions. However, it is our view that such facilities need not be provided at this stage, as apart from the inadequacy of provision at present, our objective should be to introduce these fellowships only at such Centres as have already developed their research facilities to a considerable extent.

## II. Short-term Courses and Summer Institute Programme

The existing Quality Improvement Programme Centres, namely, the five Institutes of Technology, Institute of Science, Bangalore; Roorkee University, the four Technical Teachers' Training Institutes and the Allahabad Polytechnic, Allahabad, are at present conducting a variety of short-term programmes throughout the year for improving the professional competence of teachers in engineering colleges and polytechnics.

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It is proposed that these programmes should continue in the Fifth Plan also in the same manner as in the Fourth Plan. Along with these programmes, the Indian Society for Technical Education is also organizing the programme of Summer Institutes which they have been doing since 1964. These programmes are organised by the ISTE during summer/winter vacations at over 40 engineering colleges and polytechnics in the country. It is proposed that these programmes should also continue as in the past during the Fifth Plan.

The existing norms for expenditure on both short-term courses and Summer Institutes have to be reviewed taking into account the increase in costs and prices and also to bring about a measure of uniformity in the rates of expenditure applicable to both. For instance, the existing rate of Rs.13/- per day to meet the expenditure on board, lodge and out-of-pocket allowance under these programmes is grossly inadequate. This will have to be raised to at least Rs.15/- per day. Similarly, there is no provision under the short-term programmes for the supply of resource materials including books, lecture notes etc. to participants as is done under the Summer Institutes. It is, therefore, suggested that the norms of expenditure on both these programmes are made uniform.

### III. Training in Industry:

The experience in the implementation of this programme during the last four years has not been fully satisfactory. According to the existing arrangements the State Directorates of Technical Education/Regional Offices are responsible for selection and placement of teachers in industry for practical training not exceeding three months. Ordinarily, this training is arranged during vacation and neither the Directorates nor the teachers except the States in the Western region have responded to this programme in any significant manner. There is also a feeling that the programmes of training are arranged indifferently and that the main purpose of equipping teachers with adequate practical experience is not being fully achieved. It is, therefore, proposed that the existing programme of practical training in industry should be reorganised. In this connection it may also be mentioned that the Industrial Liaison Board, Gujarat, at their meeting held on 8th April, 1975, discussed about the ways to make the Teachers Training Programme more effective and have made the following suggestions:

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1. The period of training should be at least 5-6 months so that the period can be divided for intensive training in all important Departments. This can be done in two summer vacations.
2. The candidates for training and establishments of training should be selected well in advance.
3. There should be advance visit by the Principals for matching the requirements of the trainees and the establishment and that there should be more frequent visits during training.
4. A meeting of the Executives of Training Organisations, Officers of the Directorate, Principals concerned and few trained teachers should be called to evaluate the scheme.

It is, therefore, suggested that the programme be re-organised and converted into a programme of industrial residencies for a period of one to two semesters. In order that the programme should be well-planned for each teacher and properly supervised, it is suggested that selection and placement be made by a Committee consisting of Regional Officer, the Principal of the Technical Teachers Training Institute in the Region and the concerned State Director of Technical Education. The responsibility for the formulation and supervision of the training for its entire duration be entrusted to Technical Teachers' Training Institute concerned. Since it is proposed to increase the period of training, the total number has to be reduced so that within the same amount we could send teachers for training for a longer duration. Further, since there is already a programme for teachers of Engineering Colleges for M.Tech. and Ph.D. Programme, it is suggested that a larger number of teachers from polytechnics be commissioned in the programme of training in industry. The full details will be worked out after the above proposal of increasing the duration has been accepted.

#### IV, Curriculum Development:

(a) Polytechnic Level programmes: The progress made by the four Technical Teachers' Training Institutes and the Allahabad Polytechnic in the development of

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curriculum for diploma courses has been very satisfactory. It is proposed that this programme should continue in the Fifth Plan and that to the extent necessary, the present ceiling of expenditure may be revised to reflect the level of activity reached. For instance, a monetary ceiling of Rs.1.50 lakhs was indicated for each Curriculum Development Centre, when the programme was approved. However, within this ceiling, the centres find it difficult to produce and supply a very large quantity of teachers' and students' materials prepared by them. Since an important function of these Centres is to disseminate and promote the adoption of the revised curricular material on a wide scale, it is felt that adequate provision should be made for the publication of material produced by them. It is therefore suggested that the existing ceiling of Rs.1.50 lakhs per year for each Curriculum Development Group at the polytechnic level may be revised to Rs.2.50 lakhs per year.

(b) Degree level Programme: The progress made by the Indian Institutes of Technology who have been assigned the responsibility for curriculum development at the degree level has not however made much progress. It is, therefore, suggested that an expert Committee may be appointed to examine the progress of work so far made and to suggest measures for improving and accelerating the pace of work at these Centres including the methodological aspects of curriculum development.

The Council at its last meeting recommended that when the programme of Quality Improvement is expanded during the Fifth Plan, the possibility of setting up at least one cell for Textile Technology may be considered. The question of setting up new Curriculum Development Centres can also be examined by the Expert Committee suggested above.

#### V. New Programmes - Visiting Faculty:

During the Fourth Plan period it has not been possible to make any special provision under this programme for exchange of teachers between institutions and between institutions and industry, though suggestions to this effect have been made by various quarters.

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Nevertheless it is necessary that provision for exchange of faculty is accepted as an important aspect of quality improvement in engineering education. The Institutes of Technology were expected to be the pace-setters for the Regional Engineering Colleges and other Engineering Colleges in the region. One way the Institutes can have an impact on the engineering education would be, if professors from various Engineering Colleges are deputed to other Colleges for a period of one year. Thus there could be a two-way exchange of professors between the IITs and Regional and other Engineering Colleges. These teachers should be assigned post-graduate teaching and research in other institutes and during the period of their deputation, they will draw their regular salaries and allowances from their parent institution, but the host institute should offer free accommodation either in the guest house or in one of the staff quarters and the Government should pay them a fellowship of Rs.750/- per month for out-of-pocket expenses and also TA & DA.

Similarly, top engineers from industry may be deputed to IITs and other well-established institutions for the period to be mutually acceptable to the institutions and the industry. This matter has been discussed with the Chairman, Hindustan Steel Ltd., General Manager, Bharat Heavy Electricals Ltd., Bhopal, and Additional Secretary and Director General, Bureau of Public Enterprises. All of them have welcomed the suggestion and have felt that such an arrangement would not only be beneficial to the institutes concerned, but also to the individuals from the industry. These organisations have promised full cooperation and have suggested that selected persons from industry would be sent on sabbatical leave and the public sector will pay their full salary during the period of deputation. The host institution should offer free accommodation in the guest house or in one of the staff quarters. The Government should pay them an honorarium upto Rs.3000/- depending upon the status of the expert and TA & DA.

The broad final details for implementing the programmes during the Fifth Five Year Plan in accordance with the suggestions made above are given in the attached statement.

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Estimates of Expenditure on Quality Improvement  
Programme in the Fifth Plan

(Amount in lakhs)

	1974-75	1975-76	1976-77	1977-78	1978-79	Total
1. M. Tech./Ph.D. Fellowship (continuing from previous years + 80 M. Tech. and 100 Ph.D.) every year from 1976-77.	23.78	27.50	30.50	32.00	33.00	
2. Short-term Courses (12 Centres offering 3-C courses per Centre per year)	13.12	13.79	16.00	18.00	20.00	
3. Curriculum Development (14 Groups)	15.95	16.81	25.00	30.00	30.00	
4. Summer Institutes (1200-1400 teachers every year)	18.36	10.88	15.00	18.00	22.00	
5. Training in Industry (500 Polytechnic Teacher-s and 200 College teachers in 1976-77 and 1977-78; 750 and 300 respectively in the remaining year)	3.35	3.93	10.00	15.00	15.00	
6. Visiting Faculty	-	-	5.00	6.00	6.00	
7. Expenditure on Seminars, and other miscellaneous items.	1.22	4.75	-	-	-	
	<u>75.78</u>	<u>77.66</u>	<u>101.50</u>	<u>119.00</u>	<u>126.00</u>	<u>499.94</u>

Say Rs. 500.00 lakhs

Item No. 10:            To consider the revised functions of the Regional Committees.

The All-India Council for Technical Education at its last meeting held on 17th May, 1974 while noting the membership of the reconstituted Regional Committees authorised its Chairman to examine the existing functions of these Committees and to revise them wherever necessary in accordance with the major responsibilities to be entrusted to them, in consultation with the Chairman of these Regional Committees.

The existing functions of the Regional Committees are as under :-

- i) To survey the facilities for Technical Education in all States and to make recommendations to the Coordinating Committee/Council on the development of Technical Education including establishment of new institutions, wherever necessary;
- ii) To make preliminary examination of any institutions seeking recognition and to make recommendations to the Coordinating Committee;
- iii) To tender advice and guidance to Technical institutions within the region, affiliated to the Council and/or in receipt of financial aid for funds from the Central Government as well as to such other institutions may seek the same;
- iv) To promote liaison between Technical institutions and Industry and other Technical Establishments;
- v) To assist the State and Technical Institutions in securing practical training facilities;
- vi) To appoint Boards of Examiners, taking into consideration the recommendations of the Boards of Technical Studies concerned and to arrange for the proper conduct of examinations;



- vii) To publish the results of the examinations;
- viii) To send reports to the Coordinating Committee about the conduct of examinations periodically;
- ix) To consider and make recommendations on such other matters as may be referred to it by the Coordinating Committee/Council; and
- x) To assess the standards and recognise examinations conducted by the institutions/organisations for the purpose of endorsement of their awards as National Certificate/Diploma.

The function at (ii) above is at present being performed by the Board of Assessment for Educational Qualifications, and the function at (v) by the Regional Boards of Apprenticeship Training under the amended Apprenticeship Act. Since the Council has ceased to conduct National Certificate and National Diploma Examinations, functions at (vi), (vii), (viii) and (x) are no longer required to be performed by the Regional Committees.

Thus the Regional Committees at present are performing functions at (i), (iii), (iv) and (ix). In view of the Constitutional responsibility of the Central Government to coordinate and determine the standards in institutions of higher education for research and scientific and technical institutions, it is essential that the Regional Committees should evaluate critically the academic aspects of training in the institutions conducting degree and diploma courses in engineering and technology.

As desired by the Council, comments from the Chairmen of Regional Committees on the revised functions were also obtained. Taking into consideration the comments received from them as well as the position mentioned above, it is proposed that the Regional Committees may have in future the following functions:-

1. To survey the facilities for technical education in all States and to make recommendations to the Coordinating Committee/Council on the consolidation and development of existing institutions, introduction of new courses and establishment of new institutions, wherever necessary.

2. To promote the liaison between technical institutions, industry and other technical/research establishments.
3. To review critically the academic aspects of training, such as the levels of performance achieved in the laboratories and the standards of institution and examination at the first degree level.
4. To review critically the academic aspects of training, such as the levels of performance achieved in the laboratories and the standards of instruction and examination at the diploma level in collaboration with the respective State Boards of Technical Education.
5. To tender advice and guidance to technical institutions within the region in respect of financial aid from the Central/State Governments, as well as to such other institutions as may seek the same.
6. Any other function that may be assigned to the Committee by the Council.

The revised functions of the Regional Committees are placed before the Council for consideration and approval.

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Item No. 20 To consider the constitution and functions of the proposed All India Board of Undergraduate Studies in Engineering and Technology at the degree level in all subject-fields in place of the existing Boards of Studies in different fields.

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The All India Council for Technical Education at its last meeting held on 17th May, 1974 while noting the Membership of various All India Boards of Technical Studies authorised its Chairman to examine the existing functions of these Boards and to revise them where-ever necessary in accordance with the major responsibilities to be entrusted to them, in consultation with the Chairmen of these Boards.

At present the Council is serviced by the following Boards/Committees:-

1. Board of Postgraduate Engineering and Research.
2. All India Board of Technical Studies in Management.
3. All India Board of Technicians Education.
4. All India Board of Technical Studies in Engineering and Metallurgy.
5. All India Board of Architecture and Regional Planning.
6. All India Board of Applied Art.
7. All India Board of Chemical Engineering and Technology.
8. All India Board of Textile Technology.
9. All India Board of Commerce.
10. Pharmaceutical Education Committee.

The first three Boards, namely, the Board of Postgraduate Engineering Studies and Research, Management Board and Technicians Board are specialised Boards. The Postgraduate Board deals with all postgraduate programmes in all fields of engineering and technology. Similarly, the Management Board deals with all aspects of management education, mainly at postgraduate level.

The All India Board of Technicians Education has been constituted recently on the recommendations of the Damodaran Committee to deal with all diploma courses in Polytechnics in a coordinated way. In consultation with the Chairman of the Postgraduate and Management Boards, the existing constitutions and functions have been revised with minor changes. Copies of their existing Constitution and Functions and the revised one may be seen at Annexure . Since the Technicians Board was constituted recently, no change in its

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constitution and functions has been proposed. The Constitution and functions of this Board may be seen at Annexure . . .

With regard to other Boards of Studies mentioned at S.No. 4 to 9 and the Pharmaceutical Education Committee, their existing composition and functions may be seen at Annexure . . . . . From these functions it will be observed that most of the functions assigned to them are no longer valid as the Council is not holding any examination for any course. In respect of Commerce Board, it may be stated that the Board has already finalised a scheme for Diploma in Commercial Practice (D.C.P.) which has been approved by the Council and is already being implemented. Further, since an All India Board of Technicians Education has been formulated, this function is also being looked after by that Board. As regards Commerce Education at the B.Com. and M.Com. degree level, this is being looked after by the University Grants Commission. Similarly, the Pharmaceutical Education Committee is advising the All India Council on the development of Pharmaceutical Education only at the degree and diploma level. The diploma level educational programme in this field is organised under the Education Rules of the Pharmacy Act and can be looked after by the Technicians Board.

As recommended by the All India Council at its last meeting, comments of the Chairmen of the Boards were invited regarding revised composition and functions of the Boards. On the basis of the comments received from the Chairmen of the Boards and in view of the fact that All India Council is serviced by one Postgraduate Board to look after postgraduate engineering education in all subject fields, Technicians Board to look after diploma education in engineering and technology in all fields, it would be most appropriate to combine these six Board of Studies in different fields and the Pharmaceutical Education Committee into one Board to deal with undergraduate education in all engineering and technological subjects. This Board may be named as All India Board of Undergraduate Studies in Engineering and Technology. A copy of the Constitution and Functions of the proposed All India Board of Undergraduate Studies in Engineering and Technology is placed at Annexure . . .

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Thus, it is proposed that in future the All India Council may be serviced only by the following four Boards instead of ten Boards and Committees as here-to-fore.

1. All India Board of Postgraduate Engineering Studies and Research.
2. All India Board of Technical Studies in Management.
3. All India Board of Undergraduate Studies in Engineering and Technology.
4. All India Board of Technicians Education.

The matter is placed before the Council for approval.

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Item No.12: To consider a note on resource generation in Polytechnics.

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from The polytechnic education has been under severe criticism for a long time as the diploma holders have not been able to meet the requirement of the Industry. Though after the Damodaran Committee recommendations there has been a definite awareness in the mind of the Directors of Technical Education and Principals and the faculty of the Polytechnics, the industry still find the product far/practical oriented. The main reason for this perhaps is that the State Governments have not implemented some of the important recommendations of the All India Council for Technical Education. Most of the State Governments even now, due to difficult financial position sanction only Rs.150 to Rs.200/- per year per student, on other charges out of which Rs.60/- to Rs.70/- are spend per student per year on consumables which is a very low expenditure. All India Council for Technical Education in 1972 recommended Rs.400/- per year per student. The position relating to the polytechnic education and training was examined by the Secretariat of the Council and the State Governments were requested vide the Ministry's letter No.F.15-14/74-T.2 dated 12th November, 1974 (Annexure XVIII) to take the following steps in order to augment the resources of the polytechnics in the States:

- (i) Polytechnics should utilise their workshop facilities to the maximum possible extent, and manufacture/fabricate small items required by industry, government departments, etc.;
- (ii) There should be a linkage between the polytechnics and the industry by deputing teachers to the industry and requesting the industry to depute foremen to the polytechnics; and
- (iii) Polytechnics should introduce refreshers' courses and post-diploma courses in certain specialities which are required by the industry.

A summary of the replies received from the State Governments and the reports of the Northern and Eastern Regional Offices of the Ministry of Education and Social Welfare are placed at Annexures XIX, XX, and XXI respectively.

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The views expressed in the matter by the State Governments, in general, are as stated below:

- (a) The deputation of teachers to industries is worth trial but there will be a problem of substitutes.
- (b) The deputation of supervisory staff from the industry to polytechnics can contribute towards quality improvement, but the industry may not spare the staff as its work will suffer.
- (c) Production work at the Polytechnics can be possible, but owing to accounting procedure, legal manufacturing obligations etc., it is not practicable. The production work of high quality with old model equipment and obsolete machines is not possible.
- (d) There is a scope of starting refresher's and post-Diploma courses on part-time or full-time basis for technicians in the industry, but it depends on the response from the Diploma holders, availability of additional staff in polytechnics and expenditure, prospects of job in the industry of such qualified persons etc.
- (e) Some states are of the view that if the matter is taken up at a higher level, there is a possibility of achieving some results in the matter.

The All India Board for Technicians Education at its 2nd meeting held on 31st July, 1975, also considered a Note regarding the status of polytechnic education in the country and to consider the steps to improve the quality of diploma holders and noted that a fully trained technician, who could fully accept the responsibilities of the shop floor perhaps could not be trained by an educational institute and that it is the function of educational institutions to provide a sound academic base in order to enable the student to meet the challenge of the industry as well as his own advancement with this broad outlook, the diploma holder has to be trained for a specified period in industry, in order to acquire the competence to handle labour; to acquaint himself with the latest machinery and process involved, so essential in the life of a technician. After taking into consideration of the development of the polytechnic

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education, the resources available etc., the Board recommended that the State Governments should provide enough financial assistance to remove the deficiencies by the replacement of obsolete equipment, increase of per capita expenditure on raw materials and consumables etc. On the Board's recommendation a Committee was appointed under the chairmanship of Shri T.R. Doss to recommend as to how Polytechnics in the country could generate adequate financial resources. The Committee at its meeting held on the 18th October, 1975, considered the various factors involved in the matter and their main recommendations are as under:-

- 1) Polytechnic should themselves think of ways and means of generating their own resources to meet the challenge and improve the standard of polytechnic education and at the same time care has to be exercised to see that such attempts to generate own resources should not result in over emphasis on the capacity for earning by the institutions at the cost of instructional standards or by sacrificing useful time that the faculty could otherwise devote to the students in their instructional meets. Before venturing on any particular effort on resource generation it should be clearly understood as to how far the needs of the instructional work are met by any such exercise - should be examined and earning for its own sake by the institutions should not normally be encouraged.
- 2) The Committee noted that there were various areas of resource generation such as (a) testing for which equipment available at the institutions could be used (b) repairs and maintenance for which again the equipment could be used (c) consultancy work by the Faculty & (d) entrepreneurshhip practice for the students, and once the areas of resources generation are identified it is necessary to ensure magnitude of the resources required for the purpose of instructions at the institution. After these preliminaries have been worked out the organising structure in the institution for the optimisation of the effort and maximum utility for the institution should be computed. To begin with certain institutions to be selected for the purpose should be given autonomy.

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- 3) Possibilities also could be explored by the authorities concerned of adoption of certain polytechnics by industry in the area. This adoption should mean that institution should be autonomous under the management of the industry with an appropriate managing committee and cost of running the institution at the present stage should be taken over by the management of the industry. Any further development resulting from change in the curriculum, courses offered, etc. which are thought fit to be introduced, could be shared between the funding authority and the industry
- 4) In conclusion, deliberate and specific efforts for the increase of financial resources of the polytechnics was not only necessary but also feasible and therefore, should be explored in full. Sufficient publicity for these activities as also the facilities available at the institution and the areas where there is potential for resource generation is also to be arranged.

The report of the Committee may be seen at Annexure XXII .

The Northern Regional Committee at its 42nd meeting held on 1st December, 1975 has also considered the question of resource generation in the Polytechnics and recommended that the technical institutions should be encouraged to increase their resources by setting up production centres, consultancy and maintenance services etc. and the income accrued in this way be utilised for their development.

The matter is placed before the Council for consideration.

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Item No.13: To consider a note on the introduction of Diploma courses in Agriculture Engineering.

The All India Council for Technical Education and the Central Government had some time back suggested to all Polytechnics that the diploma courses may be diversified vis-a-vis the needs of industry for well trained middle level technical personnel. Later on however, it was noted that all our efforts in this direction were apparently concentrated on engineering subjects which are of importance to large and medium industrial units in urban areas and industrial towns. It was therefore noted that a major sector of our economy, namely agriculture was totally left uncatered for both by the present diploma courses in engineering and by the diversified specialities. This sector is now becoming increasingly technology oriented as a result of new scientific inputs like hybrid seeds, multiple cropping, water management, fertilizers, plant protection methods, storage etc. The introduction of mechanical methods of farming and adequate irrigational facilities through tubewells and groundwater resources have pushed forward the traditional pattern of agriculture towards a technological or industrial enterprise. Farmers are becoming increasingly aware of the need to bring to bear upon their agricultural operations, scientific and technological knowledge and skills relevant to their occupation. Agriculture is also becoming increasingly a sector where well trained technicians from polytechnics can find suitable self-employment. The stage, therefore, has come when polytechnics must address themselves to the question of restructuring their diploma courses also to cater to the agricultural sector of our economy. This is particularly important for those polytechnics which are located in semi-urban or close to rural areas. The future usefulness of those polytechnics will depend largely upon how they adjust themselves to the new demands of the environment in which they are functioning. With the increase in agriculture prosperity, educational level of the farming community will also rise. Farmers children who complete school education upto class X or XI should be, further, equipped with the knowledge and skills that will be of use to them in stepping up and improving their agricultural occupation, instead of being trained further for white-collar jobs in towns and cities.

The Central Government therefore, suggested to all the State Governments, that the question of formulating and organising suitable engineering or technology courses oriented towards agriculture in selected Polytechnics should be considered by all State Governments. The courses may be of one, two or three years duration depending on the quantum of technology

and agriculture that needs to be integrated to produce middle level technicians who will be useful in the agricultural sector. The Central Government further suggested that the emphasis should be more on equipping an individual students with the knowledge and skills that will be useful in his self-employment rather than in finding a job in a large organisation.

Later on at its 21st meeting, the All India Council for Technical Education considered the scheme of and syllabus for the following Agricultural Technology courses formulated by the Eastern Regional Committee:-

1. Three-year Diploma course
2. Four-year Diploma course (Sandwich Pattern)
3. One-year Post-Diploma Course.

While considering the above scheme (copy enclosed ) the All India Council for Technical Education reiterated its earlier recommendations with the addendum that close cooperation must be established between the polytechnics conducting agricultural-oriented courses on the one hand and agricultural universities, agriculture industry and industry providing technical inputs for agriculture on the other hand. At the same time, noting that the ICAR had decided to set up separate agricultural polytechnic in each State, the Council further recommended that a Special Committee consisting of representatives of the ICAR, and AICTE should be set up to formulate all coordinated programmes of development of these courses. The matter was taken up with the ICAR who informed the Ministry of Education that they have already appointed a Working Group on agricultural polytechnics and agreed to include a representative each of AICTE and the Ministry of Education.

This Working Group finalised its report, some of the main recommendations are as under :-

1. The inservice Courses envisaged at Krishi Vigyan Kendra (Agricultural Polytechnic) would be mostly of short duration of 1 to 3 months and would, attract farmer's sons and daughters.
2. Courses should be tailored to the needs of the area served and should be for both men and women. The type of courses that might be provided such as cultivation of local crops, application of package of practices, farm planning, plant protection, care and feeding of animals, poultry keeping, tube-well operation, marketing of agricultural products, irrigation and water control etc. etc.

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3. In one of the meeting of the Working Group it was also decided that the english version of the Kendras should not be called, Agricultural Polytechnics, because the Polytechnics in India connotes the specific type of institution offering courses at a particular level, where as Krishi Vigyan Kendra will be the Centre for informal education along with other activities. It was, therefore, decided that english version of the Kendras should be called Farm Science Centres.
4. It has been proposed that 50 polytechnics will be set up during the 5th Plan in a phased manner on the basis of need and suitability for different regions. The Committee at the national level may select the location of the Centres in consultation with the State Governments and other State Institutions like the Agricultural Universities and voluntary agencies with experience in the field of farmers training and social education.

From what has been stated above the concept of the courses to be conducted at Krishi Vigyan Kendra and in our polytechnics is quite different. Where-as courses proposed to be started at Krishi Vigyan Kendra are inservice courses of short-term duration meant specifically to train sons and daughters of farmers in their field whereas the diploma courses proposed by the All India Council for Technical Education are of a level of middle technicians and meant for those who have had their education atleast upto High School/Higher Secondary level. The green revolution which is started in our country also needs a large number of well trained technicians which can be produced through the diploma courses in agricultural technology in selected polytechnics in semi-urban and rural areas.

As per information available with this Ministry, the following institutions are conducting diploma courses in Agricultural Engineering :-

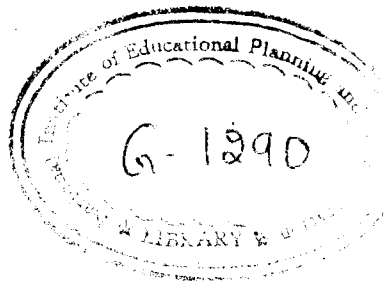
1. Muthiah Polytechnic, Annamalainagar (Tamilnadu)
2. Chandauli Polytechnic, Chandauli (UP)
3. Dibrugarh Polytechnic, Dibrugarh (Assam)
4. B & B Polytechnic, Vallabh Vidyanagar (Gujarat )

In view of the above position the matter was again taken up with the Indian Council of Agricultural Research for setting up of small working group consisting of representatives of AICTE, ICAR, some agricultural institutions and Ministry of Education and SW to consider

whether more diploma courses in Agricultural Engineering and Technology to produce middle level technicians are necessary. The ICAR have now agreed to the setting up of a Small Working Group.

The Council may like to appoint a Working Group for the purpose.

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