

INDIA

# BUREAU OF EDUCATION, INDIA

PAMPHLET No. 59

## Proceedings of the Third Meeting of All-India Council for Technical Education Held at Bombay on the 22nd April, 1948

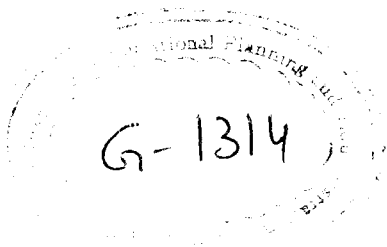


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The third meeting of the All-India Council for Technical Education was held at Bombay on Thursday, the 22nd April, 1948, under the Chairmanship of Mr. N. R. Sarker.

The following members were present :—

Mr. N. R. Sarker—*Chairman*.

Dr. Tara Chand—*Educational Adviser to the Government of India*.

#### *Ministries of the Government of India.*

Prof. J. N. Mukherjee, representing the Ministry of Agriculture.

Rao Bahadur N. C. Ghosh, representing the Ministry of Communication.

Dr. J. N. Ray, representing the Ministry of Industry and Supply.

Mr. S. Lall, representing the Ministry of Labour.

Mr. F. C. Badhwar, representing the Railway Board.

Mr. D. L. Mazumdar, representing the Ministry of Works, Mines & Power.

Mr. N. D. Gulhati, representing the Central Board of Irrigation.

#### *Constituent Assembly of India.* (Legislative).

Dr. Punjabrao Shamrao Deshmukh.

Shri Biswanath Das.

Shri Sureshchandra Majumdar.

Prof. Yashwant Raj.

#### *Provincial Governments.*

The Hon'ble Mr. Avinashalingam Chettiar, Minister of Education, Madras, representing Government of Madras.

The Hon'ble Mr. Keshava Malviya, Minister of Industries, U. P., representing the Government of United Provinces.

Mr. J. A. Taraporevala, representing the Government of Bombay.

Mr. S. Dutta, representing the Government of West Bengal.

Mr. M. R. Bhide, representing the Government of East Punjab.

#### *Indian States.*

Mr. R. Kasturi Raj Chetty, representing the Mysore State.

Dr. J. M. Mehta, representing the States of Western India, Gujrat and Baroda.

Major D. L. Deshpande, representing the Madras States, Travancore and Cochin.

#### *Industry, Commerce and Labour.*

Mr. E. J. C. Herring, representing Associated Chambers of Commerce of India, Calcutta.

- Dr. K. A. Hamied, representing All-India Organization of Industrial Employers, Bombay.  
 Mr. G. V. Apte, representing the Employers Federation of India, Bombay.  
 Dr. K. Venkataraman, representing the Employers Federation of India, Bombay.  
 Mr. Chakkrai Chettiar, representing the All-India Trade Union Congress.  
 Miss Maniben Kara, representing the Indian Federation of Labour.  
 Mr. J. N. Mitra, representing the Indian Federation of Labour.

*Central Advisory Board of Education.*

Sardar Bahadur Sardar Ujjal Singh.

*Inter University Board (India).*

Sir A. L. Mudaliar.

*Association of Principals of Institutions (India).*

Mr. N. N. Sen.  
 Mr. P. N. Joshi.

*The Institution of Engineers (India).*

Mr. N. V. Modak.  
 Mr. C. E. Preston.

*The Indian Institute of Architects.*

Mr. H. N. Dallas.

*The National Planning Committee.*

Dr. Sir J. C. Ghosh.  
 Prof. K. T. Shah.

*Indian Chemical Society, Calcutta.*

Dr. B. C. Guha.

*Nominees of the Government of India.*

Sir Fazal Ibrahim Rahimtoola.  
 Secretary, Dr. S. R. Sen Gupta.

*Also present by (special invitation).*

Sir Vithal Chandavarkar, Chairman of the All India Board of Technical Studies in Textile Technology.  
 Mr. N. K. Mitra, Chairman of the All India Board of Technical Studies in Engineering and Metallurgy.  
 Sir John Sargent,  
 Mr. W. L. Wickham } representing the British Council.

The following members were unable to attend :—

- 1.. Mr. K. K. Chettur, representative of the Ministry of Commerce.
- 2.. Dr. Sir S. S. Bhatnagar, representative of the Council of Scientific and Industrial Research.
- 3.. Secretary, Ministry of Defence.
- 4.. Representative of the Finance Ministry.
- 5.. Mr. P. M. Menon, representative of the Ministry of Health.
- 6.. Mr. M. P. Pai, representative of the Industry and Supply Ministry.
- 7.. Consulting Engineer to the Government of India (Roads), representative of the Ministry of Transport.
- 8.. The Secretary, Development Board, representative of Development Board.
- 9.. Nawab Muhammad Ismail Khan, representative, Constituent Assembly (Legislative).
- 10.. The Hon'ble Minister for Industries, Assam, representative of the Government of Assam.
- 11.. The Director of Industries, Bihar.
- 12.. Shri Bijayanand Patnaik, representative of the Government of Orissa.
- 13.. Dr. V. S. Jha, representative of the Government of the Central Provinces.
- 14.. Syed Ali Akbar, representative of H.E.H. the Nizam's Government.
- 15.. Shri V. S. Sarwate, representative of the Central India States.
- 16.. Mr. J. A. Murray, representative of the Associated Chambers of Commerce, India.
- 17.. Mr. M. A. Master, representative of the All-India Organisation of Industrial Employers.
- 18.. Mr. K. D. Jalan, representative of the Federation of Indian Chambers of Commerce and Industry.
- 19.. Sir Shri Ram, representative of the Federation of Indian Chambers of Commerce and Industry.
- 20.. Shri Harihar Nath Shastri, representative of the Indian National Trade Union Congress.
- 21.. Mr. Vital Chowdhary, representative of the All-India Trade Union Congress.
- 22.. Mr. S. Guruswami, representative of the All-India Railwaymen's Federation.
- 23.. Mr. S. M. Azam, representative of the Central Advisory Board of Education.
- 24.. The Hon'ble Dr. Shyma Prasad Mookherjee, representative of the Inter University Board (India).
- 25.. Dr. A. H. Pandya, nominee of the Government of India.

At the opening of the session the Chairman made a moving reference to the sad demise of Mahatma Gandhi and said that the Council was meeting under the shadow of a great national calamity which had left a void in the lives of all in India. He urged the Council to contribute their mite towards the realisation of the mission to which the Mahatma had dedicated himself, namely the amelioration of the living conditions of the poverty-stricken millions of India. He thought that the realisation of this object was possible only on the basis of a large scale application of modern methods of production, utilising all the knowledge which science and technology had made available to us. Technical Education had naturally a very large and vital part to play in achieving this object. Gandhiji had on different

occasions shown interest in the progress of the work of the Council and in particular to the upgrading of the existing technological institutions. He felt that the Council had the blessings of Gandhiji and this feeling would no doubt sustain the Council to a very great extent in its efforts.

The members of the Council stood up in silence for two minutes to offer their homage to the great leader.

The Chairman then addressed the members on the task which lay ahead of them and the progress made so far. He said that the Council was meeting for the first time after the attainment of freedom which had come to the country after years of struggle. The freedom by itself, however, did not solve their problems. On the other hand it meant great responsibilities and obligations towards the achievement of better living conditions for the countrymen which was an uphill task. The situation both in India and outside had become very difficult and complicated by the action and inter-action of the various conflicting forces. The partition of India had, in addition, given rise to problems of stupendous magnitude. One of these problems was the food problem and measures had to be taken to increase the food production of the country immediately so as to become self-sufficient, if possible. These would naturally entail huge schemes of irrigation, mechanisation of agriculture and such like things, all of which would require a large number of technicians for the successful implementation of the plans. The successful execution of rehabilitation programme was dependent on the availability of an adequate body of trained personnel. The situation in the country was bewildering and it would be no easy task to push on the nation building different schemes as originally planned.

In his view, the attainment of freedom had placed a great responsibility on the Council in the matter of giving proper advice to Government for training of young men who would be competent to undertake the duties that may be entrusted to them for the execution of the different development projects of the Government as well as the industries and also for the defence of the country.

The Chairman then gave a brief resume of the activities of the Council since its inception and the results so far achieved. He informed the members that the Co-ordinating Committee of the Council had met on five occasions and had done useful work. Six All-India Boards of Technical Studies had been set up and had commenced their work. The Regional Committees, however, could not be formed on account of the political changes. The Council would be considering at the present session the questions of functions to be assigned to these committees and their composition regarding which there existed some difference of opinion among some of the Provincial and State Governments.

The Council's recommendation for the setting up of Higher Technical Institutions on the lines of Massachusetts Institute of Technology had been accepted in principle by the Government who had decided to proceed with the establishment of two of these Institutions immediately, one in the East near Calcutta and the other in the West near Bombay. The Government had advertised for the Planning Staff of these institutions.

The recommendation of the Council for the immediate establishment of the two Higher Technical Institutions had been supported by the Scientific Man-Power Committee appointed recently by the Government of India to ascertain the requirements for trained personnel of various categories.

The Government had accepted the principle of upgrading the existing technological institutions and had sanctioned during the year 1947-48 capital grants and interest free loan amounting to Rs. 13.7 lakhs and Rs. 5.7 lakhs respectively.

A preliminary survey of the existing facilities for technical education in the country had been carried out by the Council. The report was now being finalised and it was hoped to publish it at an early date.

In pursuance of the decision of the Council taken at its meeting held at Bangalore last year, a memorandum had been sent to the Inter-University Board to consider the desirability of reviewing the position of technical education in the Universities and appointing a small committee with which a small committee of the Council might co-operate in drawing up the general principles to be observed in regard to degree courses in technological subjects at the Universities.

The Council had directed the Boards to draw up the curriculum and syllabuses of studies for the All-India Diplomas so that any one engaged in full or part-time work could undergo the courses. The Boards were also directed to lay greater emphasis on the practical side of the subjects as opposed to the purely academic. The majority of the Boards had completed the task of drawing up the curricula.

The Chairman thought that the Council could well claim that it had laid the foundation in such a way that if the recommendations made by them were allowed to come to early fruition in the course of the next four or five years, the country would be able to have all its present requirement of technical personnel. He made a special request to Dr. Tara Chand, the Educational Adviser, and urged on him the necessity for speedy fruition of the schemes which could only come if the Government machinery moved quickly.

The Chairman sounded an optimistic note saying that in four or five years' time things may be expected to return to normalcy in the sense that capital equipment and machinery would become freely available. By that time the Council's schemes would have started bearing fruit and the necessary technical personnel for the supervisory grades would be available. He hoped that the Provincial Governments would take early measures for training craftsmen so that the entire picture may be complete.

The Chairman refuted the criticism levelled against the Government that they proposed to spend far too much on technical education as compared to other nation-building activities. Any improvement in the living conditions of the masses naturally postulated an increase in the national wealth which was clearly dependent on the production being stepped up in all spheres of the country's economy both agriculture and industry. This could be achieved by making technical personnel available in sufficient numbers and as such any expenditure on technical education had quite a direct bearing on all the efforts towards amelioration of the living conditions of the masses. The Chairman then thanked the members of the Council who had come to attend the meeting and extended a hearty vote of thanks to the Government of Bombay on behalf of the Council for all the trouble they had taken in arranging the meetings. He also took the opportunity of thanking Sir John Sargent for having kindly consented to come to the meeting in response to his invitation. He thought that it would be no exaggeration on his part to say that Sir John's name would always be remembered by the members of the Council for his valuable contribution towards the development and renovation of the entire educational system of the country. (The full text of Mr. Sarker's address will be seen in Annexure I).

The Chairman opened the proceedings by referring to the sad demise of Sir Frederick Stones, a member, who had rendered yeoman service in the cause of technical education. In Sir Frederick's death, the Council had suffered an irreparable loss as his mature advice and judgement would no longer be available to the Council. A resolution of condolence moved by the Chair was passed unanimously, all members standing.

#### *Resolution.*

"The All-India Council for Technical Education have learnt with deep regret and profound sorrow the sad news of the death of Sir Frederick Stones who as a member of this Council and as a member of the All-India Board of Technical Studies in Textile Technology had rendered valuable service to the cause of technical

education and offer their sincere condolences and sympathies to Lady Stones and other members of the bereaved family”

While considering the agenda, the Council had before it the considered views and recommendations of the Co-ordinating Committee as embodied in the draft proceedings of its fifth meeting.

With the permission of the house the Chairman took up for consideration Item (a) of the agenda first :—

“To receive and consider a letter from Sir John Sargent regarding co-operative efforts by the British Council and the various All-India bodies towards the Advancement of cultural relations between the two countries.”

Sir John Sargent and Mr. Wickham representatives of the British Council explained to the members the objectives of the British Council namely fostering of cultural relations between Britian and various other countries.

The Chairman thanked Sir John Sargent and Mr. Wickham for responding to his invitation to meet the members of the Council personally and assured them of full co-operation from the All-India Council for Technical Education. He was sure that the cultural relations between India and U.K. would not only continue but would become more intimate as years pass by since all political controversies had now ceased.

Miss Maniben Kara also made an appreciative speech. Sir John Sargent suitably thanked the Council for the good words expressed about him and he and Mr. Wickham left the meeting at this stage and the Chairman thereafter requested all non-members and press representatives to leave the Hall.

The Chairman then invited the members to consider other items on the Agenda Annexure II).

#### ITEM No. 1

*To report that the proceedings of the Second meeting of the All-India Council for Technical Education held at Bangalore on the 29th and the 30th May, 1947 were confirmed by circulation to members.*

It was reported that the proceedings of the second meeting of the Council were confirmed by circulation to members and copies printed.

#### ITEM No. 2.

*To report the present membership of the Council.*

It was reported that since the second meeting of the Council the following changes had taken place :—

- (1) It has been decided that the Council should confine its activities to the Dominion of India only. Representatives from Sind and N. W. F. P. have therefore ceased to be members.
- (2) The Ministry of Food, Government of India, have withdrawn their representative as the work relating to development of Food Industries was now being dealt with by the Ministry of Industry and Supply, who have been given an additional representative.
- (3) The following additional representatives have been granted :—
  - (a) One representative of the Indian Chemical Society (Dr. B. C. Guha)
  - (b) One representative of the Central Board of Irrigation (Mr. A. N. Khosla).
- (4) The Central Legislature now have five seats on the Council instead of seven as owing to the abolition of the Council of State, the Central



Legislature which now consists of one house, namely, the Constituent Assembly, India (Legislative) has elected the following members to the Council:—

- (i) Nawab Mohd. Ismail Khan.
- (ii) Dr. P. S. Deshmukh.
- (iii) Mr. Biswanath Das.
- (iv) Mr. Suresh Chandra Mazumdar.
- (v) Prof. Yashwant Rai.

The other changes were:—

- (i) Mr. P. M. Menon in place of Mr. Oulsnam (Ministry of Health).
- (ii) Rai Bahadur N. C. Ghosh, in place of Mr. M. I. Rahim. (Director General of Civil Aviation).
- (iii) Mr. F. C. Badhwar in place of Mr. Oldfield (Railway Board).
- (iv) Secretary, Ministry of Defence in place of Deputy Director of Military Training.
- (v) The Hon'ble Minister for Education, Madras, in place of Joint Director of Industries and Commerce, Madras.
- (vi) The Hon'ble the Prime Minister, East Punjab in place of the Hon'ble the Finance Minister, East Punjab.
- (vii) Mr. V. S. Sarwate, Minister of Education, Holkar State in place of Capt. H. B. Richardson.
- (viii) Education Commissioner, Baroda in place of Mr. D. R. Daboo.
- (ix) Mr. Hariharnath Sashtri, of the Indian National Trade Union Congress in place of Dr. Waheed, of Federation of Muslim Chambers of Commerce and Industry.
- (x) Dr. K. Venkataraman, in place of late Sir Frederick Stones (Employers Federation of India, Bombay).
- (xi) Miss Maniben Kara in place of Prof. B. N. Banerji (Indian Federation of Labour, Delhi).
- (xii) Mr. J. N. Mitra, in place of M. A., Khan (Indian Federation of Labour Delhi).
- (xiii) Principal N. N. Sen, in place of Mr. W. W. Wood (Association of Principals of Technical Institutions).
- (xiv) Dr. A. H. Pandya, in place of Mr. G. L. Mehta (Nominee of the Government of India).

RESOLVED that the list of members be recorded (Annexure III).

#### ITEM No. 3

*To receive and consider the minutes of*

- (a) *the fourth meeting of the Co-ordinating Committee of the All-India Council for Technical Education held in New Delhi on the 15th November 1947, and*
- (b) *the fifth meeting of the co-ordinating Committee of the All-India Council for Technical Education held in Bombay on the 20th & 21st April, 1948 (Annexure IV and V).*

(i) The Co-ordinating Committee at its fourth meeting had formulated certain conditions to be imposed on the institutions which may be given grants by the

Central Government for the purpose of improving and strengthening them. In view of the representations made by the Institutions and Universities concerned and in consideration of the statutory obligations of some of them, the Co-ordinating Committee at their fifth meeting reconsidered these conditions and recommended to the Council the adoption of certain amendments thereto as embodied in the proceedings of the meeting of the Committee.

The Council adopted the following as condition (i) :—

“In view of the fact that All-India Diplomas and University Degrees are expected to be approximately of equivalent standards, the syllabuses should as far as possible be in accordance with the standards to be suggested by a joint committee of the Inter University Board and the All-India Council for Technical Education. It is not contemplated, however, to encroach on the autonomy of the universities”.

*Condition (ii) (a)*

To avoid delay likely to arise from reference to the Council everytime a Selection Committee for recruitment of staff is appointed by any institution, the following amendment to the original condition was moved by Sir Vithal Chandavarker, and adopted by the Council.

“The non-University Institutions shall include in the Selection Committees appointed for the purpose of recruitment of staff independent experts from the panels submitted by the institution and approved by the All-India Council for Technical Education”.

*Condition (ii) (b)*

The original condition was adopted.

*Condition (iii)*

The revised condition recommended by the Co-ordinating Committee was adopted without discussion.

*Condition (iv)*

It was pointed out that there were practical difficulties in rigidly adhering to the estimates made for the improvement of a particular department. Due to fluctuating prices and the uncertainty regarding availability of certain equipment, adjustments may therefore be necessary. The condition should be so amended as to give some latitude to the institution in the matter. It was decided that in every such case a reference should be made to the Government and their previous approval obtained.

*Condition (v) (a)*

To give the Provincial Governments opportunities of utilising the services of the Visiting Committee in ascertaining whether grants made by them were properly utilised and in judging the standards of teaching and examinations as also to bring about greater Co-ordination between the Council and the Provincial Governments, it was resolved that the words “and the Provincial Government concerned” be inserted after the words “report to the Council” occurring in the draft recommended by the Co-ordinating Committee.

*Condition (v) (b)*

The revised condition proposed by the Co-ordinating Committee as shown below was adopted without discussion.

*Condition (vi)*

Considering the desirability of allowing some latitude to those institutions that allow lower technical education as well to so arrange their programme that the equipment and staff be put to the best use consistent with grants made solely for higher technical education as well as the possible repercussion of immediate closure of the lower courses on the economy of the country it was resolved that the revised conditions recommended by the Co-ordinating Committee be adopted and that the same be reviewed after one year when sufficient information would be available with regard to the utilisation of the grants made to the institutions.

*Condition (vii)*

In adopting the revised condition the Council presumed that the funds required for bringing the salary scales of the teaching staff to the approved level would be found by the Central Government.

*Condition (viii)*

It was resolved that the first part of the condition be retained and the Government may prescribe the condition in regard to the placing of the present incumbent on professorial status wherever it was considered necessary.

*Condition (ix)*

Sir A. L. Mudaliar felt that a general condition such as the one suggested should not apply to all institutions and moved the following amendment.

"Where grants are given either for increase in the number of seats or with the condition that a quota of the seats should be reserved for the Central Government, the Central Government shall determine in consultation with the Provincial Governments and institutions the quota for each province for purposes of admission to the institution concerned".

In moving this amendment Sir A. L. Mudaliar explained that whereas a case had definitely been established for the Central Government to fix quotas in respect of additional seats, the same did not hold good in every case in respect of the existing seats in the various institutions. The Council should therefore leave it to the discretion of the the Central Government to prescribe the condition regarding quota in respect of existing seats if the Government should consider it necessary.

The amendment was discussed at length and the general view of the Council was that the Central Government could be expected to act in a reasonable manner in this matter. Moreover in the draft recommended by the Co-ordinating Committee consultation with the Provincial Government had been specifically mentioned. It could be assumed that the Central Government would take into consideration the requirements of the provinces in which the institutions were located while fixing the quota for the backward provinces.

On the suggestion of the Chairman it was decided to adopt for the present the conditions as it stood and to amend it later if any practical difficulty was experienced in actual working.

*Condition (x)*

No change was considered necessary in the original condition. It was adopted without discussion.

*Condition (xi) (a)*

Some members felt that the representation of the Council and the Central Government on the Managing Committee as required by this condition was very

heavy. An amendment providing for *not more than* two seats for the nominees of the Central Government and a similar number for the nominees of the All-India Council for Technical Education was adopted.

*Condition (xi) (b)*

Fears were expressed that the Universities which were autonomous bodies may not welcome the appointment of *ad hoc* visiting committees by an outside body.

It was pointed out that this would only happen if a particular University did not have its own Advisory Committee. It was open to the University to set up such a committee. The condition was then adopted.

*Condition (xii)*

This was adopted without discussion.

*The revised conditions for grants adopted by the Council read as follows :—*

- (i) In view of the fact that the All-India Diplomas and University Degrees are expected to be approximately of equivalent standards, the syllabuses should as far as possible be in accordance with the standards to be suggested by a joint committee of the Inter University Board and the All-India Council for Technical Education. It is not contemplated however to encroach on the autonomy of the Universities.
- (ii) (a) The non-University Institutions shall include in the Selection Committees appointed for the purpose of recruitment of staff, independent experts from the panels submitted by the Institution and approved by the All-India Council for Technical Education.
- (b) In the case of colleges or departments under the administrative control of universities, the appointment of staff shall be made by Selection Committee constituted in accordance with the Universities' Acts and rules, or if the appointment of selection committees is not specifically provided for in the University Act, the rules shall be framed with the approval of the Inter-University Board. In every case, the All-India Council for Technical Education shall be acquainted with the rules and regulations for the selection and appointment of the staff.
- (iii) For the non-University Institutions, equipment for laboratories of various types and workshops shall be generally as prescribed by the All-India Council for Technical Education.
- (iv) Grant under a particular head shall not be utilised for a purpose other than that for which it is intended except with the previous approval of the All-India Council for Technical Education.
- (v) (a) A visiting Committee or an Inspector appointed by the All-India Council for Technical Education shall periodically visit the non-University Institutions receiving grants and reports to the Council and the Provincial Government concerned whether the grants given by the Government are being properly utilised and also whether proper standards of teaching and examination are being maintained.

- (v) (b) In the case of University Department of Institutions administered directly by Universities, the University concerned shall appoint a Visiting Committee in accordance with its own rules. Where such rules do not exist already, the University will be required to frame them in consultation with the University Grants Committee. Such Visiting Committee shall inspect the institutions annually and report to the universities whether the Government grants were being properly utilised in accordance with the conditions laid down. The universities shall forward copies of all such reports to the All-India Council for Technical Education.
- (vi) Where degree course as well as diploma course of definitely lower standard than the degree in the same subject are being taught, the capital and recurring grant shall be utilized for the promotion of higher technical education only.
- (vii) Recipients of recurring grant shall bring the salary scale of teaching staff and their qualifications to the level approved by the Central Government in consultation with the Provincial Government and/or Universities concerned, within three years from the date from which the first recurring grant is made.
- (viii) In the case of non-University institutions, the appointment of Professors or Heads of Departments to permanent vacancies that may occur shall be made within a period of six months and in accordance with the conditions laid down in (ii) (a) above. The placing of the present incumbents on Professorial status or status of Heads of the Departments for which grants are being made by the Government shall also be subject to the approval of the Council.
- (ix) The Central Government shall determine in consultation with the Provincial Governments and institutions the quota for each Province for purposes of admissions to the institutions concerned.
- (x) Capitation fees shall not be charged in respect of students admitted under the quota system fixed by the Central Government.
- (xi) (a) The Central Government shall have at least two seats for its nominees on the Managing Committee or the Governing Body of Non-University institutions and the All-India Council for Technical Education shall also have two seats thereon. The Principal or the Head of the institution shall be an *ex-officio* member of the Managing Committee or the Governing Body. In all institutions there shall be constituted a College Council on which will be represented the Principal and all Heads of Departments. All academic matters pertaining to the College will be considered by this Council, and the proceedings of the Council shall be submitted to the Managing Committee or the Governing Body as the case may be. The Council shall meet at least twice a year.
- (v) (b) In case of University institutions where there is an Advisory Committee the All-India Council for Technical Education and the Central Government will be represented on it. Where there are no Advisory Committees, the All-India Council for Technical Education shall have the right to appoint an *ad hoc* Visiting Committee for the purpose of reporting how the grants given to the institutions were being utilised.
- (xii) Where a grant has been given by the Central Government under specific conditions accepted by a University or an institution, the University or institution concerned shall, if it does not comply with those conditions, be liable to refund the grant already received, in such manner as may be required by the Central Government and further grants shall be stopped.

The Council endorsed the view expressed by the Co-ordinating Committee that the institutions concerned should be apprised of the total grants that the Central Government was likely to give them and adopted the following resolution :—

*Resolution*

“The Council desires to make it clear that for purposes of improvement of the existing facilities in the institutions recommended for payment of grants from the Central Government and for increasing the intake of students, both non-recurring and recurring liabilities are involved and requests the Government of India to expedite the disposal of the question of total grants both recurring and non-recurring and communicate their decision to the institutions concerned at an early date.”

- (ii) Mr. Apte drew the attention of the Council to the basis on which the calculations were made for recommending grants to the institutions. He was aware of some institutions which had a larger recurring expenditure per student even now. In such cases it was only right that the recurring grant should be calculated on their actual expenditure *per capita* which was much higher than the basis adopted by the Co-ordinating Committee. If that was not done, it would not be possible for the institution to implement the recommendations for expansion of facilities as enough funds would not be available to maintain the present standards. The Institutions concerned would thus be degraded rather than upgraded.

It was explained that the detailed development plans of the Institutions had been called for and this point would certainly be taken into consideration when a scrutiny of these plans was being made.

- (iii) Members were of the view that there was not sufficient time allowed to them to get fully acquainted with the implications of the decision taken and the recommendations made by the Co-ordinating Committee and there should, therefore, be a bigger gap between the meeting of the Co-ordinating Committee and that of the Council in future. They felt that the meeting of the Co-ordinating Committee to consider the agenda for the Council should be held a month in advance and the proceedings circulated to the members of the Council in good time. The suggestion was noted by the Chairman.

ITEM NO. 4 (a)

*To receive and to consider a note setting out the action taken to constitute the Regional Committees of the Council (Annexure VI).*

Sir A. L. Mudaliar placed the view-point of the Co-ordinating Committee in moving the resolution that the demarcation of regions and constitution of the regional Committees be deferred for a period of one year. The main difficulty was the impending changes in the boundaries of Provinces and States in the country. A number of Indian States had acceded to the Indian Union. Others had merged into provinces but the position regarding the future boundaries was not as yet clear. Some more time was required to consider the view-points of the Provincial Governments and such of the States as may fall within the respective regions. At the same time the Co-ordinating Committee did not wish that the preliminary work in connection with the setting up of the committees should be held up anymore. Accordingly it has been recommended that a Planning Officer should be appointed immediately for each of the four regions.

Although opinion was somewhat divided on the issue of the constitution of the committees and the demarcation of regions the house was unanimous that four officers should be appointed forthwith one for each region. The Council was of the view that the composition of the Regional Committees had been decided by it at its last meeting after considerable deliberation. It would not be desirable therefore to amend it without giving it a trial. If in the light of experience later, it became necessary to change the composition, the Council might do so. The suggestion of the Government of Bombay was therefore not accepted for the time being. It was generally felt that the designation "Planning officer" was not suitable, considering the type of work to be done by them and that they be designated as "Special Officer"—Instead.

Sir A. L. Mudaliar then moved the following resolution which was unanimously accepted :—

*Resolution—*

"The Council accepts the principle of constituting four regional committees and resolves to constitute the committees on the lines already accepted. The Council further recommends that a Special Officer with necessary staff be immediately appointed for each of the regions."

ITEM No. 4 (b)

*To consider the suggestion of the Government of Bombay on the composition of the Co-ordinating Committee and the proposed Regional Committee of the Council. (Annexure VII.)*

The Co-ordinating Committee had recommended that the number of representatives of the provinces and states be increased from two to four. At present all the members representing Provincial Government on the Council elected one from among themselves to the Co-ordinating Committee and the representatives of the states did likewise. In the new set up it seemed necessary to grant representation to the provinces and state together. The Co-ordinating Committee therefore recommended that one representative of the provinces and states constituting a region be elected by their representatives on the Council.

The Council unanimously accepted the recommendation of the Co-ordinating Committee.

*Resolution—*

There shall be four members on the Co-ordinating Committee of the Council representing the Provinces and States. The Provincial and States representatives on the Council from each region as demarcated by the Council for purposes of the constitution of regional committees shall elect one member.

The Secretary pointed out that with the adoption of this resolution Dr. V.S. Jha and Major D. L. Deshpande ceased to be members of the Co-ordinating Committee and requested the representatives from each region to proceed with the election of a member. The members wanted some time and the election was therefore deferred to a later date. It was suggested that this should be done by correspondence.

ITEM No. 5

*To report the action taken by the Government of India on the recommendations made by the Council at its second meeting and to consider matters arising therefrom. (Annexure VIII.)*

### *I. Membership of the Council*

Details regarding the changes in memberships are reported under item 2 of the agenda.

It was pointed out that the term "Senior All-India Polytechnics" used in the text of the resolution establishing the Council did not appear to be very appropriate. The Council accepted the suggestion that the words "High-grade technical institutions" be substituted in its place, and the resolution accordingly amended.

The note of the Secretary on the subject was recorded.

### *II. Committees of the Council*

The note was recorded.

### *III. Co-ordination of higher technical Education.*

The note was recorded.

### *IV. Higher Technical Institutions*

Two resolutions framed by the Co-ordinating Committee for adoption by the Council were placed for consideration. There was a general discussion on the location of the four Higher Technical Institutions and rival claims were put forward by the different Provinces.

After the representatives from different provinces had their say, the Chairman put the question to vote. The Council decided in favour of the Hijli site for the Eastern Higher Technical Institution, Bombay for the Western Higher Technical Institution and requested the Chairman to appoint a committee or committees for the purpose of considering the question of location of the Southern and Northern Higher Technical Institutions. The resolutions of the Co-ordinating Committee amended slightly as follows were then adopted :—

#### *Resolution—*

1. The Council recommends that the site at Hijli which affords all necessary facilities and is within easy reach of Calcutta and in proximity to the provinces of Bihar and Orissa may be chosen for starting the Eastern Higher Technical Institution.

2. The Council is of the opinion that steps should be taken by the Government of India for the establishment of the four Higher Technical Institutions in the following order :—

(i) Eastern and Western Institutions (at Hijli and at Bombay).

(ii) Southern and Northern Institutions (Location to be decided later); and that immediate negotiations should be carried on with the Provincial Governments concerned for the sites required. The Council recommends that the necessary land (1,000 to 1,250 acres in each case) should be made available to the Government of India by the Provincial Government concerned free of cost. The Provincial Government should also be required to arrange for the supply of electricity, water etc. as may be required for these institutions.

### *V. Strengthening of existing institutions.*

The note was recorded. A resolution on the subject had already been passed by the Council while considering item No. 3.



## VI. Craftsman Training Scheme

The matter was discussed at a great length and the following resolution was passed :—

### *Resolution*

In view of the great need for training craftsmen in sufficient numbers to meet the requirements of industrial expansion, this Council recommends to all Provincial Governments, that immediate steps be taken for instituting training centres in the shape of trade schools, technical schools etc., to train such craftsmen.

#### ITEM No. 6 (A)

*To receive and to consider a note on the activities of the All-India Boards of Technical Studies (Annexure IX).*

Miss Maniben Kara raised the question of training and education in Marine Engineering and Navigation. She referred to the decision of the Council taken last year at Bangalore on this question and desired to know if the Board of Technical Studies in Engineering and Metallurgy had come to any conclusions.

It was explained that the Government of India in the Ministry of Commerce had set up a committee to consider the entire question relating to Marine education and the interim report of this committee was coming up for consideration of the Council under item No. 11.

The note was recorded.

#### ITEM No. 6 (B)

*To elect representatives of the Council on the reconstituted All India Boards of Technical Studies.*

The Council accepted the recommendations of the Co-ordinating Committee and nominated the following as their representatives on the different Boards of Technical Studies :—

1. Mr. K. D. Jalan—Commerce and Business Administration.
2. Mr. H. N. Dallas—Architecture and Regional Planning.
3. Rai Bahadur A. N. Khosla—Engineering and Metallurgy.
4. Prof. J. N. Mukherji—Chemical Engineering and Chemical Technology.
5. Sir Shri Ram—Textile Technology.
6. Major D. L. Deshpande—Applied Art.

#### ITEM No. 6 (c)

*To consider letters from*

1. Secretary, Federation of Indian Chambers of Commerce and Industry, New Delhi,
2. The All India Organisation of Industrial Employers, New Delhi, and
3. Secretary, the Employers Federation of India, Bombay, regarding representation of employers on the All-India Boards of Technical Studies (Annexure X).

The recommendation of the Co-ordinating Committee to grant representation on certain Boards to specific organisations of employers was accepted.

*Resolution*

Resolved that in respect of representation of employers on the various Boards of Technical Studies of the Council as reconstituted with effect from 1st January 1948 for a period of three years.

(a) the Federation of Indian Chambers of Commerce and Industry, New Delhi, may have a representative on the All-India Board of Technical Studies in Commerce and Business Administration ;

(b) the Employers' Federation of India may have their representatives on the All India Boards of Technical Studies in

(i) Chemical Engineering and Chemical Technology ;

(ii) Textile Technology ; and

(c) the All India Organisation of Industrial Employers may have representatives on the All India Boards of Technical Studies in

(i) Architecture and Regional Planning ;

(ii) Engineering and Metallurgy ;

(iii) Applied Art, and when the Boards are reconstituted after a period of three years, the Employers Federation of India shall have representation on the All India Boards of Technical Studies in Architecture and Regional Planning, Engineering and Metallurgy and Applied Art and the All-India Organisation of Industrial Employers shall then have representation on the All India Boards of Technical Studies in Chemical Engineering and Chemical Technology and the Textile Technology

## ITEM NO. 7

*To consider the suggestions of the Government of West Bengal in regard to the organisation of technical education (Annexure XI).*

Doubt was expressed as to whether it was at all necessary to have separate full time schools for the training of minor executives as suggested in the note from West Bengal. Foremen could be best picked up from amongst the skilled craftsmen who had some educational background and who improved their knowledge by attending part-time schools. The Hon'ble Minister from Madras informed that this matter had been considered by his Government who had now summoned a conference in this connection. Various suggestions had been made by qualified persons and the Government of Madras had come to certain tentative conclusions in this regard.

The Secretary requested the Hon'ble Minister to let the Government of India have a copy of the report of this Committee to enable him to prepare a scheme as desired by the Council. The Council then adopted the following resolution as recommended by the Co-ordinating Committee.

*Resolution*

The Council directs that the Secretary, in consultation with other experts, should prepare a draft scheme for the organisation of engineering education and place it together with the note from the Government of West Bengal before the Board of Technical Studies in Engineering and Metallurgy for their consideration in the first instance.

## ITEM No. 8

*To consider a representation from the Technical Employees Association, C.P. W. D. regarding admission of the Diploma holders in service to the Degree for All-India Diploma Examinations directly (Annexure XII)*

It was explained that part-time courses leading to the All India Diploma in Engineering were provided for under the scheme. The P. W. D. employees had therefore two alternatives before them :—

either

- (i) to sit for the professional examination conducted by the Institution of Engineers (India) or
- (ii) to attend part-time courses and prepare for the All-India Diploma.

In the case of Architects, however, the conditions were different. There were not many architectural schools available in the country and the Indian Institute of Architects did not conduct any professional examination. Some concession appeared to be called for in their case. The Council adopted the resolutions recommended by the Co-ordinating Committee.

*Resolution*

“The Council is of the view that the Engineering Diploma Holders in service of the C. P. W. D. should either take part time courses and appear for the All India Diploma Examination or qualify at the Associate Membership Examination of the Institution of Engineers.

“In the case of Architectural Assistants the Council desires that the matter may be considered in the first instance by the Board of Technical Studies in Architecture who may suggest the necessary conditions which such assistants should fulfil in order to be eligible to sit for the different parts of the All-India Diploma examinations”.

## ITEM No. 9

*To consider a note from the Government of Madras on the organisation of apprenticeship Training and the provision of facilities for the training of students in Telecommunications Engineering in the All-India Radio. (Annexure XIII)*

The resolution recommended by the Co-ordinating Committee was passed after slight modifications.

*Resolution*

“The Council requests the Government of India and the Provincial Governments to throw open their technical and industrial organizations for apprenticeship training. The Council recommends that the Government of India should in consultation with the Provincial Governments draw up an approved list of industrial concerns which are capable of imparting apprenticeship training in appropriate branches. The Council is of the opinion that the apprenticeship training course can be a success only if the Central Government or the Provincial Government concerned is prepared to offer stipends to the apprentices during their period of apprenticeship and also pays for one or more officers in the appropriate industrial concerns to supervise the training”.

## ITEM No. 10

*To receive and to consider the report of the Reorganisation Committee of the Indian School of Mines, Dhanbad.*

The report was recorded.

## ITEM No. 11

*To receive and to consider the report of the Committee appointed by the Ministry of Commerce, Government of India, on training of personnel for the Merchant Navy in India.*

The Council adopted the following resolution :—

*Resolution.*

While expressing general agreement with the views contained in the report of the Merchant Navy Officers Training Committee the Council is of the opinion that the question of training of personnel for Port Trust, Ship-building industry etc., is closely linked up with that for the Merchant Navy and authorises the Chairman to appoint a small Committee to examine the aforesaid report and to consider the question of training of personnel of the Merchant Navy, Post Trust etc. as a whole and report to the Co-ordinating Committee.

## ITEM No. 12

*To consider the request of the All India Manufacturers Organisation for representation on the Council (Annexure XIV).*

The resolution as recommended by the Co-ordinating Committee was read to the house by the Secretary.

It was slightly amended and adopted by the Council.

*Resolution.*

“In view of the fact that most of the members of the All India Manufacturers Organisation are members of the Employers Organisations also, and since the latter are represented on the Council, the Council regrets that they cannot recommend the grant of separate representation to this body”.

## ITEM No. 13

*To elect from their respective constituencies members on the Co-ordinating Committee of the Council in place of Pandit Govind Malaviya (Central Legislature) and Professor B. N. Banerji (Commerce, Industry and Labour).*

The members from the constituencies proceeded to elect their representatives. The Chairman announced the election of the following members :—

Dr. P. S. Deshmukh in place of Pt. Govind Malaviya. (Central Legislature).  
Miss Maniben Kara in place of Prof. B. N. Banerji (Commerce, Industry and Labour).

## ITEM No. 14

*(a) To report that Sir J. C. Ghosh lately Director, Indian Institute of Science, Bangalore and now Director General Industry and Supply, Government of India and Mr. H. N. Shrivastava, Additional Chief Engineer, Posts and Telegraphs, New Delhi, have been nominated by the Chairman to represent the Council on the General Council and the Engineering Division Council respectively of the Indian Standards Institution.*

*(b) To report that Major D. L. Deshpande Principal, Engineering College, Trivandrum has been nominated by the Chairman to represent the Council on the Advisory Committee for the Power Engineering Department of the Indian Institute of Science, Bangalore.*

The information was recorded.

## ITEM No. 15 (a)

(a) *To receive and consider a letter from Sir John Sargent regarding co-operative efforts by the British Council and the various All Indian Bodies towards the advancement of cultural relations between the two countries. (Annexure XV)*

Proceedings relating to this item are already reported on page 6.

## ITEM No. 15 (b)

*To consider a note from the Government of Bombay regarding provision of facilities for training of technically qualified personnel in industrial and business organisations. (Annexure XVI)*

The need for providing such facilities was appreciated by all members. The Council decided that the matter required technical investigation and accepted the resolution recommended by the Co-ordinating Committee.

*Resolution*

"The Council directs that a joint committee representing the Boards of Technical Studies in Engineering, Commerce, Chemical Technology and Textile Technology, be constituted for the purpose of drawing up a scheme for the training of technically qualified personnel in industrial Management and Business Organisation".

## ITEM No. 15 (c)

*To consider a note from the Ministry of Transport, Government of India, regarding training facilities for certain classes of Technical Personnel for employment under the Port Authorities. (Annexure XVII).*

The Council adopted the resolution by the Co-ordinating Committee.

*Resolution*

"The Council directs that the question of providing training facilities for certain classes of technical personnel with a view to their employment under the Port authorities, be examined by the Committee appointed under item No. 11 of the agenda."

## ITEM No. 15 (d)

*To consider letter No. 977 (E) / XVIII-219/44 dated the 6th April, 1948 from the Government of the United Provinces,*

(i) *requesting that United Provinces Government may be represented in the Co-ordinating Committee,*

(ii) *requesting for the location of the Northern Higher Technical Institute at Kanpur.*

(iii) *requesting that all the institutions of the provincial Government be represented on the Regional Committee of the Council.*

(iv) *expressing the opinion that the exclusion of Provincial Government Institutions for purposes of recommendations for financial aid from the Central Government is unjustifiable, and*

(v) *taking exception to the grouping adopted in reporting the results of survey of technical institutions. (Annexure XVIII)*

The views of the Council on the first three matters raised by the United Provinces Government have been expressed on the appropriate items of the Agenda. [Items Nos. 4 (b) 5, and 4 (a) respectively].

In regard to the question of financial aid from the central funds to Provincial Government Institutions, the Council did not see any justification for it. The Provincial Governments could include plans for the improvement of existing institutions or the setting up of new institutions in their development plans and obtain the approval of the Central Government thereto to be eligible for development grants.

The Council endorsed the system of grouping adopted by the Committee set up for the purpose in their report on the Survey of facilities in Technical Education.

#### ITEM NO. 15 (e)

*To consider letter No. 2038E dated the 5th April, 1948 from the Government of Bihar regarding the establishment of a Zonal Higher Technical Institute in Bihar and other matters. (Annexure XIX)*

The Chairman remarked that the Council has already disposed of this question under item No. 5.

#### ITEM NO. 15 (f)

*To report that Prof. J. N. Mukherjee, Director, Indian Agricultural Research Institute, New Delhi, has been nominated by the Chairman to represent the Council on the Chemical Division Council of the Indian Standards Institution.*

The report was recorded.

Mr. Herring, representative of the Associated Chambers of Commerce raised the question of American Universities which were issuing bogus degrees and which he believed had representatives in this country. He pointed out that since the aim of this Council was to improve the standard of technical education in the country, some action was definitely indicated to prevent such bogus degrees being awarded to students here.

The Secretary informed that the Ministry of Education had already given consideration to this matter and was in correspondence with the Institution of Engineers (India) in this connection. A list of the American Universities which were recognised in this country had been circulated by the Ministry of Education.

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

## ANNEXURE 1

PRESIDING OVER THE THIRD SESSION OF THE ALL INDIA COUNCIL OF TECHNICAL EDUCATION HELD IN BOMBAY ON 22ND APRIL, HON'BLE MR. N. R. SARKAR SAID:

We meet here to-day under the shadow of an unparalleled national calamity which has left a void in the lives of all of us, both as individuals and as a nation—a void which is too deep for words to express. The fell hands of a madman—for mad he was no doubt—has taken our beloved leader, Mahatma Gandhi, away from our midst. But though he is no longer with us physically to give us advice and guidance in our moments of stress and strain, his spirit lives in us all and I am sure he is keenly watching us from the Heavens above. Now when he is no more with us we all have to consider how in our respective spheres we can contribute our mite towards the realisation of the mission to which he had dedicated all his thoughts and work the amelioration of the living conditions of our poverty stricken millions—and I think if we can do even a little bit towards this we may feel thankful to the Providence for giving us this opportunity to carry on the work which was so dear to the heart of our great Teacher. But I do not think realisation of this is possible except on the basis of a large scale application of modern methods of production utilising all the knowledge which science and technology has made available to us. And in this, technical education has a large and vital part to play. Without advancement in this sphere our progress will necessarily be limited. I do not mind telling you that on different occasions Gandhiji showed his interest in the progress of work of our Council. I remember after the end of our last Co-ordination Committee Meeting at Delhi when I met him he enquired as to what progress we had been able to make in the work of our Council and what we had done towards upgrading of the existing institutions, particularly about the technological departments of the Benares Hindu University. When I reported to him about our progress he was very pleased indeed and remarked that only provision of money will not be enough but the Council must see that these institutions produce men who will be really useful to the Society. I do feel that in our work here we had his blessings and this feeling will no doubt sustain us all to a very great extent indeed in our efforts and enthuse us to do our job in a real spirit of service to the common man.

To-day once again, as so many times before in the history of this ancient land of ours, we stand at the crossroads. After years of struggle freedom has come to us. But this freedom of ours, let us clearly bear in mind, does not by itself solve our problems; on the other hand it means that now we have greater responsibilities and obligations for we can no longer blame the foreign rulers for all our ills. On our shoulders now rests the entire responsibility for betterment of the living conditions of our countrymen and this in any case for a country like ours is an uphill task. Besides, independence has come to us at a time when the situation both in India and outside has become very difficult and complicated by the action and interaction of various conflicting forces. The whole world, India not excluded, is in the throes of a process of transition from war to peace economy. And now while one process of adjustment had just started, we have to face and tackle the problems which any changeover from dependence to independence inevitably entails. And as if all this was not enough, partition of India has given rise to additional problems of stupendous magnitude for the country at large and, in a intensified degree, for Nagal and the Punjab. To mention just one of such problems, we have become a deficit country in respect of food. It is well-known that now yearly expenditure abroad for food purchases is proving too heavy a burden for a country like ours and the strain on our limited resources of foreign exchange is more than we can bear. It is, therefore, absolutely imperative that we must find out ways and means to increase our food production immediately and to become, if not fully self-sufficient, at least nearly so. This will necessitate huge schemes of irrigation, mechanisation of agriculture and such like things, all of which would require more

and more technicians for successful implementation of the plans. We have, again, the problems of relief and rehabilitation and the successful execution of the relief and rehabilitation programme in the two partitioned Provinces in the shortest possible time is dependent on the availability of an adequate body of trained personnel. The simultaneous pressure of the three forces operating has created very nearly a bewildering and baffling situation for the Governments of our country and it will be no easy task to straighten out the complications and push on with our different schemes of nation-building as we had all originally hoped for.

We are to-day meeting here for the first time after the attainment of freedom. We must, I feel, clearly realise that in the context of our newly won independence the responsibility of the Council has become all the greater in the matter of giving proper advice to the Governments for training up the youngmen of our country as skilled technicians competent to undertake the duties that may be entrusted to them for execution of the different development projects of the Government as well as of the industries and also for the defence of our country and to ensure that a steady flow of such trained young-men is available for all these tasks.

I would now like to give you a brief résumé of the activities of the Council since its inception and the results achieved so far.

As you know, the All-India Council for Technical Education was set up by the Government of India on the 30th November 1945 on the advice of the Central Advisory Board of Education in the first instance with advisory functions only and without prejudice or commitment to the full implementation of the Central Advisory Board's recommendations *i.e.* the establishment of a National Council for Technical Education for the control of policy in technical education generally and for dealing with all matters connected with technical education above the High School stage. The immediate task assigned to the Council was

- (a) to survey the whole field of technical education;
- (b) to conduct preliminary investigations with a view to ascertaining the conditions on which the authorities in control of existing institutions would be prepared to co-operate in the All-India Scheme.

The strength of the Council is 65 members representing various Ministries of the Government of India, Central Legislature, Provincial and State Governments, Commerce, Industry, Labour, Professional Associations, Educational Interests, etc.

The Council has met twice already.

At its inaugural meeting held in April/May 1946 the Council felt that for the efficient discharge of the duties assigned to it by the Government, it should have three types of committees set up under its aegis, *viz* :

- (i) All-India Boards of Technical Studies—one for each of the main subject of technology, in Engineering and Chemical Technology, Commerce and Business Administration, Textile Technology, Applied Art, Architecture and Regional Planning, for achieving an uniformly high standard of education in technological subjects.
- (ii) Regional Committees of the Council one for each region to perform general functions assigned to the Council and supervise the work of the higher technical institutions as are not affiliated to the Universities and may with the approval of the Provincial Governments concerned join in All-India Schemes.
- (iii) A Co-ordinating Committee to co-ordinate the activities of the above Committees and to act as an executive organ of the Council.

The Co-ordinating Committee and the six All-India Boards of Technical Studies have already been set up and have commenced their work. The Boards have met



twice till now and they have been reconstituted from the 1st of January, 1948, the tenure of office of the previous Boards having expired on the 31st December, 1947. (A note on the activities of the Boards is being placed on the table for perusal and information of the members). The Co-ordinating Committee has met five times till now.

In view of the political changes which were impending the question of setting up the Regional Committees of the Council could not be taken up earlier. It has now been decided, in consultation with the Provincial Governments, to set up four Regional Committees. There is, however, some difference of opinion amongst some of the Provincial and State Governments regarding the function to be assigned to these Committees, and their composition, and it is for the Council to consider in its present session the different points of view and to make recommendations so that these Committees may come into existence in the near future.

The Council considered the interim report of the Higher Technological Education Committee, of which I happened to be the Chairman, on the development of technical institutions in India and endorsed the opinion that to meet India's future needs for high grade engineers, technologists, architects etc., Government should establish four Regional Higher Technical Institutions in the East, West, North and South on the lines of the Massachusetts Institute of Technology, and the Government have accepted in principle the immediate establishment of two of these Higher Technical Institutions viz., one in the East near Calcutta and the other in the West near Bombay. Each of those Institutions have been planned to have a student body of about 3,000 (2,000 Under-graduate and 1,000 Post-graduate students) and is expected to cost about Rs. 3.04 Crores on capital and Rs. 44.31 lakhs on recurring expenditure. The posts of one Director and Eight Heads of Departments have also been sanctioned by the Government of India for the Eastern Higher Technical Institute and steps have been taken to advertise these posts simultaneously in India, U. K. and U. S. A. The land for building these Institutions is also in process of acquisition.

I may also inform you that in the meantime the Government of India have appointed a Scientific Manpower Committee to ascertain the requirement for trained personnel of various categories and cadres over the next few years and though their final report is not yet out, in their preliminary report this Committee has endorsed the recommendation of the Council for the immediate establishment of two Higher Technical Institutions as referred to before.

The question of strengthening and improving the existing higher technical institutions in the country came up for considerable discussion at both the meetings of the Council held so far. The Council emphasised the necessity of upgrading some of the existing higher technological institutions. On the advice of the Co-ordinating Committee, Visiting Committees were appointed to inspect some of these institutions with a view to making recommendations for their improvement both as to the number of students they can take in for training up as also for raising the standard of education imparted. A small Committee of experts was appointed on the advice of the Co-ordinating Committee to scrutinise the reports of the Visiting Committees and make uniform recommendations. The reports of the Visiting Committees as well as the report of Scrutinising Committee were considered by the Co-ordinating Committee at its last meeting held in November, 1947. The Co-ordinating Committee recommended that grants from the Central Government to the extent of Rs. 1.5 crores on special expenditure to be spent in four years and about Rs. 30 lakhs on recurring expenditure be made to the 14 institutions inspected by the Visiting Committees for their improvement on lines suggested. I am glad to inform you that the Government of India have accepted the whole scheme in principle and during the financial year 1947-48 they granted a sum of Rs. 13.75 lakhs as capital expenditure and Rs. 5.75 lakhs as interest free loan to these institutions towards implementation of the Scheme.

A preliminary survey of the existing facilities for technical education in the country has been undertaken and an interim report on the survey was presented

to the Council at its meeting held in May, 1947. Almost all the major institutions have now replied to the questionnaire issued by the Council and it is hoped to finalise the full report at an early date.

With a view to ensuring uniform standards of technical education in the country, a memorandum has been sent to the Inter-University Board requesting them to consider the desirability of reviewing the position of technical education in the Universities and of appointing a small Committee with which a small committee of the the All India Council for Technical Education may co-operate in drawing up the general principles to be observed in regard to degree courses in technological subjects at the Universities.

The six All India Boards of Technical Studies were requested to draw up the curriculum and frame syllabuses of studies for granting All India Diplomas so that in the matter of content of education they can reach a uniform as well as a sufficiently high standard. The All India Diploma Schemes shall have the following three essential features :—

- (a) Flexibility in regard to conditions for qualifying for the diplomas so that anyone engaged in full or part-time occupations could undergo the course and better himself technically ;
- (b) greater emphasis is laid on the practical side of the subjects as opposed to the purely academic ;
- (c) the curriculum etc. is to be constantly under review to suit the changing needs of industry.

I am happy to say that the need for both degrees and diplomas to proceed side by side in the national system of education is generally recognised by all concerned and that with the exception of the Board of Applied Art—which has made some progress—the other five Boards have more or less completed the first task assigned to them.

From the brief survey of our activities I have given above it will be seen that we have been able to make a good beginning and plans have been laid to meet our requirements in the immediate future. Much, of course, necessarily depends on the Government's implementation of our recommendations quickly. We have recommended the early starting of the two Higher Technical Institutions ; we have taken steps towards upgrading of 14 existing institutions and we have also made tangible progress towards drawing up syllabus and curriculum of studies for different technical subjects on an uniform and high standard on All India basis for diploma courses. I think we can claim that we have laid the foundation in such a way that if our recommendations are allowed to come to early fruition, in course of next 4/5 years we shall be able to have all our present requirements of trained personnel. While on this, I have a special request to make to Dr. Tarachand, the new Education Adviser. Dr. Tarachand is himself an eminent educationist and I am sure realising as he must do, the urgent need for speedy fructification of our schemes, he will move the Government machinery accordingly and see that the whole scheme is put in working order as early as possible.

There is one point in this connection which I would specially like to mention to you. So far as I can judge about the development of world conditions, it seems to me that in four or five years time things will have come to some sort of normalcy in the sense that capital equipment and machineries will become freely available. By that time also, if we can work to schedule, our schemes will have started to bear fruit and for our new industries there will be no dearth of technicians. But there is one snag in this programme. These technicians will only form the supervising higher personnel. It has been variously estimated that for every engineer there are usually 100 or so skilled and un-skilled workers. And here I have a special appeal to make to our Provincial Governments. On them will rest the responsibility for training and building up this skilled and semi-skilled labour force in the absence of which much of what we can achieve will prove useless.

will be their duty to see that when the time comes we do not have to suffer from dearth of an adequate force of skilled and semi-skilled labour and in order to ensure this they will have to take steps from now on for giving such training.

I find that there is some criticism against the Government of India that they propose to spend far too much on technical education as compared to so many other nation building activities of our life. To those who think and contend that this money would have been better spent in other ways for improvement of the living conditions of our masses I would like to say that any such improvement postulates an increase in the national wealth, which again is dependent on our being able to step up production in all spheres of our economy, both agricultural and industrial. I think what I have said in the beginning has made it quite clear that rapid advancement in this field is not possible except through application of modern methods of production in industry and agriculture for which technicians and necessarily technical education are indispensable. So, really what we spend on technical education has quite a direct bearing on all our efforts towards amelioration of the living standard of the masses.

Before I close I must thank you all for having taken the trouble of coming over here and attending the meeting of the Council in the midst of all your pre-occupations as also for the ungrudging services that you have rendered for the work of the Council.

On behalf of the Council and on my own behalf, I would thank the Government of Bombay for all the trouble they have taken to arrange for the meetings of our Council and to give us all possible assistance and help to conduct our work smoothly even in the midst of all their pre-occupations which must be keeping them very busy indeed.

I would also like to take this opportunity of conveying my thanks to Sir John Sargent for having kindly consented to come to this meeting in response to my invitation. I do not think it will be any exaggeration on my part to say that Sir John Sargent's name will always be remembered by us all for his valuable contribution towards the development and renovation of the entire educational system of our country.

I feel I should also speak to you about the valuable services rendered by our energetic and industrious Secretary Dr. Sen Gupta whose wide knowledge and experience in all matters relating to technical education have been so helpful to us in carrying on the work entrusted to the Council. I consider him to be an acquisition to this Council.

## ANNEXURE II

MEETING OF THE ALL INDIA COUNCIL FOR TECHNICAL EDUCATION HELD ON THE  
22ND APRIL, 1948

*Agenda*

1. To report that the proceedings of the second meeting of the All India Council for Technical Education held at Bangalore on the 29th and 30th May, 1947 were confirmed by circulation to members.
  2. To report the present membership of the Council. (Annexure III)
  3. To receive and to consider the minutes of—
    - (a) the fourth meeting of the Co-ordinating Committee of the All India Council for Technical Education held in New Delhi on the 15th November 1947, and
    - (b) the fifth meeting of the Co-ordinating Committee of the All India Council for Technical Education held in Bombay on the 20th and 21st April 1948. (Annexures IV & V)
  4. (a) To receive and to consider a note setting out the action taken to constitute the Regional Committees of the Council. (Annexure VI)
    - (b) To consider suggestions of the Government of Bombay on the composition of the Co-ordinating Committee and the proposed Regional Committees of the Council. (Annexure VII)
  5. To report the action taken by the Government of India on the recommendations made by the Council at its second meeting and to consider matters arising therefrom. (Annexure VIII)
  6. (a) To receive and to consider a note on the activities of the All India Boards of Technical Studies. (Annexure IX)
    - (b) To elect representatives of the Council on the reconstituted all India Boards of Technical Studies.
    - (c) To consider letters from—
      1. Secretary, Federation of Indian Chambers of Commerce and Industry, New Delhi,
      2. All India Organisation of Industrial Employers, New Delhi, and
      3. Secretary, the Employers Federation of India, Bombay.
- regarding representation of employers on the All India Boards of Technical Studies  
( Annexure X)

7. To consider the suggestions of the Government of West Bengal in regard to the organisation of Technical Education. (Annexure XI)

8. To consider a representation from the Technical Employees Association C. P. W. D., regarding grant to Diploma Holders in Service, of direct admission to the Degree or All India Diploma Examinations. (Annexure XII)

9. To consider a note from the Government of Madras on the organisation of apprenticeship training, and the provision of facilities for the training of students in Tele-communications Engineering in the All India Radio. (Annexure XIII)

10. To receive and to consider the report of the Re-organisation Committee of the Indian School of Mines, Dhanbad.

11. To receive and to consider the reports of the Committee appointed by the Ministry of Commerce, Government of India, on training of personnel for the Merchant Navy in India.

12. To consider the request of the All India Manufacturers Organisation for representation on the Council. (Annexure XIV)

13. To elect from their respective constituencies members on the Co-ordinating Committee of the Council in place of Pandit Govind M. Laviya (Central Legislature) and Professor B. N. Banerji (Commerce, Industry and Labour).

14. (a) To report that Sir J. C. Ghosh lately Director, Indian Institute of Science, Bangalore, and now Director General, Industry and Supply, Government of India and Mr. H. N. Shrivastava, Additional Chief Engineer, Posts and Telegraphs, New Delhi, have been nominated by the Chairman to represent the Council on the General Council and the Engineering Division Council respectively of the Indian Standards Institution.

(b) To report that Major D. L. Deshpande, Principal, Engineering College, Trivandrum, has been nominated by the Chairman to represent the Council on the Advisory Committee for the Power Engineering Department of the Indian Institute of Science, Bangalore.

15. Any other business :—

(a) To receive and consider a letter from Sir John Sargent regarding co-operative efforts by the British Council and the various All India bodies towards the advancement of cultural relations between the two countries. (Annexure XV)

(b) To consider a note from the Government of Bombay regarding provision of facilities for training of technically qualified personnel in industrial and business organisations. (Annexure XVI)

(c) To consider a note from the Ministry of Transport, Government of India, regarding training facilities for certain classes of Technical Personnel for employment under the Port Authorities. (Annexure XVI)

(d) To consider letter No. 977(E)/XVIII-219/44, dated the 6th April 1948 from the Government of the United Provinces—

- (i) requesting that United Provinces Government may be represented in the Co-ordinating Committee,
- (ii) asking for the location of the Northern Higher Technical Institute at Kanpur,
- (iii) requesting that all the institutions of the Provincial Government be represented on the Regional Committee of the Council,
- (iv) expressing the opinion that the exclusion of Provincial Government Institutions for purposes of recommendations for financial aid from the Central Government is unjustifiable, and
- (v) taking exception to the grouping adopted in reporting the results of a survey of technical institutions. (Annexure XVII)

(e) To consider letter No. 2038E, dated the 5th April 1948 from the Government of Bihar regarding the establishment of a Zonal Higher Technical Institute in Bihar and other matters. (Annexure XIX)

(f) To report that Prof. J. N. Mukherjee, Director, Indian Agricultural Research Institute, New Delhi, has been nominated by the Chairman to represent the Council on the Chemical Division Council of the Indian Standards Institution.

Annexure III  
 Part No. 2 of Agenda

ALL-INDIA COUNCIL FOR TECHNICAL EDUCATION

LIST OF MEMBERS

- |   |   |
|---|---|
| Chairman . . . . .                              | 1. Mr. N. R. Sarkar, 'Ranjani', 231, Lower Circular Road, Calcutta.   |
| Educational Adviser to the Government of India. | 2. Dr. Tara Chand, M.A., D. Phill., Educational Adviser to the Government of India, Ministry of Education, New Delhi. |

MINISTRIES OF THE GOVERNMENT OF INDIA

REPRESENTATIVES

- |  |  |
|--|--|
| Ministry of Agriculture . . . . .              | 3. Professor J. N. Mukherjee, Director, Indian Agricultural Research Institute, New Delhi.   |
| Ministry of Commerce . . . . .                 | 4. Mr. K. K. Chettur, M.A., Joint Secretary, Ministry of Commerce, New Delhi.  |
| Council of Scientific and Industrial Research. | 5. Dr. Sir S. S. Bhatnagar, O.B.E., D.Sc., F.R.S., Director, Council of Scientific and Industrial Research, New Delhi.   |
| Ministry of Finance . . . . .                  | 6.   |
| Ministry of Health. . . . .                    | 7. Mr. P. M. Menon, I.C.S., Joint Secretary, Ministry of Health, New Delhi.  |
| Ministry of Industry and Supply . . . . .      | 8. Mr. M. P. Pai, I.C.S., Joint Secretary, Ministry of Industry and Supply, New Delhi.<br>9. Dr. J. N. Ray, Deputy Director General (Development), D. G. I. & S., New Delhi. |
| Ministry of Labour . . . . .                   | 10. Mr. S. Lall, C.I.E., I.C.S., Secretary, Ministry of Labour, New Delhi.   |
| Ministry of Communications . . . . .           | 11. Rao Bahadur N. C. Ghosh, Director General of Civil Aviation in India, New Delhi.   |
| Ministry of Railways . . . . .                 | 12. Mr. F. C. Badhwar, Member, Railway Board.  |
| Ministry of Defence . . . . .                  | 13. Secretary, Ministry of Defence, New Delhi.   |
| Ministry of Works, Mines and Power             | 14. Mr. D. L. Mazumdar, I.C.S., Joint Secretary, Ministry of Works, Mines and Power, New Delhi.  |
| Ministry of Transport . . . . .                | 15. Consulting Engineer to the Government of India (Roads), Ministry of Transport, New Delhi.  |

- Development Board . . . . 16. The Secretary, Development Board  
New Delhi.
- Central Board of Irrigation . . . . 17. Shri A. N. Khosla, I.S.E., President  
Central Board of Irrigation, C  
Secretary, Central Board of Irrig  
tion, Kennedy House, Simla S. W.

CONSTITUENT ASSEMBLY  
OF INDIA (LEGISLATIVE)

18. Nawab Muhammad Ismail Kha.  
210-A, Sadar Bazar, Mustafa Castl  
Meerut.
19. Dr. Punjabrao Shamrao Deshmuk  
Amraoti.
20. Shri Biswanath Das, Hospital Roa  
Berhampore, District Ganjam, B. I  
Railway (Orissa).
21. Shri Suresh Chandra Majumda  
1, Burman Street, Calcutta.
22. Prof. Yashwant Rai, c/o Shri Prith  
Singh Azad, M.L.A., P. O. Nayashah  
Tehsil Kharar, District Ambala.

PROVINCIAL GOVERNMENTS

- Government of Madras . . . . 23. Hon'ble Minister for Education,  
Madras.
- Government of Bombay . . . . 24. Hon'ble Mr. B. G. Kher, Prim  
Minister.  
or  
Director of Public Instruction, Bomba  
Province, Poona.
- Government of West Bengal . . . . 25. The Hon'ble Minister for Education  
West Bengal or his nominee.
- Government of Bihar . . . . 26. The Director of Industries, Bihar
- Government of Assam . . . . 27. The Hon'ble Minister for Industries  
Assam  
or  
The Director of Industries, Assam
- Government of Orissa . . . . 28. Shri Bijayanand Patnaik, M.L.A  
Cuttack.
- Government of East Punjab . . . . 29. Hon'ble the Premier, East Punjab.
- Government of the United Provinces 30. The Hon'ble Minister of Industries  
United Provinces, or Representative.
- Government of the Central Provinces 31. Dr. V. S. Jha, Director of Public  
Instruction, C. P. and Berar, Nagpur

INDIAN STATES

- Hyderabad-Deccan . . . . 32. Syed Ali Akbar, M.A. (Cantab), Direc  
tor of Public Instruction, H. E. E  
the Nizam's Government.



- Mysore . . . . . 33. Director of Public Instruction, Mysore (R. Kasturi Raj Chetty, B.A., B.L., Dip. Edn.
- Central India States (Holkar Government). 34. Shri V. S. Sarwate, Education Minister, Indore.
- States of Western India, Gujarat and Baroda. 35. Education Commissioner, Baroda Government, Baroda.
- Madras States, Travancore and Cochin. 36. Major D. L. Deshpande, B.Sc. (Hons.), M.Sc. (Eng.), M.I.E., A. M. I. E., Principal, Engineering College, Trivandrum.

### INDUSTRY, COMMERCE AND LABOUR

- Associated Chambers of Commerce of India, Calcutta. 37. Mr. A. Farrington, c/o M/s. Greave, Cotton and Co., Ltd., 1, Forbes Street, Fort, Bombay.
38. Mr. J. A. Murray, Messrs. Jardine Skinner & Co., Calcutta.
- All India Organisation of Industrial Employers, Bombay. 39. Mr. M. A. Master, General Manager, Scindia Steam Navigation Co., Ltd. Scindia House, Ballard Estate, Bombay.
40. Dr. K. A. Hamied, c/o C.I.P.L.A. Manufacturers of Chemical and Pharmaceutical Products, 289, Belassi Road, Byculla, Bombay.
- Federation of Indian Chambers of Commerce and Industry, New Delhi. 41. Mr. K. D. Jalan, Senior Vice President, Indian Chambers of Commerce, 102-A, Clive Street, Calcutta.
42. Sir Shri Ram, 22, Curzon Road, New Delhi.
- Indian National Trade Union Congress, Bombay. 43. Shri Harihar Nath Shastri, 11/39, Gwaltoli, Kanpur.
- The Employers' Federation of India, Bombay. 44. Mr. G. V. Apte, Superintendent of Training, the Tata Iron and Steel Company Limited, Jamshedpur (Via Tatanagar).
45. Dr. K. Venkataraman, D. Sc., Director, Department of Chemical Technology, University of Bombay, Matunga, Bombay.
- The All India Trade Union Congress. 46. Mr. Chakkrai Chettiar, c/o Madras Provincial Committee of All India Trade Union Congress, 157, Sharaf Ali House, Broadway, Madras.
47. Mr. Vithal Chowdhary, M.Sc., Dalvi Building, Parel, Bombay.

- The Indian Federation of Labour, Delhi. 48. Miss Maniben Kara, Cumbala Hills 7, Huges Road, Bombay.
- All India Railwaymen's Federation 49. Mr. J. N. Mitra, Indian Federation of Labour, Albert Hall, 15, Bunkim Chatterji Street, Calcutta.
50. Mr. S. Guruswami, General Secretary of the All India Railwaymen's Federation, Mylapore, Madras.

CENTRAL ADVISORY BOARD OF  
EDUCATION

51. Sardar Bahadur Sardar Ujjal Singh, 12, Curzon Road, New Delhi.
52. Mr. S. M. Azam, Education Member H. E. H. the Nizam's, Government, Hyderabad (Deccan).

INTER-UNIVERSITY BOARD  
(INDIA)

53. Sir A. L. Mudaliar, B.A., M.D., D.Sc., F. R. C. O. G., F.A.C.S., Vice Chancellor of Madras University.
54. Dr. Shyama Prasad Mookherjee, M.A. B.L., Bar-at-Law, D. Litt., M.L.A., 77, Asutosh Mookherjee Road, Calcutta.

ASSOCIATION OF PRINCIPALS  
OF TECHNICAL INSTITUTIONS  
(INDIA)

55. Mr. N. N. Sen, Principal, Bengal Engineering College, Sibpore, Howrah.
56. Mr. P. N. Joshi, M.Sc., Technical Principal, Victoria Jubilee Technical Institute, Bombay.

THE INSTITUTION OF ENGI-  
NEERS (INDIA)

57. Mr. N. V. Modak, C.I.E., J.P., B.E., M. Inst. C.E., M.I.E. (India), F. R. San I. "Udyam" Near Sivaji Park, Bombay 28.
58. Mr. C. E. Preston, M. Engineering (Liverpool), M.B.E., M.I.E. (India), Special Officer, Department of Technical and Vocational Education, Mint Compound, Saifabad, Hyderabad (Deccan).

THE INDIAN INSTITUTE OF  
ARCHITECTS (BOMBAY)

59. Mr. H. N. Dallas, A.R.I.B.A., c/o Messrs. Parelkar and Dallas, Medows House, Medows Street, Fort, Bombay.

THE NATIONAL PLANNING  
COMMITTEE

60. Dr. Sir J. C. Ghosh, D.Sc., F.N.I.,  
Director General of Industry and Supply,  
New Delhi.
61. Professor K. T. Shah, University  
Buildings, Fort, Bombay.

INDIAN CHEMICAL SOCIETY,  
CALCUTTA

62. Dr. B. C. Guha, D.Sc., Ph.D., F.N.I.,  
Professor and Head of the Department  
of Applied Chemistry, University  
College of Science, 92 Upper Circular  
Road, Calcutta.

APPOINTED BY THE GOVERN-  
MENT OF INDIA

63. Sir Fazal Ibrahim Rahimtoola, C.I.E.  
B.A., Ismail Building, Hornby Road  
Bombay.
64. Dr. A. H. Pandya, Sc.D., M.I.E.;  
17, Raja Santosh Road, Calcutta.

SECRETARY

Dr. S. R. Sen Gupta, B.Sc. (Glas.), Ph.D.  
(Glas.), Deputy Educational Adviser to  
the Govt. of India, Ministry of Edu-  
cation.

**Annexure IV****Item No. 3 (a) of Agenda.**

Third Meeting

(All-India Council for Technical Education)

PROCEEDINGS OF THE 4TH MEETING OF THE CO-ORDINATING COMMITTEE, OF THE ALL-INDIA COUNCIL FOR TECHNICAL EDUCATION HELD AT NEW DELHI ON THE 15TH NOVEMBER, 1947.

1. The fourth meeting of the Co-ordinating Committee of the All-India Council for Technical Education was held at New Delhi on the 15th November, 1947, under the Chairmanship of Mr. N. R. Sarkar. The following members were present :—

1. MR. N. R. SARKAR (*Chairman*).
2. PROF. B. N. BANERJEE.
3. MR. WALTER GEORGE.
4. SIR J. C. GHOSH.
5. DR. V. S. JHA.
6. RAI BAHADUR N. K. MITRA.
7. MR. N. V. MODAK.
8. SIR JOHN SARGENT.
9. DR. S. R. SEN GUPTA, (*Secretary*).

Principal P. N. Joshi, a member of the Council attended on behalf of Sir Vithal Chandavarkar, Chairman of the Board of Textile Technology. Pandit Govin Malviya who was a representative of the previous Central Legislature, and therefore according to the constitution of the Council ceased to be a member of both the Council and its Co-ordinating Committee with effect from the 15th August, 1947 was also present by special invitation. Sir S. S. Bhatnagar, Sir Padampat Singhania, Sir Vithal N. Chandavarkar, Major D. L. Deshpande, Dr. K. A. Hamid, Sir A. L. Mudaliar and Mr. G. L. Mehta were unable to attend (The agenda of the meeting is shown in Annexure I).

*Item No. I.*

To report that the proceedings of the third meeting of the Co-ordinating Committee held at Bangalore on the 27th and 28th May, 1947, were confirmed by circulation to members. The proceedings were considered by the All India Council for Technical Education at its second meeting held on the 29th and 30th May, 1947.

2. It was reported that the proceedings of the third meeting of the Co-ordinating Committee held at Bangalore on the 27th and 28th of May 1947 were confirmed by circulation to members and were considered by the All-India Council for Technical Education at its meeting held on the 29th and 30th May 1947.

*Item No. II*

To receive and consider the report of the Sub-Committee appointed by the Co-ordinating Committee to scrutinise the reports of the Visitor Committees and to make recommendations for grants to the institutions concerned.

3. The Committee then considered the report of the Scrutinising Committee (Annexure II) which met at New Delhi on the 14th November, 1947 and expressed satisfaction with the soundness of the recommendations made by the Scrutinising Committee. As already decided by the Council, the Committee reiterated the view that the following important institutions of engineering and technology

should be strengthened and developed immediately by means of financial assistance from the Central Government :—

- I. Engineering College, Banaras Hindu University.
- II. College of Engineering and Technology, Jadavpur.
- III. Victoria Jubilee Technical Institute, Bombay.
- IV. College of Mining and Metallurgy, Banaras Hindu University.
- V. College of Technology, Banaras Hindu University.
- VI. Department of Chemical Technology, Bombay University.
- VII. Lakshminarayan Institute of Technology, Nagpur University.
- VIII. Department of Applied Chemistry, College of Science and Technology, University of Calcutta.
- IX. Department of Applied Physics, College of Science and Technology University of Calcutta.
- X. Jaipur Vikram Deo College of Science and Technology, Andhra University.
- XI. The Allagappa Chettiar College of Chemical Technology, Madras University.
- XII. College of Engineering and Technology, Muslim University, Aligarh.
- XIII. College of Engineering, Annamalai University.
- XIV. Dayalbagh Technical College, Agra.

4. The Committee considered the relative merits of the different institutions from the point of view of recommending financial assistance for strengthening them. They agreed with the Scrutinising Committee that of the 14 institutions listed above, the last three, namely, the College of Engineering and Technology, Muslim University, the College of Engineering Annamalai University and the Dayalbagh Technical College, Agra, should be treated on a different footing from the rest for the reason that not much progress had been made with the Engineering Colleges of Annamalai and Aligarh Universities, whereas the Dayalbagh Technical College, although a good one of its kind, required to be strengthened considerably to bring it to the standard of an Engineering College providing degree courses. The Committee, therefore, recommended that grants to these institutions should be made by the Central Government only after the institutions had raised sufficient funds from other sources to meet at least a third of the total capital and recurring cost involved in bringing them up to the requisite standard.

5. The Committee then considered the basis of assessment of the minimum requirements in respect of building space, equipment, library, etc., in a good institution of Engineering and Technology; the minimum recurring cost of technical education, hostel accommodation etc., and the present day building costs. The Committee agreed with the assessments made by the Scrutinising Committee as set out below :—

- (a) *College Building*.—(to include instructional space, Workshops, laboratories, office etc.) A good Engineering College providing in the main undergraduate courses should have a minimum floor area calculated on the basis of 200 sq. ft. per student and a Technological Institution providing mainly post-graduate courses and research facilities should have a minimum floor area calculated on the basis of 300 sq. ft. per student.
- (b) *Laboratory equipment and Workshop (Machinery and Tools)*.—Considering the present market prices, the equipment, library etc. should be

provided at the rate of at least Rs. 5,000 per student, if an institution is to be adequately equipped.

- (c) *Cost of education.*—The Committee agreed with the Scrutinising Committee that at a properly staffed institution the cost of education would amount to approximately Rs. 1,000 per student per annum for Engineering and Rs. 1,200 per student per annum for Chemical Technology and Chemical Engineering Degree courses. The latter figure may prove to be a little low for post-graduate and research institutions.
- (d) *Hostel accommodation.*—In regard to hostel accommodation, provision should be made at the rate of 150 sq. ft. per hostel seat and Rs. 150 per seat for furniture and fittings.
- (e) *Building Cost.*—The cost of college building should be calculated at the rate of Rs. 12/8/- per sq. ft. and that of hostel buildings at the rate of Rs. 10 per sq. ft. For Calcutta and Bombay, the figures should be Rs. 15 and Rs. 12/-8/- per sq. ft. respectively. In the case of institutions providing mainly post-graduate instruction and research facilities, an additional provision at the rate of Rs. 5 per sq. ft. would be required to meet the extra cost of fittings and furnishings.

6. With regard to the conditions to be imposed on the institutions receiving grants the Committee decided on certain modifications of the recommendations, made by the Scrutinising Committee in this behalf. The conditions as amended are as follows :—

- (i) While no encroachment on the autonomy of the Universities is suggested syllabuses of studies should be in harmony with the pattern adopted by the All-India Council for Technical Education.
- (ii) (a) The non-University institutions shall include in the Selection Committee appointed for the purpose of recruitment of staff, independent experts with the approval of the All-India Council for Technical Education.
- (b) In the case of colleges or departments under the administrative control of universities, the appointment of staff shall be made by Selection Committee constituted in accordance with the Universities' Acts and Rules, or if the appointment of selection committees is not specifically provided for in the University Act, the rules for the appointment of such Committees shall be framed with the approval of the Inter-University Board. In every case, the All-India Council for Technical Education shall be acquainted with the rules and regulations for the selection and appointment of staff.
- (iii) Equipment for laboratories of various types and workshops shall be generally as prescribed by the All-India Council for Technical Education.
- (iv) Grant under a particular head shall not be utilised for purposes other than that for which it is intended except with the general approval of the All-India Council for Technical Education.
- (v) (a) A visiting committee or an inspector appointed by the All-India Council for Technical Education shall periodically visit the non-University institutions receiving grants and report to the Council whether the grants given by the Government are being properly utilised and also whether proper standards of teaching and examination are being maintained.
- (b) In the case of University Departments, or Institutions administered directly by Universities, the University concerned, shall appoint a

Visiting Committee in accordance with its own rules. Where such rules do not exist already, the University will be, required to frame them in consultation with the University grants Committee. Such Visiting Committees shall inspect the institutions annually and report to the Universities whether the Government grants are being properly utilised and proper standard of instruction and examination maintained. The Universities shall forward copies of all such reports to the All-India Council for Technical Education.

- (vi) Where degree course as well as diploma courses of a definitely lower standard than the degree in the same subject, are being taught, the diploma courses shall be discontinued or separated from the College or Institution receiving grant, so that no portion of the capital or recurring grant is utilised either directly or indirectly except for the promotion of higher technical education.
- (vii) Recipients of recurring grant shall bring the salary scale of teaching staff and their qualifications to the level recommended by Central Government within three years from the date from which the grant is made.
- (viii) In the case of non-university institutions the appointment of professor or Heads of Departments for a period exceeding three months shall be subject to the approval of the All-India Council for Technical Education. The placing of the present incumbents on professorial status or the status of Heads of Departments carrying the salaries prescribed by the Central Government shall also be subject to the approval of the Council.
- (ix) The Central Government shall determine the quota for each province for purposes of admissions to the institutions concerned, especially to those additional seats which may be provided as a direct result of the grant from the Central Government.
- (x) Capitation fees shall not be charged in respect of students admitted under the quota system fixed by the Central Government.
- (xi) (a) The Central Government shall have at least two seats for its nominees on the Managing Committee or the Governing Body (consisting of say 12 members) of non-university institutions and the All-India Council for Technical Education shall also have two seats thereon. Provision should also be made for the teaching staff to be adequately represented on the Managing Committee or the Governing Body of the Institutions.
- (b) In the case of institutions or departments administered directly by a University, the Central Government and the All-India Council for Technical Education shall have the right to nominate one member each on the Committee of Management or on the Advisory Committee.
- (xii) The number of students to be admitted each year and the total strength of the student population of the College or the Institution shall not exceed the number which may be fixed from time to time by the All-India Council for Technical Education.

7. The Committee then considered the question of capital grants by Government for the construction of hostels and agreed with the Scrutinising Committee that the assistance for the purpose of providing hostels should be in the nature of an interest free loan repayable to the Government within 33 years.

The Committee also endorsed the view of the Scrutinising Committee that for the present, the Government need not give any grant or loan for building staff quarters.

8. *Nature of financial assistance and spread of grants.*—The Committee recommended that the financial assistance from the Central Government should be in the nature of :—

- (i) Capital grant for college building and equipment, etc.
- (ii) Annual recurring grant towards the cost of education, to meet the excess of recurring expenditure on salaries, stores and contingencies, etc. over income from endowments, student fees, etc.
- (iii) An interest-free loan for the purpose of providing student hostels repayable to the Government within 33 years.

As regards the mode of payment of grants and loans the Committee came to the following conclusions :—

- (a) The entire capital grant for the construction of college buildings should be spread over a period of three years ending in the financial year 1949-50. Similarly the loan for construction of student hostels should be spread over the same period.
- (b) The capital grant for equipment may be spread over a period of four years ending in the financial year 1950-51 in the following manner :—
  - 5 per cent of the total recommended, in the year 1947-48
  - 15 per cent of the total recommended, in the year 1948-49
  - 60 per cent of the total recommended, in the year 1949-50
  - 20 per cent of the total recommended, in the year 1950-51

If, however, the position regarding the availability of equipment improves to some extent, the grant may be allocated as follows :—

- 5 per cent in the year 1947-48
- 30 per cent in the year 1948-49
- 45 per cent in the year 1949-50
- 20 per cent in the year 1950-51.

The grant on equipment normally spread over a period of five years may however be differently adjusted if the Government is satisfied that an institution or institutions can arrange to acquire the necessary and requisite equipment at an early period.

- (c) The recurring grant should be so arranged that in the fifth year, *i.e.* in the year 1951-52, an Institution should be receiving the maximum grant recommended.

The allocation may be as follows :—

- 20 per cent of the max. grant recommended, in the year 1947-48
- 40 per cent of the max. grant recommended, in the year 1948-49
- 60 per cent of the max. grant recommended, in the year 1949-50
- 80 per cent of the max. grant recommended, in the year 1950-51
- 100 per cent of the max. grant recommended, in the year 1951-52

The reasons for the above allocation are mainly as follows :—

- (i) Increase in the student population would be gradual.
- (ii) It would take the institutions some time to properly re-organise their staff.

The Committee, however, recognised that suitable re-adjustments may be necessary to suit individual institutions and recommended that the allocation indicated above should be regarded as purely tentative and the Government should make suitable adjustments so as to enable the institutions to recruit competent staff as early as possible.



(d) *Interim Relief.*—In the case of College of Engineering and Technology Jadavpur, the Victoria Jubilee Technical Institute, Bombay, and the College of Engineering, Banaras Hindu University, the Committee recommended that the Government should give immediately some interim grants in addition to the grants etc. recommended for the year 1947-48, for the Committee learns that the Jadavpur and the Banaras Colleges were in financial difficulties and the Victoria Jubilee Technical Institute also required financial assistance to cope with the refugee students from Sind. The amount of such interim relief should, however, be determined by the Ministry of Education and the grants so given deducted from the amounts payable in subsequent years.

9. The Committee was informed that a large amount of surplus equipment suitable for educational purposes were available in America and they expressed the opinion that since the procurement of equipment was a matter of great urgency and required immediate consideration, the Government of India should depute two or three suitable officers immediately to go abroad for the purpose of facilitating purchase and shipment of the equipment required by the Technical Institutions in the country. The delegation should be empowered to enter into necessary financial commitments for this purpose. The Committee was informed by the Chairman that contacts may be made with America through Dr. B. C. Roy who had returned from America recently and knew the details of how that arrangement could be made.

10. *Grants to University Institutions.*—The Committee was of the opinion that since the scope of the University Grants Committee was for the present limited to the three Central Universities, the Ministry of Education should take necessary action so that the grants recommended for non-central university institutions are made immediately available to them, without waiting for the extension of the scope of the University Grants Committee. With regard to the Central Universities, it was recognised that the Ministry of Education would take such action as it may consider appropriate. The Committee, however, was of the opinion that the Government should immediately take such action as would ensure the timely disbursement and utilisation of grants recommended for the year 1947-48. The Committee felt that it should be left entirely to the discretion of the Ministry of Education whether they should apprise the University Grants Committee of the action which they might take in respect of grants to the non-central universities.

11. *Recommended annual intakes and other observations.*—The Committee then considered the question of annual intake of students into various institutions recommended for financial assistance. Their views in this and other related matters are given below. The Committee, however, recognised that the intake which they now considered appropriate might require to be modified from time to time by the All-India Council for Technical Education.

(I) *College of Engineering, Banaras Hindu University.*—The number of annual admissions should be 160, i.e. 80 each for the mechanical and electrical engineering degree course for the present, and later on this number may be changed to 60, 60 and 40 for mechanical, electrical and civil engineering degree courses respectively when in the opinion of the Council the College has been sufficiently strengthened.

(II) *College of Engineering & Technology, Jadavpur.*—The annual admission to the College should be 200—80, 60 and 60 in the mechanical, electrical and chemical engineering degree courses respectively.

The Institution should be required to either discontinue the junior courses (diploma and certificate courses) and the agricultural courses or to provide these courses in an entirely separate institution, within a period of three years from the receipt of the first grant. It may be mentioned here that the grant is entirely for the Engineering section of the College.

(III) *Victoria Jubilee Technical Institute.*—In addition to the present rate of admission of 40 students to the combined Mechanical and Electrical Degree courses, the institution should admit 20 more students; and in addition to the present rate of admission of 10 students to the Textile Manufacture Degree course, the institution should admit ten more students. Civil Engineering Degree courses should also be introduced immediately with an annual intake of 50 students and a Chemical Engineering Degree course should be also introduced immediately in collaboration with the Bombay University, Chemical Technology Department, with an annual intake of 20 students.

(IV) *College of Mining and Metallurgy, Banaras Hindu University.*—The annual rate of admission to this College should be as follows:—

Mining . . . . .	16
Metallurgy . . . . .	32

The Committee endorsed the view of the Scrutinising Committee that the Fuel Technology course should not be introduced.

(V) *College of Technology, Banaras Hindu University.*—The annual intake of students in the Pharmacuetics and the Industrial Chemistry departments should be 22 and 30 respectively.

The Committee was not in favour of recommending any financial assistance for the Ceramics and Glass Technology Department of these institutions and decided that no portion of the grant recommended should be utilised for this Department.

(VI) *Department of Chemical Technology, University of Bombay.*—The Department should admit the following additional students to the degree courses and for research work:—

Textile Chemistry . . . . .	18
Plastics & Paints and Varnishes . . . . .	9
Oils, Fats & Soaps . . . . .	8
For research leading to M.Sc. (Tech. or Ph.D.) . . . . .	20

In addition to the above, 20 students should be admitted each year to a Chemical Engineering Degree courses which should be introduced immediately and run in collaboration with the V.J.T.I.

(VII) *Lakshminarayan Institute of Technology, Nagpur.*—The institution should admit 72 I.Sc. students to the revised four-year B.Sc. (Tech.) Degree course and 12 students for research leading to degrees of M.Sc., Ph.D. or D.Sc.

The Committee endorsed the Scrutinising Committee's view that the Government of India should inform the institution that in the opinion of the All-India Council for Technical Education, frequent changes in the senior staff as seem to have taken place in this institution cannot be conducive to its proper growth.

Dr. Jha reported that although the institution has been established with private endowment, it was under the administrative control of the Nagpur University. The Committee directed that this should be verified and the institution treated as a university or a non university institution as the case might be.

(VIII) *Department of Applied Chemistry, University College of Science and Technology, Calcutta University.*—The annual intake of students to the M.Sc. course should be 36 and to the special diploma course 20. The number of research workers should be increased from 25 to 50. The Committee approved of the proposal for the introduction of new sections of Plastics and Chemical Engineering.

(IX) *Department of Applied Physics, University College of Science and Technology, Calcutta University.*—The Committee approved of the proposal for splitting up this Department into two Departments, namely, the Department of Applied Physics and a new Department of Radio Physics and Electronics and recommended that the annual admission to the M.Sc. course in Applied Physics should be 40 and that there should be provision for 16 research students.

It was also recommended that the capital and recurring grants to the Applied Physics Department should be 2.15 lakhs and 0.5 lakhs respectively.

The annual admission to the new Department of Radio Physics and Electronics should be 20 and there should be provision for 8 research workers. The Committee

recommended that the capital and recurring grants for this new Department should be Rs. 5.47 and Rs. 0.792 lakhs respectively.

(X) *Jaipur Vikram Deo College, Andhra University.*—The Committee approved of the proposal to split up the Department of Chemical Technology into two Departments, namely, the Department of Chemical Technology and a new Department of Pharmacy and recommended that grants should be made available for strengthening these two Departments.

The annual intake should be 21 students for degree courses in the Department of Chemical Technology and 10 students for the degree courses in Pharmacy and there should be provision for three research workers in Pharmaceutics.

The Committee felt that the Department of Chemistry did not come within their purview.

(XI) *Alagappa Chettiar College of Technology, Madras University.*—The Department of Chemical Technology should admit 30 students per year.

It was decided not to recommend any grant for the Leather Technology Department since a recurring annual grant is made to this Department by the Council of Scientific and Industrial Research.

It was also decided that no capital grant should be made to the Textile Technology Department since the Department formed part of the Government Textile Institute. A recurring grant of Rs. 40,000 was, however, recommended for this Department to enable the University to appoint professors and other necessary staff.

(XII) *College of Engineering, Muslim University, Aligarh.*—For the next four or five years or until the institution was properly developed and organised, admission to this college should be 90 students only, *i.e.*, 30 in each of the Departments of Civil, Mechanical and Electrical Engineering.

The Committee noted with regret that this Engineering College, although forming a part of the Central University, was very poorly equipped in the matter of staff and equipment. The Ministry of Education should, therefore, be asked to note the unfavourable comments made by the Visiting Committee appointed by the All-India Council for Technical Education.

As already mentioned the Committee was of the opinion that the authorities of the Institution should be asked to raise sufficient funds to meet at least one-third of the capital and recurring expenditure required to strengthen the college before the Central Government consider giving any further grant to this institution. The Committee were emphatic that the Central Government should make sure that a third of the capital and recurring cost involved for strengthening this institution has been raised by the University authorities before they make any further grant.

It may be noted that the grant recommended by the Committee constitutes in their opinion, two-thirds of the total capital and recurring expenditure and interest-free loan required for strengthening this institution.

(XIII) *College of Engineering, Annamalai University.*—The annual admission for the next five years should be 60 students, *i.e.*, 30, 15 and 15 in Civil, Mechanical and Electrical Engineering Departments respectively. Here, also, the university authorities should raise a third of the capital and recurring cost involved before the Central Government agree to make the two-thirds of the grant which the Committee recommends in the following paragraph.

(XIV) *Dayalbagh Technical College, Agra.*—The annual admission should be 60 students, *i.e.*, 30 in Mechanical and 30 in Electrical Engineering Degree courses.

The authorities of this institutions should also raise sufficient funds to meet at least a third of the estimated capital and recurring cost required to strengthen

this institution before the Central Government gives the grant amounting to two-thirds of the development cost as recommended by the Committee.

12. *Capital and Recurring Grants and Interest free loans.*—The Committee then considered the financial implications of the above recommendations. The detailed calculations will be seen in Annexure III. A summary of the grants which the Committee recommends is given below :—

Serial No.	Institution	Capital grant in lakhs of rupees		Ultimate recurring grant in lakhs	Interest free loan for hostels
		Building	Equipment		
1	2	3	4	5	6
I	Engineering College, Banaras Hindu University.	3.12	16.87	5.12	3.96
II	Jadavpur Engineering College . . . . .	5.38	24.00	6.48	14.175
III	V.J.T.I., Bombay . . . . .	7.60	9.87	2.06	4.340
IV	College of Mining and Metallurgy, Banaras Hindu University.	3.11	6.85	1.53	3.17
V	College of Technology, Banaras Hindu University.	1.30	4.20	2.08	2.18
VI	Deptt. of Chemical Technology, Bombay University.	3.34	3.06	1.07	3.24
VII	Laxminarayan Tech. Inst., Nagpur . . . . .	5.07	1.50	0.47	1.39
VIII	Deptt. of Applied Chemistry Calcutta University.	4.52	2.81	1.202	3.00
IX	Deptt. of Applied Physics and Radio Electronics, Calcutta University.	5.25	2.38	1.29	
X	Jaipur Vikram Deo College, Andhra University.	3.20	2.27	0.70	
XI	Alagappa Chettiar College, Madras . . . . .	2.50	2.50	0.60	For Chem. Technology Deptt.
				0.40	For Textile Technology Deptt.
	Total for I to XI . . . . .	44.39	76.31	23.022	35.455
XII*	Engineering College, Aligarh . . . . .	2.14	10.813	1.92	3.96
XIII*	Engineering College, Annamalai . . . . .	3.33	7.33	1.28	2.64
XIV*	Dayalbagh Technical College, Agra . . . . .	3.00	7.06	1.28	2.0
	Total for XII to XIV . . . . .	8.47	25.203	4.48	8.60
	Grand Total . . . . .	52.86	101.513	27.502	44.055

\*In the case of these institutions grants, etc., have been calculated at 66.6% of the total estimated cost of development.

*Item No. III*

To report the action taken by the Government of India on the recommendations made by the Co-ordinating Committee at its third meeting held on May 27 and 28, 1947 and by the All India Council for Technical Education at its second meeting held on May 29 and 30, 1947.

13. It was decided to record the information.

*Item No. IV*

To receive and consider a note on the activities of the All-India Boards of Technical Studies.

14. It was decided to record the information.

It was suggested by a few members that supplementary examinations might be held. Since the number of candidates involved was extremely small, the Committee decided to postpone the consideration of this issue until a later date.

The Committee endorsed the views of the Boards of Engineering and of Chemical Technology, that a second examination should not be held for those candidates who failed to appear at the last examination and that such candidates may be permitted to take the next examination in the normal course.

*Item No. V*

To consider the draft of a memorandum to be submitted to the Inter-University Board on the subject of collaboration between the All India Council for Technical Education and the Board.

15. The draft memorandum for submission to the Inter-University Board on the subject of collaboration between the All-India Council for Technical Education and the Board was approved and the Secretary was directed to issue it immediately to the Secretary of the Inter-University Board.

*Item No. VI*

To receive the interim report of the Scientific Man-Power Committee.

16. The Committee expressed its appreciation of the Interim Report of the Scientific Man-Power Committee and its agreement in principle with the recommendations made in that report. The Committee further recommended that the Government of India should take immediate steps for the implementation of these recommendations.

*Item No. VII*

To consider the question of reconstitution of the All-India Boards of Technical Studies on the expiry of their present term on the 31st December 1947.

17. It was noted that the All-India Boards of Technical Studies have to be reconstituted on the 1st of January 1948. The Chairman was authorised to select the specialists to be nominated by the Co-ordinating Committee on each of these Boards. It was further decided that any member of the Co-ordinating Committee who had names to suggest should intimate to the Secretary before the 31st December 1947.

*Item No. VIII*

To receive and consider a letter dated the 15th July 1947, from Col. Beeching, Special Officer, Technical and Vocational Education Department, Hyderabad (Deccan), on the question of establishment.

of 'Engineers Council for Professional Development' in India, and to make recommendations.

18. The Committee considered the issue raised in Col. Beeching's letter but regretted that the question of professional ethics was a matter which the Institution of Engineers (India) was the competent body to deal with and not the All-India Council for Technical Education.

*Item No. IX*

To report that Sir J. C. Ghosh, Director, Indian Institute of Science, Bangalore, has been nominated to represent the All India Council for Technical Education on the General Council of the Indian Standards Institution set up by the Department of Industry and Supply.

19. The Committee approved of the nomination of Sir J. C. Ghosh to the Indian Standards Institution as a representative of the All-India Council for Technical Education.

*Item No. X(a)*

To consider letter No. 1205-E, dated the 14th October 1947, from the Government of East Punjab on the subject of location of the Northern Higher Technical Institution.

20. It was felt that consideration of the question of location of the northern higher technical institution was premature since the Government of India have decided to set up only two out of the four higher technical institutions within the first quinquennium. In any case, the matter could be considered only after the East Punjab Government had established themselves and had decided the location of their capital.

*Item No. X(b)*

To receive a note on the discussion between Major D. L. Deshpande (the representative of the All India Council for Technical Education on the Training Sub-Committee of the Central Employment Advisory Committee) and Mr. S. N. Roy, Director of Training, D.G.R. & E., held on 5th June 1947.

21. It was decided to record the information.

*Item No. X(c)*

To consider a note on the formation of Regional Committee of the All India Council for Technical Education and to make necessary recommendations.

22. The Committee noted the views expressed by the various Provinces and States on the question of formation of the Regional Committees of the All-India Council for Technical Education and decided that the composition of the regions should be as follows :—

*Northern Region*.—East Punjab, U.P., Delhi, Central India and Rajputana States and Kashmir and Jammu States when the latter had finally acceded to the Indian Union.

*Eastern Region*.—Assam, West Bengal, Bihar, Orissa, Tripura and the other Eastern India States.

*Southern Region*.—Madras, Mysore and the other South-India States and the Hyderabad State if the latter accedes to the Indian Union.

*Western Region*.—Bombay, Central Provinces, and Berar and the Western India States.

The Committee desired that the Government of India should set up these Committees at an early date in consultation with the Provincial Governments.

*Item No. X(d)*

To consider the question of selection of a site near Calcutta for the Eastern Higher Technical Institution.

23. The Committee noted that the Ministry of Railways had decided not to locate the Locomotive Workshop at Kanchrapara, where a site in proximity to site reserved for the workshop had been provisionally selected for the Eastern Higher Technical Institution. The Committee expressed the opinion that it did not appear to be particularly desirable to locate the Eastern Higher Technical Institution at the Kanchrapara site now and suggested that the Government of India should request the Government of West Bengal to acquire a piece of land measuring at least 100 acres within a radius of ten miles from Calcutta—the site to have adequate facilities for water and electric supply. Pandit Govind Malaviya wished it to be recorded that he was opposed to locating the Eastern Higher Technical Institution near Calcutta which is very close to the frontier between India and Eastern Pakistan. The Committee, however, recognised that the final decision regarding the selection of sites within the convenient reach of the industrial area of Calcutta should rest with the Government of India.

*Item No. X(e)*

To consider suitable abbreviations for the All India Diplomas in various subjects which the diploma holders may be permitted to affix to their names.

24. It was decided to postpone the consideration of this item to a later date.

*Item No. X(f)*

To report the appointment of Major D. L. Deshpande, Principal, Engineering College, Travancore University, as a representative of the All India Council for Technical Education on the Standing Advisory Committee on Power Engineering of the Indian Institute of Science, Bangalore.

25. The Committee approved of the appointment of Major D. L. Deshpande on the Standing Advisory Committee on Power Engineering of the Indian Institute of Science, Bangalore, as a representative of the All India Council for Technical Education.

26. The Chairman mentioned that Sir John Sargent, the Educational Adviser to the Government of India, and a member of the All-India Council for Technical Education and the Co-ordinating Committee was due to proceed on leave preparatory to retirement on the 19th November 1947. Members spoke eloquently of the yeoman service which Sir John had rendered to the cause of education in India and in particular to the establishment of the All-India Council for Technical Education and its development. The Committee decided to place on record their appreciation of the work of Sir John Sargent in and outside the Committee for the promotion and co-ordination of higher technical education in India.

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

## APPENDIX I TO ANNEXURE IV

## CO-ORDINATING COMMITTEE OF THE ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

*Fourth Meeting*Place : *New Delhi.*Date : *15th November 1947*

## AGENDA

1. To report that the proceedings of the third meeting of the Co-ordinating Committee held at Bangalore on the 27th and 28th May, 1947, were confirmed by circulation to members. The proceedings were considered by the All India Council for Technical Education at its second meeting held on the 29th and 30th May, 1947.

2. To receive and consider the report of the Sub-Committee appointed by the Co-ordinating Committee to scrutinise the reports of the Visiting Committees and to make recommendations for grants to the institutions concerned.

3. To report the action taken by the Government of India on the recommendations made by the Co-ordinating Committee at its third meeting held on May 27 and 28, 1947 and by the All India Council for Technical Education at its second meeting held on May 29 and 30, 1947.

4. To receive and consider a note on the activities of the All India Boards of Technical Studies.

5. To consider the draft of memorandum to be submitted to the Inter-University Board on the subject of collaboration between the All India Council for Technical Education and the Board.

6. To receive the interim report of the Scientific Man-Power Committee.

7. To consider the question of reconstitution of the All India Boards of Technical Studies on the expiry of their present term on the 31st December, 1947.

8. To receive and consider a letter dated the 15th July, 1947, from Col. Beeching, Special Officer, Technical and Vocational Education Department, Hyderabad (Deccan), on the question of establishment of 'Engineers Council for Professional Development' in India and to make recommendations.

9. To report that Sir J. C. Ghosh, Director, Indian Institute of Science, Bangalore, has been nominated to represent the All India Council for Technical Education on the General Council of the Indian Standards Institution set up by the Department of Industry and Supply.

10. Any other business.

(a) To consider letter No. 1205E dated the 14th October 1947 from the Government of East Punjab on the subject of location of the Northern Higher Technical Institution.

(b) To receive a note on the discussion between Major D. L. Deshpande (the representative of the All India Council for Technical Education on the Training Sub-Committee of the Central Employment Advisory Committee) and Mr. S. N. Roy, Director of Training, D. G. R. & E. held on 5th June 1947.

(c) To consider a note on the formation of Regional Committees of the All India Council for Technical Education and to make necessary recommendations.

(d) To re-consider the question of selection of a site near Calcutta for the Eastern Higher Technical Institution.

(e) To consider suitable abbreviations for the All India Diplomas in various subjects which the diploma holders may be permitted to affix to their names.

(f) To report the appointment of Major D. L. Deshpande, Principal, Engineering College, Travancore University, as a representative of the All India Council for Technical Education on the Standing Advisory Committee on Power Engineering of the Indian Institute of Science, Bangalore.



## APPENDIX II TO ANNEXURE IV

## PROCEEDINGS OF THE SCRUTINISING COMMITTEE OF THE ALL-INDIA COUNCIL FOR TECHNICAL EDUCATION HELD AT NEW DELHI ON THE 14TH NOVEMBER 1947.

The All-India Council for Technical Education at its second meeting held at Bangalore in May 1947, while considering the reports of the Visiting Committees appointed to inspect some of the technical institutions in the country, had agreed with the recommendations of the Co-ordinating Committee arising out of those reports, that more Visiting Committees should be appointed to visit and inspect the

- (1) Jaipur Vikram Deo College of Science and Technology, Waltair, Andhra University,
- (2) Chemical Technology Department of the Madras University,
- (3) Departments of Applied Physics and Applied Chemistry of the University College of Science and Technology, Calcutta University, and
- (4) Lakshminarayan Institute of Technology, Nagpur University,

in addition to the seven institutions already visited; and that a small scrutinising committee should scrutinize the recommendations of the Visiting Committees and submit for consideration of the Co-ordinating Committee specific recommendations for strengthening and improvement of each of the institutions reported upon.

The following Scrutinising Committee was appointed:—

MR. N. R. SARKER—*Chairman*.

SIR S. S. BHATNAGAR.

SIR J. C. GHOSH.

MR. G. L. MEHTA.

MR. N. V. MODAK.

SIR A. L. MUDALIAR.

SIR JOHN SARGENT.

DR. S. R. SEN GUPTA—*Secretary*.

2. The Committee met at New Delhi on the 14th November 1947 under the Chairmanship of Mr. N. R. Sarker.

The following members were present:—

MR. N. R. SARKER—*Chairman*.

SIR J. C. GHOSH.

MR. N. V. MODAK.

DR. S. R. SEN GUPTA—*Secretary*.

Dr. D. M. Sen of the Ministry of Education attended on behalf of Sir John Sargent, Educational Adviser to the Government of India.

Sir S. S. Bhatnagar, Mr. G. L. Mehta, Sir A. L. Mudaliar and Sir John Sargent were unable to attend.

3. The Committee had before them the Visiting Committee's reports on the following:—

- (1) College of Engineering and Technology, Jadavpur.
- (2) Victoria Jubilee Technical Institute, Bombay.
- (3) Department of Chemical Technology, Bombay University.
- (4) Engineering College, Banares Hindu University.
- (5) College of Mining and Metallurgy, Banares Hindu University.
- (6) College of Technology, Banares Hindu University.
- (7) Dayalbagh Technical College, Agra.
- (8) College of Engineering and Technology, Muslim University, Aligarh.
- (9) College of Engineering, Annamalai University.
- (10) Lakshminarayan Institute of Technology, Nagpur University.
- (11) Department of Applied Chemistry, College of Science and Technology, University of Calcutta.
- (12) Department of Applied Physics, College of Science and Technology, University of Calcutta.
- (13) Jaipur Vikram Deo College of Science and Technology, Waltair, Andhra University.

The Visiting Committee's report on the Alagappa Chettiar College of Chemical Technology, Madras University, was not available. Sir J. C. Ghosh, the Chairman of the Committee had however examined the development plans of the institution and had discussed them with the head of the institution and was able to give his views in the matter of financial assistance which the institution should receive.

4. (a) *Accommodation and Equipment.*— At the outset the Committee considered the minimum requirements in respect of building space, equipment, library etc. and came to the conclusion that a good Engineering College should have a minimum floor area calculated on the basis of 200 sq. ft. per student and that the value of equipment, library facilities, etc. should come up to Rs. 5,000 per student at the present market value.

(b) *Cost of Education.*— In the matter of cost of education, the Committee was of the view that it should amount to approximately Rs. 1,000 per student per annum for Engineering and Rs. 1,200 per annum per student for Chemical Technology and Chemical Engineering Degree courses.

(c) *Hostel.*— As regards hostel accommodation, the Committee was of the opinion that provision should be made at the rate of 150 sq. ft. per hostel seat and Rs. 150 per seat for furniture and fittings. Assistance given for the purpose of providing hostels should be in the nature of an interest free loan repayable to the Government within 33 years.

(d) *Staff Quarters.*— The Committee was not in favour of granting any loan for building staff quarters for the present.

(e) *Building cost.*— It was agreed that except for Calcutta and Bombay the cost of the College building should be calculated at the rate of Rs. 12/8- per sq. ft. and that of hostel buildings at the rate of Rs. 10/- per sq. ft. For Calcutta and Bombay, the figures should be Rs. 15/- and Rs. 12/8/- per sq. ft. respectively. In the case of post-graduate institutions, an additional provision at the rate of Rs. 5/- per sq. ft. should be made towards the cost of fittings and furnishing of the post-graduate department.

5. *Relative Merits of Institutions.*—The Committee then considered the relative merits of the respective institutions from the point of view of granting financial assistance for strengthening them. They came to the conclusion that of the 14 institutions, the following 3 namely the Annamalai University Engineering College, the Aligarh University Engineering College, and the Dayalbagh Technical College should be treated on a different footing from the rest for the reason that not much progress has been made with the Annamalai University College and the Aligarh Engineering College, whereas the Dayalbagh Technical College, although a good one of its kind, required to be strengthened considerably to bring it to the standard of an Engineering College. It was decided that grants should be made to the above three institutions only if they can raise funds to meet at least a third of the capital and recurring cost involved in bringing these institutions up to the requisite standard as indicated above.

6. *Conditions for grant.*—The Committee then considered the conditions under which grants may be made and came to the conclusion that the grants should be subject to the following general conditions :—

(i) Syllabuses of studies shall be in harmony with the pattern adopted by the All India Council for Technical Education.

(ii) In the matter of appointment of staff for non-University Institutions, independent experts shall be included in the Selection Committees with the approval of the All India Council for Technical Education.

In the case of Colleges or Departments under the Administrative control of the Universities, the appointment of staff shall be made by the Selection Committees of the Universities with the approval of the Inter-University Board.

(iii) Equipment for various laboratories shall be generally as prescribed by the All India Council for Technical Education.

(iv) Grant given under one head shall not be used for purposes other than that for which it is intended except with the approval of the All India Council for Technical Education.

(v) A Visiting Committee or Inspector appointed by the All India Council for Technical Education shall periodically visit the non-University Institutions receiving grants from the Central Government and report to the Council whether the grants given by the Government are being properly utilised. In the case of University Departments or Institutions administered directly by the Universities, the University concerned shall appoint visiting committees in consultation with the University Grants Committee to visit annually the Institutions receiving grants from the Central Government and report whether the grants given by the Government were being properly utilised. Such reports shall be made available to the All India Council for Technical Education

- (vi) Where degree courses as well as diploma courses of a definitely lower standard than the degree in the same subject are being taught, the Diploma courses shall either be discontinued or dissociated from the College or Institution receiving grant, so that no portion of the capital or recurring grant is utilised either directly or indirectly except for the promotion of higher technical education.
- (vii) Recipients of recurring grants shall bring the scales of salaries of teaching staff and their qualifications to the level recommended by the Central Government within three years from the date which the grant is first made.
- (viii) In the case of non-University Institutions, the appointment of Professors or Heads of Departments shall be subject to the approval of the All India Council for Technical Education. The placing of the present incumbents on Professorial status or the status of Heads of Departments carrying the salaries prescribed by the Central Government shall also be subject to the approval of the Council in the case of non-University Institutions.
- (ix) The Government shall determine the quota for each province for purposes of admissions to the Institutions concerned, especially to those additional seats which may be provided as a direct result of the grant from the Central Government.
- (x) Capitation fees shall not be charged in respect of the students admitted under the quota system fixed by the Central Government.
- (xi) The Central Government shall have at least two seats for its nominees on the Managing Committee or the Governing Body of non-University institutions and the All India Council for Technical Education shall also have two seats thereon. In the case of Institutions or Departments administered by a University direct the Central Government and the All India Council for Technical Education shall have the right to nominate one member each on the Advisory Committee or the Committee of Management.
- (xii) The number of students to be admitted each year and the total strength of the student population of the College or Institution shall not exceed the number which may be fixed from time to time by the All India Council for Technical Education.

7. *Spread of Grants.*—The Committee expressed the view that the grants may be spread over a period of four years as indicated below.

- (a) The entire amount of grant for buildings should be spread over three years ending in the financial year 1949-50.
- (b) The grant for equipment may be spread over four years, *i.e.*, upto the year 1950-51 in the following manner :—
- |                                  |
|----------------------------------|
| 5 per cent in the year 1947-48   |
| 15 per cent in the year 1948-49. |
| 60 per cent in the year 1949-50. |
| 20 per cent in the year 1950-51. |
- (c) The recurring grant should be so arranged that in the fifth year, *i.e.* in the year 1951-52 the institution should be receiving the maximum grant recommended. This may be spread as follows :—
- |                     |               |
|---------------------|---------------|
| In the year 1947-48 | 20 per cent.  |
| In the year 1948-49 | 40 per cent.  |
| In the year 1949-50 | 60 per cent.  |
| In the year 1950-51 | 80 per cent.  |
| In the year 1951-52 | 100 per cent. |

The above allocation is, however, purely tentative and may be changed so as to enable the institutions to recruit competent staff immediately wherever necessary.

8. *Grants to University Institutions.*—It was agreed that until the scope of the University Grants Committee is extended the Ministry of Education should be requested to take immediate action to see that grants recommended for the non-Central University Institutions are made immediately. There was, however, no objection to acquainting the University Grants Committee with the action which the Ministry of Education may take in respect of grant to the non-Central Universities. In case of Departments or constituent College of the Central Universities, it was appreciated that the Ministry of Education will be free to take such action as they may consider appropriate.

9. *Annual Intakes.*—The Committee then considered the Visiting Committees reports for each institution so as to fix the number of annual intakes and the financial assistance necessary for each institution.

1. *College of Engineering, Benares Hindu University.*—The number of annual admissions to the Engineering College should be limited to 160; 80 each in the Mechanical and Electrical Engineering Degree courses for the present. Later on the numbers may be changed to 50, 60 and 40 for Mechanical, Electrical and Civil Engineering Diploma Courses respectively when in the opinion of the Council the College has been sufficiently strengthened.

II. *College of Engineering and Technology, Jadavpur.*—The annual admission to Degree courses should be limited to 200 (80 Mech. Engineering, 60 Electrical Engineering and 60 Chemical Engineering) and the grant should be made to the Institution on the distinct understanding that the Institution would either discontinue the junior courses and the agricultural courses or provide these courses in an entirely separate institution within a period of three years from the receipt of the first grant.

III. *Victoria Jubilee Technical Institute.*—It was agreed that the Institution should have 20 additional seats for the combined Mechanical and Electrical Degree courses and 10 additional seats for the Textile Manufacturing Degree course. Civil Engineering Degree course should also be introduced with an annual intake of 50 students and a Chemical Engineering Degree course for 20 students in collaboration with the Bombay University Chemical Technology Department.

IV. *College of Mining and Metallurgy, Benares Hindu University.*—The Committee was of the view that annual admission to this College should be as follows:—

Mining . . . . .	16
Metallurgy . . . . .	32

The Committee also expressed the opinion that since the production of synthetic fuel and the maximum utilization of natural fuel were of supreme importance, the Government of India should take steps to set up a Government institution under their own control for the training of fuel technologists rather than leave this important branch of study to be tackled by non-government institutions.

V. *College of Technology, Benares Hindu University.* The Committee was not in favour of recommending any financial assistance for the Ceramics and the Glass Technology Department of this institution. They agreed that the Pharmaceutics and the Industrial Chemistry Departments of this institution should be strengthened and that the annual intakes to these courses should, for the time being, be limited to 22 and 30 respectively.

VI. *Department of Chemical Technology, University of Bombay.*—The Committee agreed that provision should be made for the following additional seats:

Textile Chemistry . . . . .	18
Plastics, Paints and Varnishes . . . . .	9
Oils, Fats & Soaps . . . . .	8
Research students altogether . . . . .	20

In addition to the above 20 students should be admitted each year to the Chemical Engineering Degree course, the course to be run in collaboration with the Victoria Jubilee Technical Institute.

VII. *Lakshminarayan Institute of Technology, Nagpur.*—The Committee agreed that the annual intake to the B.Sc. (Tech.) course and for research should be 72 and 12 respectively. The Committee, however, wished it to be conveyed to the Institution that, in their opinion, frequent changes in the senior staff as seem to be taking place in this institution cannot be conducive to the proper growth of the Institution.

VIII. *Department of Applied Chemistry, Calcutta University.*—The Committee agreed that the annual intake of students to the M.Sc. course should be 36, to the Soap-Diploma course 10 and the number of research students should be increased to 50. They were in favour of introduction of new sections of Plastics and of Chemical Engineering.

IX. *Department of Applied Physics, Calcutta University.*—The Committee suggested the splitting up of this Department into two departments, namely, the Department of Applied Physics and a new Department of Radio Physics and Electronics. The Committee agreed that the annual admission to M.Sc. course should be limited to 40 and that there should be provision for 16 research students. The Committee were of the opinion that the capital grant to the Applied Physics Department should be limited to 2.15 lakhs and the recurring grant to 0.5 lakhs.

For the new Department of Radio Physics and Electronics, the annual intake to M.Sc. courses should be 20 and there should be 8 research students. The Committee are of the opinion that capital grant for this new Department should amount to 5.47 lakhs and the recurring grant to 0.792 lakhs.

X. *Jaipur Vikram Deo College of Science and Technology, Andhra University.*—The Committee were not in favour of giving any grant to the Department of Chemistry and they agreed with the Visiting Committee that the Department of Chemical Technology should be split into two departments, namely, the Department of Chemical Technology and the Department of Pharmacy and that grants should be made for the strengthening of these two departments. The Committee agreed that the annual intake of the Chemical Technology Department should be 21 and that of the Pharmaceutics Department 18 and the latter should have at least three research students.

XI. *Alagappa Chettiar College of Technology, Madras University.*—The Committee agreed with the view expressed by Sir J. C. Ghosh that the annual admission to this Department should be 30 per year and that the Institution should be given a capital grant of Rs. 5 lakhs for buildings and equipment and a recurring grant of Rs. 60,000 per year. The Committee was not in favour of giving any grant to the Leather Technology Department which is receiving an annual grant of Rs. 50,000 from the Council of Scientific and Industrial Research. The Committee was also not in favour of giving any capital grant to the Textile Technology Department since the Department forms a part of the Government Textile Institute, but recommended that to enable the University to appoint professors and other necessary staff an annual recurring grant of Rs. 40,000 should be made to this Department.

XII. *College of Engineering, Muslim University, Aligarh.*—The Committee noted with regret that this Engineering College although forming a part of a Central University, was very poorly equipped in the matter of staff and equipment and desired that the Ministry of Education's attention should be drawn to the unfavourable comments made by the Visiting Committee. The Committee was definitely of the view that for the next four or five years or until the Institution has been properly developed, the admission to this College should be strictly limited to 90 students, 30 in Civil Engineering, 30 in Mechanical Engineering and 30 in Electrical Engineering. The University authorities must secure private benefactions to the extent of a third of the estimated capital and recurring cost as calculated before the Central Government makes any further grant to this institution.

XIII. *Engineering College, Annamalai University.*—Here again the Committee was definitely of the view that the annual admission to the institution should be strictly limited to 60 students 30 in Civil Engineering, 15 in Mechanical Engineering and 15 in Electrical Engineering for the next five years and that the University must secure benefaction to the value of a third of the recurring and the capital cost involved to bring the Institution to a proper footing before the Central Government makes any grant to this College.

XIV. *Dyababai Technical College, Agra.*—The Committee agreed that the annual admission to the degree course should be limited to 60 students (30 Mech., 30 Electrical Engineering). The authorities of this institution must secure private benefactions to the extent of a third of the estimated capital and recurring cost as calculated before the Central Government makes any grant to this institution.

10. A summary of the foregoing recommendations in respect of capital and recurring grants for each institution together with detailed calculations will be found in Annexure 'I'.

A statement of the total financial implications of the recommendations made by the Seru-  
minising Committee is given in Annexure 'II'.

## ANNEXURE II

### SUMMARY OF RECOMMENDATIONS

No.	Institution	Capital grant in lakhs of Rupees		Recurring grant in lakhs	Interest free loan for hostel
		Building	Equipment		
I	Engineering College Banaras Hindu University.	3.12	16.87	5.12	3.90
II	Jadavpur Engineering College . . .	3.38	26.00	6.43	4.01
III	Victoria Jubilee Technical Institute, Bombay.	7.60	9.87	1.52	4.33
IV	College of Mining and Metallurgy, Benares Hindu University.	3.11	6.85	1.53	3.17
V	College of Technology Benares Hindu University.	1.30	4.20	2.08	3.08
VI	Dept. of Chemical Technology, Bombay University.	3.34	3.06	1.07	3.24
VII	Luxminarayan Technical Institute, Nagpur.	1.51	1.70	1.75	1.39

ANNEXURE II—*contd.*  
SUMMARY OF RECOMMENDATIONS—*contd.*

VIII	Dept. of Applied Chemistry, Calcutta University.	4.52	2.81	2.13	} 3.00
IX	Dept. of Applied Physics and Radio & Electronics, Calcutta University.	5.25	2.38	1.29	
X	Jaipur Vikram Deo College, Andhra University.	2.29	2.27	0.70	..
XI	Alagappa Chettiar College, Madras.	2.50	2.50	0.60 0.40	..
Total for I to XI.		37.92	78.51	24.62	35.78
XII	Engg. College Aligarh . . . .	2.14	12.15	2.13	3.96
XIII	Engg. College Annamalai . . . .	3.33	7.33	1.28	2.64
XIV	Dayalbagh Technical College . . . .	3.00	7.07	1.28	2.00
Total for XII to XIV		8.47	26.55	4.69	8.60
Grand Total . . . .		46.39	105.06	29.31	44.38

## APPENDIX III TO ANNEXURE IV

*College of Engineering Benares Hindu University*

Courses . . . . .	Degree Courses in Mechanical, Electrical and Civil Engineering.
Proposed rate of Admission . . . . .	160 students per year
Duration of course . . . . .	4 years
Proposed student strength . . . . .	640.
Existing accommodation in College Buildings.	1,03,000 sq. ft.
Value of existing equipment . . . . .	Rs. 15.125 lakhs
Existing Hostel accommodation . . . . .	For 400 students
Present annual income apart from students tuition fees . . . . .	Nil.

*Assessment of Capital grant—**(a) College Buildings*

Total requirement at 200 sq. ft. per student = $200 \times 640 =$	1,28,000 sq. ft.
Less existing accommodation per student	1,03,000 sq. ft.
Shortage =	25,000 sq. ft.

Cost involved at Rs. 12-8-0 per sq. ft. =  $Rs. 12.5 \times 25,000 = Rs. 3.125$  lakhs

*(b) Equipment :—*

Total requirement at Rs. 5,000 per student	= $640 \times 5,000$
	= 32 lakhs.
Less value of existing equipment . . . . .	= 15.125 lakhs

Shortage . . . = 16.875 lakhs

*Total capital grant required :—*

Buildings	= Rs. 3.125 lakhs
Equipment	= Rs. 16.875 lakhs
Total	= Rs. 20.0 lakhs

*Assessment of Recurring grant.—*

@Rs. 1,000 per student, being cost of education, annual recurring expenditure amounting to . . . . .	= $640 \times 1,000 = Rs. 6.40$ lakhs
Less income from tuition fees at Rs. 200 . . . . .	= $200 \times 640 = Rs. 1.28$ lakhs

Ultimate Recurring grant required . . . . . = Rs. 5.12 lakhs

*Loan for Construction of students Hostel.—*

Additional accommodation is required for 240 students (640—400)

@150 sq. ft. per seat total additional floor area required =  $150 \times 240 = 36,000$  sq. ft.

@Rs. 10 per sq. ft. cost of construction amounts to  $(36,000 \times 10)$  i.e. Rs. 3.6 lakhs.

@Rs. 150 per seat on account of furniture and fittings, cost involved amounts to  $150 \times 240$  i.e. Rs. 0.36 lakhs.

Total loan required—

Building	= Rs. 3.6 lakhs
Furniture	= Rs. 0.36 lakhs
Total	= Rs. 3.96 lakhs

*Recommendations of the Co-ordinating Committee—*

Capital grant college Building	=	Rs. 3.12 lakhs.
Equipment	=	Rs. 16.87 lakhs.
Recurring grants	=	Rs. 5.12 lakhs.
Loan for construction of Hostel	=	Rs. 3.96 lakhs.
<i>Spread of grants—</i>		

In lakhs of Rupees

	1947-48	1948-49	1949-50	1950-51	1951-52	Total
Capital grant . . . . .	1947.48	1948.49	1949.50	1950.51	1951.52	Total
Collego Building . . . . .	6240	1.2480	1.2480	..	..	3.1200
Equipment . . . . .	8435	2.5305	10.1220	3.3740	..	16.8700
Recurring grant . . . . .	1.0240	2.0480	3.0720	4.0960	5.1200	..
<b>Total</b> . . . . .	<b>2.4015</b>	<b>5.8265</b>	<b>14.4420</b>	<b>7.4700</b>	<b>5.12</b>	<b>..</b>
Loan . . . . .	.702	1.584	1.584	..	..	3.960

*II. College of Engineering and Technology, Jadavpur, Bengal.—*

Present courses of study (to be strengthened)	Degrees in Mechanical, Electrical and Chemical Engineering.
Duration of course . . . . .	4 years.
Proposed annual intake . . . . .	80 in Mechanical, 60 in Electrical and 60 in Chemical Engineering i.e. 200 students per year.
Proposed student body . . . . .	800.
Existing accommodation 1,37,500 sq. ft. approximately in the College.	

*Buildings :—*

Present-day value of existing equipment	Rs. 14 lakhs approximately.
Existing Hostel accommodation . . . . .	100 students.
Present annual income apart from tuition fees . . . . .	Rs. 40,000 from the Bengal Government.

*Assessment—**Capital Grant—**(a) College Buildings—*

Total requirements @ 270 sq. ft. per student = 200 × 800 . . . . .	= 1,60,000 sq. ft.
Less existing accommodation . . . . .	= 1,37,500 sq. ft.
Shortage . . . . .	= 22,500 sq. ft.

Construction cost involved @ Rs. 15 per sq. ft. = 15 × 22,500 . . . . . = Rs. 3.375 lakhs.

*(b) Equipment*

Total requirement @ Rs. 5,000 per student, i.e., 5,000 × 800	= Rs. 40.00 lakhs.
Less value of existing equipment . . . . .	= Rs. 14.00 lakhs.
Shortage . . . . .	= Rs. 26.00 lakhs.
Total capital grant assessed . . . . .	= 3.375 + 26.00
	= Rs. 29.375 lakhs.

*Recommended by Co-ordinating Committee.*

Building . . . . .	Rs. 5.38 lakhs.
Equipment . . . . .	Rs. 24.00 lakhs.
<b>Total</b> . . . . .	<b>Rs. 29.38 lakhs.</b>



*Recurring Grant--*

For Chemical Engineering @ Rs. 1,200 per student for (60 × 4) = 240 students	Rs. 2·88 lakhs.
For Mechanical and Electrical Engineering @ Rs 1,000 per student for (80 + 60) × 4 i.e. 560 students.	Rs. 5·60 lakhs.
Total annual expenditure	Rs. 8·48 lakhs.
Less Income from tuition fee at Rs. 200 per student for 800 students	Rs. 1·60 lakhs.
Grant from Bengal Government	Rs. 0·40 lakhs.
	Rs. 2·00 lakhs.
Ultimate recurring grant required	Rs. 6·48 lakhs.
Ultimate recurring grant recommended	Rs. 6·48 lakhs.

*Interest free loan for construction of Hostel--*

Additional accommodation required for (800 --- 100) i.e. 700 students at 150 sq. ft. per seat	1,05,000 sq. ft.
@Rs. 12/8 per sq. ft. cost of construction involved	Rs. 13·125 lakhs.
@Rs. 150 per hostel seat, cost of furniture and fittings i.e. 700 × 150	Rs. 1·05 lakhs.
Total	Rs. 14·175 lakhs.

*Recommended by Co-ordinating Committee--*

Interest free loan of Rs. 14·175 lakhs.

*Spread of grants and loan.*

Items	In lakhs of Rupees					Total
	1947-48	1948-49	1949-50	1950-51	1951-52	
<i>Non-recurring Capital Grant.</i>						
(a) College Buildings	1·08	2·15	2·15	..	..	5·38
(b) Equipment	1·20	3·60	14·40	4·80	..	24·00
<i>Recurring Grant</i>	1·296	2·542	3·888	5·184	6·48	
Interest-free loan repayable in 33 years by equal annual instalments	2·825	5·67	5·67	..	..	14·175

**III. Victoria Jubilee Technical Institute, Bombay--**

Courses of study proposed to be introduced and/or strengthened. Degree courses in Mechanical and Electrical Engineering Textile Manufacture, Civil Engineering and Chemical Engineering (in collaboration with the Chemical Technical Department of Bombay University).

Duration of all courses	4 years.
Proposed rate of admission	Degree courses in combined Mechanical and Electrical Engineering . . . . . 60 students Degree in Textile Manufacture . . . . . 20 students Degree in Civil Engineering . . . . . 50 students Degree in Chemical Engineering (with Bombay University) . . . . . 9 students
Total	139 students

NOTE—It is recommended that in the Chemical Engineering degree course, the Bombay University will be reckoned to cater for 55% of the students and the V.J.T.I. will cater for 45%.

Proposed student strength	139 × 4 = 556.	
Existing accommodation in College Buildings.	60,500 sq ft. is available for degree courses, the balance is left for use of the Diploma courses.	
Present day value of Existing equipment.	Rs. 17·93 lakhs for Degree courses.	
Existing hostel accommodation	For 342 students only.	
Present annual income apart from student fees.	Bombay Govt. grant from 1944 onwards	Rs. 1·7 lakhs.
	Additional Bombay Govt. grant for Mech. and Elect. Degree courses	0·53 lakhs.
	Additional Bombay Govt. grant for Textile Degree courses	0·53 lakhs.
	Grant from local Bodies	0·075 lakhs.
	Grant from Mill-owner's Association	0·089 lakhs.
	<b>Total</b>	<b>2·924 lakhs.</b>

#### Assessment—

##### Capital grant—

###### (a) College Buildings :—

Total requirement at 200 sq. ft. per student for 556 students	1,11,200 sq. ft.
Less existing accommodation	60,500 sq. ft.
	Shortage, 50,700 sq. ft.
Cost of construction involved @ Rs. 15 per sq ft.	Rs. 7·605 lakhs.

###### (b) Equipment—

Total requirement @ Rs. 5,000 per student for 556 students	27·80 lakhs.
Less value of existing equipment	17·93 lakhs.
	Shortage 9·87 lakhs.

##### Recommendation of the Co-ordinating Committee

Capital grant for college Buildings	7·60 lakhs.
Capital grant for Equipment	9·87 lakhs.

##### Recurring grant—

Recurring expenditure at Rs. 1,000 per student on 520 (130 × 4) students of the Civil, Mechanical and Electrical Engineering and Textile Manufacture, degree courses	5·20 lakhs.
Recurring expenditure at Rs. 1,200 per student on 36 (9 × 4) students of the Chemical Engineering Degree course	0·432 lakhs.
<b>Total</b>	<b>5·632 lakhs.</b>

Less Income from students fees @ Rs. 200 per student of 556 students. . . . . Rs. 1·112 lakhs,

Grants from Bombay Govt. and others for Degree courses . . . . . Rs. 2·940 lakhs.

**Total** . . . . . Rs. 3·552 lakhs. Rs. 3·552 lakhs.

Ultimate recurring grant required . . . . . Rs. 2·080 lakhs.

*Recommendation of the Co-ordinating Committee—*

Ultimate recurring grant of Rs. 2·08 lakhs.

*Interest-free loan for construction of hostels—*

Additional accommodation required for 214 (556—342) students @ 150 sq ft. per seat $150 \times 214$ . . . . .	32,100 sq. ft.
@ Rs. 12/8/- per sq ft. cost of construction involved . . . . .	Rs. 4·0125 lakhs.
@ Rs. 150 per seat, cost of furniture and fittings . . . . .	Rs. 0·321 lakhs.
<b>Total</b> . . . . .	<b>Rs. 4·3335 lakhs.</b>

*Recommendation of the Co-ordinating Committee—*

Interest-free loan repayable in 33 years by equal annual instalments . . . . . Rs. 4·34 lakhs.

*Spread of Grants and Loan—*

Item	In lakhs of rupees					Total
	1947-48	1948-49	1949-50	1950-51	1951-52	
<i>Non-recurring Capital grant—</i>						
(a) College Buildings . . . . .	1·52	3·04	3·04	..	..	7·600
(b) Equipment . . . . .	·4935	1·4805	5·9220	1·974	..	9·870
<i>Recurring Grant</i> . . . . .	0·416	0·832	1·248	1·664	2·08	..
<i>Interest free loan repayable in 33 years by equal instalments</i> . . . . .						
	0·868	1·736	1·736	..	..	4·340

*IV. Banaras Hindu University College of Mining and Metallurgy—*

Courses . . . . .	Degree courses in Mining and Metallurgy.
Proposed rate of admission . . . . .	48 (16+32) students per year.
Duration of the Course . . . . .	4 years.
Proposed student strength . . . . .	192.
Existing accommodation in College Buildings . . . . .	13,500 sq. ft.
Value of existing equipment . . . . .	2·75 lakhs.
Existing Hostel Accommodation . . . . .	None.
Present annual income apart from students tuition fees . . . . .	Nil.

*Assessment of Capital grant—**(a) College Building—*

Total requirement @ 200 sq. ft. per student = $200 \times 192$ =	38,400 sq. ft.
Less existing accommodation . . . . .	= 13,500 sq. ft.
Shortage . . . . .	= 24,900 sq. ft.
Cost involved @ Rs. 12/8/- per sq. ft. $12·5 \times 24,900$ =	3·115 lakhs.

*(b) Equipment—*

Total requirement @ Rs. 5,000 per student . . . . .	= $192 \times 5,000$ .
	= Rs. 9·60 lakhs.
Less value of existing equipment . . . . .	= Rs. 2·75 lakhs.
Shortage . . . . .	= Rs. 6·85 lakhs.
Total capital grant required.	
Building . . . . .	= Rs. 3·115 lakhs.
Equipment . . . . .	= Rs. 6·850 lakhs.
<b>Total</b> . . . . .	<b>= Rs. 9·965 lakhs.</b>

*Assessment of Recurring grant—*

@ Rs. 1,000 per student, being cost of education, annual recurring expenditure amounting to 192 × 1,000 . . . . .	= Rs. 1.92 lakhs.
Less income from tuition fees @ Rs. 200 = 200 × 192 . . . . .	= Rs. 0.384 lakhs.
Ultimate recurring grant required . . . . .	Rs. 1.536 lakhs.

*Loan for construction of students Hostel.—*

Accommodation is required for 192 students

@ 150 sq. ft. per seat, total additional floor area required = 150 × 192 = 28,800 sq. ft.
@ Rs. 10 per sq. ft. cost of construction amounts to (28,800 × 10) i.e. Rs. 2.88 lakhs.
@ Rs. 150 per seat on account of furniture and fittings, cost involved amounts to 150 × 192 i.e., Rs. 0.2880 lakhs.

Total loan required.

Building . . . . .	Rs. 2.88 lakhs.
Furniture and Fittings . . . . .	Rs. 0.288 lakhs.
Total . . . . .	Rs. 3.168 lakhs.

*Recommendation of the Co-ordinating Committee—*

Capital grant—

College Building . . . . .	Rs. 3.11 lakhs.
Equipment . . . . .	Rs. 6.85 lakhs.
Recurring grant . . . . .	Rs. 1.53 lakhs.
Loan for construction of Hostel . . . . .	Rs. 3.17 lakhs.

*Spread of Grants and Loan—*

	In lakhs of rupees					Total
	1947-48	1948-49	1949-50	1950-51	1951-52	
<i>Capital grant—</i>						
College Building . . . . .	0.622	1.244	1.244	..	..	3.11
Equipment . . . . .	0.3425	1.0275	4.1100	1.3700	..	6.85
Recurring grant . . . . .	0.306	0.612	0.918	1.224	1.530	..
Total . . . . .	1.2705	2.8835	6.2720	2.594	1.530	..
Loan . . . . .	0.634	1.268	1.268	..	..	3.17

*V. Banares Hindu University College of Technology—*

Courses to be strengthened . . . . .	Degree course in Pharmaceutics and Industrial Chemistry.
Proposed rate of admission . . . . .	52 students per year i.e. 22 for Pharmaceutics and 30 for Industrial Chemistry.
Duration of Course . . . . .	4 years.
Proposed student strength . . . . .	208.
Existing accommodation in College Buildings . . . . .	31,200 sq. ft. in the above two courses.
Value of existing equipment . . . . .	6.20 lakhs approximately.
Existing Hostel Accommodation . . . . .	For 76 students of the above two courses
Present annual income apart from students tuition fees . . . . .	Nil.

*Assessment of Capital grant—**(a) College Building—*

Total requirement @ 200 sq. ft. per student = $200 \times 208$	= 41,600 sq. ft.
Less existing accommodation . . . . .	= 31,200 sq. ft.
Shortage . . . . .	= 10,400 sq. ft.
Cost involved @ Rs. 12/8/- per sq. ft. = $12.5 \times 10,400$	= Rs. 1.30 lakhs.

*(b) Equipment—*

Total requirement @ Rs. 5,000 per student = $208 \times 5000$	= Rs. 10.40 lakhs.
Less value of existing equipment . . . . .	= Rs. 6.20 lakhs.
Shortage . . . . .	= Rs. 4.20 lakhs.

*Total capital grant required—*

Buildings . . . . .	= Rs. 1.30 lakhs.
Equipment . . . . .	= Rs. 4.20 lakhs.

Total . . . . . = Rs. 5.50 lakhs.

*Assessment of Recurring grant—*

@ Rs. 1200 per student, being cost of education, annual recurring expenditure amounting to $208 \times 1200$	= Rs. 2.496 lakhs.
Less income from tuition fees @ Rs. 200 = $200 \times 208$	= Rs. 0.416 lakhs.
Ultimate Recurring grant required . . . . .	= Rs. 2.08 lakhs.

*Loan for construction of students Hostel—*

Additional accommodation is required for 132 students (208—76) @ 150 sq. ft. per seat, total additional floor area required =  $150 \times 132$  . . . . . = 19,800 sq. ft.

@ Rs. 10 per sq. ft. cost of construction amounts to (19,800 × 10) i.e. Rs. 1.98 lakhs.

@ Rs. 150 per seat on account of furniture and fittings, cost involved amounts to  $150 \times 132$  i.e. Rs. 0.198 lakhs.

*Total loan required —*

Building . . . . .	= Rs. 1.98 lakhs.
Furniture and Fittings . . . . .	= Rs. 0.198 lakhs.

Total . . . . . Rs. 2.178 lakhs.

*Recommendations of the Co-ordinating Committee—**Capital Grant—*

College Buildings . . . . .	= Rs. 1.30 lakhs.
Equipment . . . . .	= Rs. 4.20 lakhs.
Recurring grant . . . . .	= Rs. 2.08 lakhs.
Loan for construction of Hostel . . . . .	= Rs. 2.18 lakhs.

*Spread of grants—*

In lakhs of rupees

	1947-48	1948-49	1949-50	1950-51	1951-52	Total
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*Capital grant—*

College Building . . . . .	.260	.520	.520	..	..	1.300
Equipment . . . . .	.210	0.630	2.520	.840	..	4.200
Recurring Grant . . . . .	.416	0.832	1.248	1.664	2.08	..
<hr/>						
Total . . . . .	.886	1.982	4.288	2.504	2.08	..
<hr/>						
Loan . . . . .	.436	.872	.872	..	..	2.180

**VI. Department of Chemical Technology, Bombay University—**

<b>Courses to be strengthened</b>	Degree courses in Chemical Technology and Chemical Engineering (in collaboration with the Victoria Jubilee Technical Institution, Bombay) and Research.
<b>Proposed rate of Admission</b>	115 students per year and 20 Research students at any one time.
<b>Duration of course</b>	2 years after B. Sc. for B. Sc. (Tech.)
<b>Proposed student strength</b>	230 and 20 Research workers.
<b>Value of existing equipment</b>	Rs. 8·80 lakhs.

**Assessment of Capital grant—****(a) College Building—**

Additional Building required for instructional purposes as recommended by the Visiting Committee which is @ 300 sq. ft. per student approximately= 16,700 sq. ft.

Cost involved @ Rs. 15 per sq. ft.  $15 \times 16,700$  . . . = Rs. 2,50,500

Cost of furniture and fittings @ Rs. 5 per sq. ft. required for post-graduate and research institutions—

$5 \times 16,700$  . . . . . = Rs. 83,500

**Total** . . . . . **Rs. 3,34,000**

**(b) Equipment—**

Total additional requirement as recommended by the Visiting Committee—

Chemical Engineering Laboratories . . . . . = Rs. 1·15 lakhs.

Other Laboratories . . . . . = Rs. 1·915 lakhs.

**Total** . . . . . **Rs. 3·065 lakhs.**

**Total Capital grant required—**

Buildings . . . . . = Rs. 3·34 lakhs.

Equipment . . . . . = Rs. 3·065 lakhs.

**Total** . . . . . **Rs. 6·405 lakhs.**

**Assessment of Recurring grant—**

As recommended by the Visiting Committee . . . . . = Rs. 1·072 lakhs.

**Loan for construction of students Hostel—**

Additional accommodation is required for 160 students as per Visiting Committee's recommendations :—

@ 150 sq. ft. per seat total additional floor area required=  $150 \times 160 = 24,000$  sq. ft.

@ Rs. 12/8/- per sq. ft. cost of construction amounts to =  $24,000 \times 12/8 =$  Rs. 3·0 lakhs.

@ Rs. 150 per seat on account of furniture and fittings cost involved amounts to . . . . . =  $150 \times 160 =$  Rs. 0·24 lakhs.

**Total loan required—**

Building . . . . . Rs. 3·00 lakhs.

Furniture and fittings . . . . . Rs. 0·24 lakhs.

**Total** . . . . . **Rs. 3·24 lakhs.**

**Recommendations of the Co-ordinating Committee.—****Capital grant—**

College Buildings . . . . . Rs. 3·34 lakhs.

Equipment . . . . . Rs. 3·06 lakhs.

Ultimate recurring grant . . . . . Rs. 1·07 lakhs.

Loan for construction of Hostel . . . . . Rs. 3·24 lakhs.

In lakhs of rupees

	1947-48	1948-49	1949-50	1950-51	1951-52	Total
<b>Capital grant—</b>						
College Building . . . . .	0·668	1·336	1·336	..	..	3·340
Equipment . . . . .	0·153	0·459	1·836	·612	..	3·060
Recurring Grant . . . . .	0·214	0·428	0·642	0·856	1·070	..
<b>Total</b> . . . . .	<b>1·035</b>	<b>2·223</b>	<b>3·814</b>	<b>1·468</b>	<b>1·070</b>	<b>..</b>
<b>Loan</b> . . . . .	<b>·648</b>	<b>1·296</b>	<b>1·296</b>	<b>..</b>	<b>..</b>	<b>3·240</b>

**II. Laxminarayan Institute of Technology, Nagpur. —**

courses . . . . .	Degree Courses in Chemical Technology and Chemical Engineering and research.
proposed rate of admission . . . . .	40 students per year.
duration of course . . . . .	4 years.
proposed student strength . . . . .	160 and 12 research students.
existing accommodation in College Buildings.	19,000 ft <sup>2</sup>
value of existing equipment . . . . .	Rs. 7·10 lakhs including Rs. 5·00 already ordered.
present annual income apart from students tuition fees.	Rs. 1·25 lakhs.

**Assessment of Capital grant—****(a) College Buildings—**

Total requirement @ 300 ft. per student =  $300 \times 172 = 51,600$  ft<sup>2</sup>  
 Less existing accommodation . . . . . = 19,000 ft<sup>2</sup>.

Shortage . . . . . = 32,600 ft<sup>2</sup>.

Cost involved @ Rs. 12/8 per ft.<sup>2</sup> =  $12 \cdot 5 \times 32,600 =$  Rs. 4·075 lakhs.

Cost of furniture and fitting @ Rs. 5 per ft.<sup>2</sup> for post-graduate and research institutions = Rs. 1·63 lakhs.

Total . . . . . Rs. 5·705 lakhs.

**(b) Equipment—**

Total requirement @ Rs. 5000 per student =  $172 \times 5000 =$  Rs. 8·60 lakhs.

Less value of existing equipment . . . . . = Rs. 7·10 lakhs.

Shortage . . . . . Rs. 1·50 lakhs.

Total Capital grant required

Building . . . . . = Rs. 5·705 lakhs.

Equipment . . . . . = Rs. 1·5 lakhs.

Total . . . . . = Rs. 7·205 lakhs.

**Assessment of Recurring grant.—**

@ Rs. 1200 per student, total annual recurring expenditure . . . . . = Rs. 2·064 lakhs.

Less Income from tuition fees @ Rs. 200 =  $200 \times 172 =$  Rs. 34,400

and income from Endowment Fund = Rs. 1,25,000

Total . . . . . = Rs. 1,59,400 = 1·594 lakhs.

Ultimate Recurring grant required . . . . . Rs. 0.47 lakhs.

**Loan for construction of students Hostel—**

Additional accommodation is required for 84 students as recommended by the Visiting Committee @ 150 sq. ft. per seat, total additional floor area required

$$= 150 \times 84 = 12,600 \text{ sq. ft.}$$

@ Rs. 10 per sq. ft. cost of construction amounts to  $(12,600 \times 10)$  i.e. Rs. 1.26 lakhs.

@ Rs. 150 per seat on account of furniture and fittings, cost involved amounts to  $150 \times 84$  i.e., Rs. 0.126 lakhs.

Total loan required—

Buildings . . . . .	Rs. 1.26 lakhs.
Furniture & Fittings . . . . .	Rs. 0.126 lakhs.
Total . . . . .	Rs. 1.386 lakhs.

*Capital grant—*

College Building . . . . .	Rs. 5.07 lakhs.
Equipment . . . . .	Rs. 1.5 lakhs.
Recurring Grant . . . . .	Rs. 0.47 lakhs.
Loan for construction of Hostel . . . . .	Rs. 1.39 lakhs.

*Spread of Grants and Loan -*

In lakhs of rupees

	1947-48	1948-49	1949-50	1950-51	1951-52	Total
<i>Capital grant—</i>						
College Building . . . . .	1.014	2.028	2.028	..	..	5.070
Equipment . . . . .	.075	.225	0.900	.300	..	1.500
Recurring Grant . . . . .	.094	0.188	0.282	0.376	0.470	..
Total . . . . .	1.183	2.441	3.210	0.676	0.470	..
Loan . . . . .	.278	.556	.556	..	..	1.390

**VIII & IX. University College of Science and Technology, Calcutta University, Department of Chemistry—**

Courses . . . . .	Post-graduate degree courses and research in Chemistry.
Proposed rate of admission . . . . .	36 students in M. Sc. course and 20 students in Soap Diploma Course each year and 50 Research students at any one time.
Duration of Course . . . . .	2 years (M. Sc.), 1 year diploma.
Proposed student strength . . . . .	92 students and 50 Research students, i.e., a total of 142.
Existing accommodation in College Buildings . . . . .	20,000 sq. ft.
Value of existing equipment . . . . .	5.00 lakhs.
Existing Hostel accommodation . . . . .	Nil.
Present annual income apart from students tuition fees.	Rs. 21,829 (from Endowment funds).



**Assessment of Capital grant—****(a) College Building—**

Total requirement @ 300 sq. ft. per student	= 300 × 142	
	= 42,600 sq. ft.	
Less existing accommodation	= 20,000 sq. ft.	
		<hr/>
Cost involved @ Rs. 15 per sq. ft.	Shortage	= 22,600 sq. ft.
		= Rs. 15 × 22,600
		= Rs. 3,39,000
Cost of furniture and fittings @ Rs. 5 per sq. ft. for post-graduate courses and research facilities		= Rs. 1,13,000
		<hr/>
	Total	= Rs. 4.52 lakhs.

**(b) Equipment—**

Total requirement for post-graduate courses and research work @ Rs. 5,500 per student	= 142 × 5500	= Rs. 7.81 lakhs.
Less value of existing equipment		= Rs. 5.00 lakhs.
		<hr/>
	Shortage.	= Rs. 2.81 lakhs.

**Total capital grant required—**

Buildings	Rs. 4.52 lakhs.
Equipment	Rs. 2.81 lakhs.
	<hr/>
Total	Rs. 7.33 lakhs.

**Assessment of Recurring grant—**

@ Rs. 1,200 per student, being cost of education of post-graduate courses, annual recurring expenditure amounting to 142 × 1200		= Rs. 1.704 lakhs.
Less Income from tuition fees @ Rs. 200 i.e., 200 × 142	= Rs. 28,400	
and income from endowment funds	= Rs. 21,829	Rs. 0.50229 lakhs.
		<hr/>
Ultimate recurring grant required		Rs. 1.202 lakhs.

**DEPARTMENT OF APPLIED PHYSICS**

The following amounts are assessed—

**Capital grant—**

Building	Rs. 1.88 lakhs.
Equipment	Rs. 0.28 lakhs.
	<hr/>
Total	Rs. 2.16 lakhs.

**Recurring grant—**

Annual recurring grant Rs. 50,000.

The rate of admission and the number of research workers are proposed to be increased by 100 %

**DEPARTMENT OF RADIO AND ELECTRONICS**

The following amounts are assessed.—

**Capital grant—**

Building	Rs. 3.37 lakhs.
Equipment	Rs. 2.10 lakhs.
	<hr/>
Total	Rs. 5.47 lakhs.

**Recurring grant—**

Annual recurring Rs. 79,000

*Loan for construction of Student's hostel—*

Loan for construction of hostel to accommodate 100 students Rs. 3.0 lakhs.

*Recommendation of the Co-ordinating Committee.—*

	Capital grant		Recurring grant
	Buildings	Equipment	
	In lakhs of Rupees		In lakhs of Rs.
Dept. of Chemistry . . . . .	4.52	2.81	1.202
Dept. of Applied Physics . . . . .	1.88	0.28	0.5
Dept. of Radio & Electronics . . . . .	3.37	2.10	0.79
<b>Total</b> . . . . .	<b>9.77</b>	<b>5.19</b>	<b>2.492</b>

Loan for students' hostel . . . . . 3.00 lakhs.

*Spread of Grants and Loan—*

	In lakhs of Rupees					Total
	1947-48	1948-49	1949-50	1950-51	1951-52	
<i>Capital Grant—</i>						
College Buildings . . . . .	1.9540	3.9080	3.9080	..	..	9.7700
Equipment . . . . .	.2595	0.7785	3.1140	1.0380	..	5.1900
Recurring Grant . . . . .	.4984	0.9968	1.4952	1.0936	2.492	..
<b>Loan</b> . . . . .	<b>0.6</b>	<b>1.2</b>	<b>1.2</b>	<b>..</b>	<b>..</b>	<b>3.00</b>

*X. Jeypore Vikram Deo College of Science and Technology, Andhra University—**Assessment—*

Department of Pharmacy . . . . . Student body . . . . . 21

*Capital grant—**(a) College Building.—*

Additional floor area required @ 300 sq. ft. per student for 21 students . . . . . 6,300 sq. ft.  
 @ Rs. 12/8/- per sq. ft. cost of construction involved . . . . . Rs. 0.7875 lakhs.  
 @ Rs. 5 per sq. ft. cost of furniture and fittings . . . . . Rs. 0.315 lakhs.

**Total** . . . . . **Rs. 1.1025**

*(b) Equipment (including library) required as per Visiting Committee's recommendations . . . . . Rs. 0.60 lakhs.*

**Total** . . . . . **Rs. 1.7025 lakhs.**

*Recurring grant—*

Recommended by the Visiting Committee . . . . . Rs. 0.352 lakhs.

*Department of Chemical Technology—*

Student body = 84; Existing floor area 13,200 sq. ft.

**Capital Grant—****(a) College Buildings—**

Total floor area required for instructional purposes @ 300 sq. ft. per student for 84 students	25,200 sq. ft.
Less existing floor area	13,200 sq. ft.

Shortage . . . . . 12,000 sq. ft.

@ Rs. 12/8/- per sq. ft. cost of construction involved . . . . . Rs. 1.50 lakhs.

@ Rs. 5 per sq. ft. for cost of furniture and fittings required in post-graduate and research institutions . . . . . Rs. 0.60 lakhs.

**Total . . . . . Rs. 2.10 lakhs.**

**(b) Equipment (including library)**

Recommended by the Visiting Committee. . . . . Rs. 1.61 lakhs.

**Recurring grant—**

Recommended by the Visiting Committee. . . . . Rs. 0.34,936 lakhs.

**Recommendations of the Co-ordinating Committee.—**

	Grants in lakhs of Rupees		
	Buildings	Equipment	Recurring
Department of Pharmacy . . . . .	1.10	0.60	0.35
Department of Chemical Technology . . . . .	2.10	1.67	0.35
<b>Total . . . . .</b>	<b>3.2</b>	<b>2.27</b>	<b>0.70</b>

**Spread of Grants—**

	In lakhs of Rupees					Total
	1947-48	1948-49	1949-50	1950-1951	1951-52	
<b>Capital Grant—</b>						
College Building . . . . .	0.6400	1.280	1.280	..	..	3.200
Equipment . . . . .	0.1135	0.3405	1.3620	0.4540	..	2.2700
Recurring Grant . . . . .	0.1400	0.2800	0.4200	0.5600	0.700	.
<b>Total . . . . .</b>	<b>0.8935</b>	<b>1.9005</b>	<b>3.0620</b>	<b>1.0140</b>	<b>0.700</b>	<b>..</b>

**XI. Alagappa Chettiar College, Madras . . . . .****Recommendations of the Co-ordinating Committee—****Department of Chemical Technology.—****Capital Grant.—**

Building . . . . . Rs. 2.50 lakhs.

Equipment . . . . . Rs. 2.50 lakhs.

**Total . . . . . Rs. 5.00 lakhs.**

Recurring Grant . . . . . Rs. 0.60 lakhs.

## DEPARTMENT OF TEXTILE TECHNOLOGY

Capital Grant . . . . .	Nil
Recurring Grant . . . . .	Rs. 0.40 lakhs.
Total recurring grant to the College . . . . .	= 0.6 + 0.4 = Rs. 1 lakh.

Spread of grants . . . . . In lakhs of Rupees

Items	1947-48	1948-49	1949-50	1950-51	1951-52	Total
<i>Capital Grant</i> —						
College Building . . . . .	0.50	1.00	1.00	..	..	2.50
Equipment . . . . .	0.125	0.375	1.500	0.50	..	2.50
<i>Recurring Grant</i> . . . . .	0.20	0.40	0.60	0.80	1.00	..
Total . . . . .	0.825	1.775	3.100	1.30	1.00	..

XII. *Colleges of Engineering, Muslim University, Aligarh.*—

Courses . . . . .	Degree courses in Mech. Electrical and Civil Engineering.
Proposed rate of admission . . . . .	90 students per year i.e., 30 in each branch of Engineering.
Duration of Course . . . . .	4 years.
Proposed student strength . . . . .	360.
Existing Accommodation in College Buildings . . . . .	46,250 sq. ft.
Value of existing equipment . . . . .	Rs. 1.78 lakhs.
Existing Hostel accommodation . . . . .	Nil.
Present annual income apart from students tuition fees . . . . .	Nil.

*Assessment of Capital grant*—(a) *College Building*—

Total requirement @ 200 ft. per student . . . . .	= 200 × 260	= 72,000 ft <sup>2</sup>
Less existing accommodation . . . . .		= 46,250 ft <sup>2</sup>

Shortage . . . . . = 25,750 "

Cost involved @ Rs. 12/8 per ft <sup>2</sup> . . . . .	= 12.5 × 25,750	= 3.21875 lakhs.
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(b) *Equipment*

Total requirement @ Rs. 5,000 per student . . . . .	= 360 × 5,000	= Rs. 18.0 lakhs.
Less value of existing equipment . . . . .		= Rs. 1.78 lakhs.

Shortage . . . . . = Rs. 16.22 lakhs.

Total capital grant required—

Buildings . . . . . = Rs. 3.21875 lakhs.

Equipment . . . . . = Rs. 16.22 lakhs.

Total . . . . . = Rs. 19.43875 lakhs.

*Assessment of recurring grant*—

@ Rs. 1,000 per student, being cost of education, annual recurring expenditure amounting to 360 × 1,000 . . . . .		= Rs. 3.6 lakhs.
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Less income from tuition fees @ Rs. 200 . . . . .	= 200 × 360	= Rs. 0.72 lakhs.
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Ultimate recurring grant required . . . . . = Rs. 2.88 lakhs.

*Loan for construction of students' Hostel—*

Additional accommodation is required for 360 students.

- @ 150 ft<sup>2</sup> per seat, total additional floor area required . . . . . = 150 × 360 = 54,000 ft<sup>2</sup>.
- @ Rs. 10 per ft.<sup>2</sup> cost of construction amounts to (54,000 × 10) i.e., Rs. 5.4 lakhs.
- @ Rs. 1.50 per seat on account of furniture and fittings, cost involved amounts to 150 × 360 i.e., Rs. 0.54 lakhs.

Total loan required—

Building . . . . . Rs. 5.4 lakhs.

Furniture and Fittings Rs. 0.54 lakhs.

Total . . . . . Rs. 5.94 lakhs.

*Total financial assistance required—***Capital—**

- College Building . . . . . = Rs. 3.21876 lakhs.
- Equipment . . . . . = Rs. 16.22 lakhs.
- Recurring . . . . . = Rs. 2.88 lakhs.
- Loan for construction of Hostel . . . . . = Rs. 5.94 lakhs.

*Recommendations of the Co-ordinating Committee—***Capital grant from Government—**

- College Building . . . . . = Rs. 2.14 lakhs.
- Equipment . . . . . = Rs. 10.813 lakhs.
- Recurring grant from Govt. . . . . = Rs. 1.92 lakhs.
- Interest free loan . . . . . = Rs. 3.96 lakhs.

*Spread of grants and Loans—*

In lakhs of Rupees

	1st year	2nd year	3rd year	4th year	5th year	Total
<b>Capital Grant—</b>						
College Building . . . . .	0.4280	0.8560	0.8560	..	..	2.1400
Equipment . . . . .	0.54065	1.62195	6.48780	2.1626	..	10.813
Recurring Grant . . . . .	.3840	0.768	1.1520	1.5360	1.9200	..
<b>Total . . . . .</b>	<b>1.35265</b>	<b>3.24595</b>	<b>8.49580</b>	<b>3.6986</b>	<b>1.9200</b>	<b>..</b>
<b>Loan . . . . .</b>	<b>.792</b>	<b>1.584</b>	<b>1.584</b>	<b>..</b>	<b>..</b>	<b>3.960</b>

**XIII. Department of Engineering and Technology, Annamalai University—**

- Courses proposed to be strengthened . Degree courses in Mechanical Electrical and Civil Engineering.
- Proposed rate of admission . . . . . 60 students per year, i.e., 30 in Civil and 15 each in Mechanical and Electrical Engineering respectively.
- Duration of Courses . . . . . 4 years.
- Proposed strength of student Body . . . . . 240.
- Existing Accommodation in College Buildings . . . . . Nil.
- Present day value of existing equipment . . . . . Nil.
- Existing Hostel accommodation . . . . . Nil.
- Present annual income apart from students fees . . . . . Nil.

(A block grant of Rs. 2 lakhs has been made by the Madras Govt.)

**Assessment—****Capital expenditure.—****(a) College Building.—**

Total requirement for 240 students @ 200  
ft<sup>2</sup> per student = 200 × 240 = 48,000 ft<sup>2</sup>.

Less existing accommodation . . . = Nil.

Shortage . . . = 48,000 ft<sup>2</sup>.

@ Rs. 12/8 per ft<sup>2</sup> cost of construction involved . . . = Rs. 6·00 lakhs.

**(b) Equipment.—**

@ Rs. 5,000 per student, total requirement  
for 240 students amounts to . . . Rs. 12·00 lakhs.

Less:—Value of existing equipment . . . Nil.

Shortage . . . = Rs. 12·00 lakhs.

**Total requirement for capital expenditure.—**

Building . . . = Rs. 6·00 lakhs.

Equipment . . . = Rs. 12·00 lakhs.

Total . . . = Rs. 18·00 lakhs.

Less Block grant . . . = Rs. 2·00

Rs. 16·00 lakhs.

**Recurring Expenditure.—**

@ Rs. 1,000 per student, for 240 students total annual expenditure . . . = Rs. 2·40 lakhs.

Less:—Annual Income from tuition fees @ Rs. 200 per student . . . = Rs. 0·48 lakhs.

Shortage . . . = Rs. 1·92 lakhs.

**Hostels.—**

Accommodation for 240 students @ 150 ft<sup>2</sup> per seat . . . = 36,000 ft<sup>2</sup>

@ Rs. 10 per ft<sup>2</sup> cost of construction amounts to . . . = Rs. 3·6 lakhs.

@ Rs. 150 'per seat. cost of furniture & fittings . . . = Rs. 0·36 lakhs.

Total . . . = Rs. 3·96 lakhs.

**Summary of total capital and recurring expenditure.—****Capital expenditure—**

Buildings and Equipment . . . = Rs. 16·00 lakhs.

Recurring expenditure . . . = Rs. 1·92 lakhs.

Hostel . . . = Rs. 3·96 lakhs.

**Recommendations of the Co-ordinating Committee.—****Capital Grant.—**

Building . . . = Rs. 3·33 lakhs.

Equipment . . . = Rs. 7·33 lakhs.

Ultimate Recurring Grant . . . = Rs. 1·28 lakhs.

Interest free loan for construction of Hostels . . . Rs. 2·64 lakhs.

**Spread of Grants and Loan.—**

In lakhs of Rupees

	1st year	2nd year	3rd year	4th year	5th year	Total
<b>Capital Grant.—</b>						
Building . . .	0·666	1·332	1·332			3·330
Equipment . . .	0·566	1·0995	4·3980	1·4660		7·330
Recurring Grant . . .	0·256	0·512	0·768	1·024	1·280	
Total . . .	1·285	2·9435	6·4980	2·4900	1·280	
Loan . . .	0·528	1·056	1·056			2·64

**XIV. Technical College, Dayalbagh, Agra—**

Courses . . . . .	Degree courses in Mech. and Electrical Engg.
Proposed rate of Admission . . . . .	60 students per year.
Duration of Course . . . . .	4 years.
Proposed students' strength . . . . .	240.
Existing Accommodation in College Buildings . . . . .	12,000 ft <sup>2</sup> .
Value of existing equipment . . . . .	Rs. 1.40 lakhs.
Existing Hostel Accommodation . . . . .	for 58 students.
Present annual income apart from students tuition fees . . . . .	Nil.

**Assessment of capital grant—**

**(a) College Building—**

Total requirement @ 200 ft <sup>2</sup> per student = 200 × 240	= 48,000 ft <sup>2</sup>
Less existing accommodation . . . . .	= 12,000 ft <sup>2</sup> .

Shortage . . . . . = 36,000 ft<sup>2</sup>

Cost involved @ Rs. 12/8/- per ft <sup>2</sup> = 12.5 × 36,000	= Rs. 4.5 lakhs.
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**(b) Equipment—**

Total requirement @ Rs. 5,000 per student = 240 × 5000	= Rs. 12 lakhs
Less value of existing equipment . . . . .	= Rs. 1.40 lakhs.

Shortage . . . . . = Rs. 10.60 lakhs.

**Total capital grant required.—**

Buildings . . . . .	= Rs. 4.50 lakhs.
Equipment . . . . .	= Rs. 10.60 lakhs.

Total . . . . . = Rs. 15.10 lakhs.

**Assessment of Recurring grant—**

@ Rs. 1,000 per student, being cost of education, annual recurring expenditure amounting to 240 × 1000 . . . . .	= Rs. 2.4 lakhs.
Less income from tuition fees @ Rs. 200 per student = 200 × 240	= Rs. 0.48 lakhs.
Ultimate Recurring grant required . . . . .	= Rs. 1.92 lakhs.

**Loan for construction of students Hostel.—**

Additional accommodation is required for 182 students (240-58)  
 @ 150 ft<sup>2</sup> per seat. Total additional floor area required  
 = 150 × 182 = 27,300 ft<sup>2</sup>.

@ Rs. 10 per ft<sup>2</sup> cost of construction amounts to (27,300 × 10)  
 i.e., Rs. 2.73 lakhs.

@ Rs. 150 per seat cost of furniture and fittings amounts to  
 (150 × 182) i.e., Rs. 0.273 lakhs.

**Total amount involved—**

Building . . . . .	Rs. 2.73 lakhs.
Furniture & fittings . . . . .	Rs. 0.273 lakhs.

Total . . . . . = Rs. 3.003 lakhs.

**Total financial assistance required—**

**Capital—**

College Building . . . . .	= Rs. 4.50 lakhs.
Equipment . . . . .	= Rs. 10.60 lakhs.
Recurring . . . . .	= Rs. 1.92 lakhs.
For construction of Hostel . . . . .	= Rs. 3.003 lakhs.

*Recommendation of the Co-ordinating Committee—*

## Capital grant from Central Government.—

College Buildings . . . . .	= Rs. 3.00 lakhs.
Equipment . . . . .	= Rs. 7.06 lakhs.
Recurring Grant . . . . .	= Rs. 1.28 lakhs.
Interest free loan for construction of Hostels. . . . .	= Rs. 2.00 lakh .

*Spread of grants & loan—*

In lakhs of Rupees

	1st year	2nd year	3rd year	4th year	5th year	Total
<i>Capital Grant—</i>						
College Buildings . . . . .	.6000	1.2000	1.2000	..	..	3.000
Equipment . . . . .	.3530	1.0590	4.2360	1.4120	..	7.0600
Recurring Grant . . . . .	.2560	0.5120	0.7680	1.024	1.2800	..
<b>Total</b> . . . . .	<b>1.2090</b>	<b>2.7710</b>	<b>6.2040</b>	<b>2.4360</b>	<b>1.28</b>	<b>..</b>
Loan . . . . .	.40	.80	.80	..	..	2.00



## STATEMENT OF GRANTS FOR THE FINANCIAL YEAR 1947-48

Name of Institution	Non-recurring grant in lakhs of rupees		Recurring grant in lakhs	Total
	Building	Equipment		
I. College of Engineering, Banaras Hindu University.	0·624	0·8435	1·0240	2·4915
II. College of Engineering & Technology, Jadavpur, Bengal.	1·080	1·2060	1·2990	3·5760
III. Victoria Jubilee Technical Institute, Bombay.	1·520	0·4935	0·4160	2·4105
IV. College of Mining & Metallurgy, Banaras Hindu University.	0·622	0·3425	0·3050	1·2705
V. College of Technology, Banaras Hindu University.	0·260	0·2100	0·4160	0·8860
VI. Department of Chemical Technology, Bombay University.	0·668	0·1530	0·2140	1·0350
VII. Laxminarayan Institute of Technology, Nagpur.	1·014	0·0750	·0940	1·1830
VIII. Department of Applied Chemistry College of Science & Technology University of Calcutta.	1·954	0·2595	0·4984	2·7119
IX. Department of Applied Physics, College of Science & Technology University of Calcutta.				
X. Jaipur Vikeram Deo College of Science & Technology, Andhra University.	0·640	0·1135	0·1400	0·8935
XI. Alagappa Chettiar, College of Technology, Madras University.	0·500	0·1250	0·2000	0·8250
Total	8·882	3·8155	4·6044	17·3019
XII. College of Engineering & Technology, Muslim University, Aligarh	0·4280	0·54065	0·3840	1·35265
XIII. Département of Engineering and Technology Annamalai University.	0·666	0·3665	0·256	1·2885
XIV. Technical College, Dayalbagh, Agra.	0·6000	0·3530	0·2560	1·2090
Total	1·6940	1·26015	0·8960	3·98015
GRAND TOTAL	10·5760	5·07565	5·5004	21·15205

## STATEMENT OF GRANTS FOR THE FINANCIAL YEAR 1948-49

Name of Institution	Non-recurring grant in lakhs of rupees		Recurring grant in lakhs	Total
	Building	Equipment		
I. College of Engineering Banaras, Hindu University.	1·248	2·5305	2·0480	5·8265
II. College of Engineering & Technology, Jadavpur, Bengal.	2·150	3·6000	2·5920	8·3420
III. Victoria Jubilee Technical Institute, Bombay.	3·040	1·4805	0·8320	5·3525
IV. College of Mining & Metallurgy, Banaras Hindu University.	1·244	1·0275	0·6120	2·8835
V. College of Technology, Banaras Hindu University.	0·520	0·6300	0·8320	1·982
VI. Department of Chemical Technology, Bombay University.	1·336	0·4590	0·4280	2·223
VII. Laxminarayan Institute of Technology, Nagpur.	2·028	0·2250	0·1880	2·441
VIII. Department of Applied Chemistry College of Science & Technology, University of Calcutta.	3·908	0·7785	0·9968	5·6833
IX. Department of Applied Physics, College of Science & Technology, University of Calcutta.				
X. Jaipur Vikram Deo College of Science & Technology, Andhra University.	1·280	0·3405	0·2800	1·9005
XI. Alagappa Chettiar College of Technology, Madras University.	1·000	0·3750	0·4000	1·775
Total	17·754	11·4465	9·2088	38·4093
XII. College of Engineering & Technology, Muslim University, Aligarh.	0·8560	1·62195	0·768	3·24595
XIII. Department of Engineering & Technology, Anamalai University.	1·332	1·0995	0·512	2·9435
XIV. Technical College, Dayalbagh Agra.	1·2000	1·0590	0·5210	2·7710
Total	3·3880	3·78045	1·7920	8·96045
GRAND TOTAL	21·1420	15·22695	11·0008	47·36975

## STATEMENT OF GRANTS FOR THE FINANCIAL YEAR 1949-50

Name of Institution	Non-recurring grant in lakhs of rupees		Recurring grant in Lakhs of Rupees	Total
	Building	Equipment		
1. College of Engineering, Banaras Hindu University.	1·288	10·1220	3·0720	14·4420
2. College of Engineering & Technology, Jadavpur, Bengal.	2·150	14·40	3·8880	20·4380
3. Victoria Jubilee Technical Institute, Bombay.	3·040	5·9220	1·2480	10·210
4. College of Mining & Metallurgy, Banaras Hindu University.	1·244	4·1100	0·9180	6·2720
5. College of Technology Banaras Hindu University.	0·520	2·520	1·2480	4·288
6. Department of Chemical Technology, Bombay University.	1·336	1·836	0·6420	3·814
7. Laxminarayan Institute of Technology, Nagpur.	2·028	0·900	0·2820	3·210
8. Department of Applied Chemistry, College of Science and Technology, University of Calcutta.	3·908	3·1140	1·4952	8·5172
9. Department of Applied Physics, College of Science & Technology, University of Calcutta.				
10. Jaipur Vikeram Deo College of Science & Technology, Andhra University.	1·280	1·3620	0·4200	3·0620
Alagappa Chettiar College of Technology, Madras University.	1·00	1·500	0·6000	3·100
Total	17·754	45·7860	13·8132	77·3532
12. College of Engineering & Technology, Muslim University, Aligarh.	0·8360	6·48780	1·1520	8·49580
13. Department of Engineering & Technology, Annamalai University.	1·332	4·3980	0·768	6·4980
14. Technical College, Dayalbagh, Agra.	1·200	4·2360	0·7680	6·2040
Total	3·380	15·12180	2·6880	21·19780
GRAND TOTAL	21·142	60·9078	16·5012	98·551

## STATEMENT OF GRANTS FOR THE FINANCIAL YEAR 1950-51

Name of Institutions	Non-recurring grant in Lakhs of rupees		Recurring grant in Lakhs of Rupees	Total
	Building	Equipment		
1. College of Engineering, Banaras Hindu University	..	3.374	4.0960	7.4700
2. College of Engineering and Techno- logy, Jadavpur, Bengal.	..	4.800	5.1860	9.9840
3. Victoria Jubilee Technical Institute, Bombay.	..	1.974	1.6640	3.6380
4. College of Mining and Metallurgy, Banaras Hindu University.	..	1.270	1.2240	2.5940
5. College of Technology, Banaras Hindu University	..	0.840	1.6640	2.5040
6. Department of Chemical Technology, Bombay University.	..	0.612	0.8560	1.4680
7. Laxminarayan Institute of Tech- nology, Nagpur.	..	0.300	0.3760	0.6760
8. Department of Applied Chemistry, College of Science & Technology, University of Calcutta.	}	1.0380	1.9936	3.0306
9. Department of Applied Physics, College of Science & Technology, University of Calcutta.				
10. Jaipur Vikram Deo College of Science & Technology, Andhra University.	..	0.454	0.5600	1.0140
11. Alagappa Chettiar College of Technology, Madras University	..	0.500	0.8000	1.3000
Total	..	15.262	18.4176	33.6796
12. College of Engineering & Techno- logy, Muslim University, Aligarh.	..	2.1626	1.5360	3.6986
13. Department of Engineering, & Technology, Annamalai University.	..	1.4660	1.024	2.4900
14. Technical College, Dayalbagh, Agra	..	1.4120	1.024	2.4360
Total	..	5.0406	3.5840	8.6246
GRAND TOTAL	..	20.3026	22.0016	42.3042

## STATEMENT OF GRANTS FOR THE FINANCIAL YEAR 1951-52

Name of Institution	Non-recurring grant in lakhs of rupees		Recurring grant in lakhs of Rupees	Total
	Building	Equipment		
1. College of Engineering, Banaras Hindu University	..	..	5.12	5.12
2. College of Engineering & Technology, Jadavpur, Bengal.	..	..	6.48	6.48
3. Victoria Jubilee Technical Institute, Bombay.	..	..	2.08	2.08
4. College of Mining & Metallurgy Banaras Hindu University.	..	..	1.53	1.53
5. College of Technology Banaras Hindu University.	..	..	2.08	2.08
6. Department of Chemical Technology, Bombay University.	..	..	1.07	1.07
7. Laxminarayan Institute of Technology, Nagpur.	..	..	0.47	0.47
8. Department of Applied Chemistry, College of Science & Technology, University of Calcutta.	}	..	2.492	2.492
9. Department of Applied Physics, College of Science & Technology, Calcutta University.				
10. Jaipur Viceroy Deo College of Science & Technology, Andhra University.	..	..	0.70	0.70
11. Alagappa Chettiar College of Technology, Madras University.	..	..	1.00	1.00
Total	..	..	23.022	23.022
12. College of Engineering & Technology, Muslim University, Aligarh.	..	..	1.9200	1.9200
13. Department of Engineering and Technology, Annamalai University.	..	..	1.280	1.280
14. Technical College, Dayalbagh, Agra.	..	..	1.280	1.280
Total	..	..	4.4800	4.4800
<b>GRAND TOTAL</b>	..	..	27.5020	27.5020

## STATEMENT OF LOANS TO BE GIVEN FOR CONSTRUCTION OF HOSTELS

Name of Institution	Financial year—in lakhs of rupees			Total
	1947-48	1948-49	1949-50	
I. College of Engineering, Banaras Hindu University.	0.792	1.584	1.584	3.960
II. College of Engineering & Technology, Jadavpur, Bengal.	2.835	5.670	5.670	14.175
III. V. J. T. I., Bombay	0.868	1.736	1.736	4.340
IV. College of Mining and Metallurgy, Banaras Hindu University.	0.634	1.268	1.268	3.170
V. College of Technology, Banaras Hindu University.	0.436	0.872	0.872	2.180
VI. Department of Chemical Technology, Bombay University.	0.648	1.296	1.296	3.240
VII. Luxminarayan Institute of Technology, Nagpur.	0.278	0.556	0.556	1.390
VIII. University College of Science & Technology, Calcutta University.	0.600	1.200	1.200	3.00
IX. Department of Applied Chemistry and Applied Physics.				
X. Jaipur Vikeram Deo College of Technology, Andhra University.	..	..	..	..
XI. Alagappa Chettiar College of Technology, Madras.	..	..	..	..
Total	7.091	14.182	14.182	35.455
XII. College of Engineering and Technology, Muslim University, Aigarh.	0.792	1.584	1.584	3.960
XIII. Department of Engineering and Technology, Annamalai University.	0.528	1.056	1.056	2.64
XIV. Technical College, Dayalbagh, Agra.	0.400	0.800	0.800	2.000
Total	1.720	3.440	3.440	8.600
GRAND TOTAL	8.811	17.622	17.622	44.055

## ANNEXURE V

## ITEM 3 (b) OF AGENDA

*Proceedings of the fifth meeting of the Co-ordinating Committee of the All-India Council for Technical Education held at Bombay on the 20th and 21st April, 1948.*

1. The fifth meeting of the Co-ordinating Committee of the All-India Council for Technical Education was held at Bombay on the 20th and 21st April, 1948, under the Chairmanship of Mr. N. R. SARKAR. The following members were present :—

1. MR. N. R. SARKAR. (*Chairman*).
  2. MR. CLAUDE BATLEY.
  3. SIR VITHAL CHANDEVKAR.
  4. MAJOR D. L. DESHPANDE.
  5. SIR J. C. GHOSH.
  6. DR. K. A. HAMEED.
  7. MR. N. K. MITRA.
  8. MR. N. V. MODAK.
  9. SIR A. L. MUDALIAR.
  10. SIR PADAMPAT SINGHANIA.
  11. DR. TARA CHAND.
- DR. S. R. SEN GUPTA. (*Secretary*).

Sir S. S. Bhatnagar, Sir Bertie Staig, Dr. V. S. Jha and Dr. A. H. Pandya were unable to attend.

(The agenda for the meeting is shown in Appendix I.)

*Item No. 1.*—To report that the proceedings of the fourth meeting of the Co-ordinating Committee held at New Delhi on the 15th November, 1947 were confirmed by circulation to members.

2. It was reported that the proceedings of the fourth meeting of the Co-ordinating Committee were confirmed by circulation.

*Item No. 2.*—To consider the agenda for the third meeting of the All-India Council for Technical Education.

3. To meet the wishes of the members this item was considered on the second day of the meeting. The gist of the observations made by the members and the resolutions recommended for the consideration of the Council on some of the items are given below:—

*Item 3 (a).*—

In view of the representations made by the Institutions concerned and in consideration of the statutory obligations of some of them, the Committee reconsidered the conditions recommended to be imposed on the institutions receiving grants from the Central Government on the recommendation of the Council. The revised conditions are as follows:—

- (i) In view of the fact that the All-India Diplomas and University Degrees are expected to be approximately of equivalent standards, the syllabuses should as far as possible be in accordance with the standards to be suggested by a joint committee of the Inter University Board and the All-India Council for Technical Education.
- (ii) (a) The non-University Institutions shall include in the Selection Committees appointed for the purpose of recruitment of staff, independent

experts with the approval of the All-India Council for Technical Education.

- (b) In the case of colleges or departments under the administrative control of universities, the appointment of staff shall be made by Selection Committees constituted in accordance with the Universities' Acts and rules, or if the appointment of selection committees is not specifically provided for in the University Act, the rules for the appointment of such Committees shall be framed with the approval of the Inter-University Board. In every case, the All-India Council for Technical Education shall be acquainted with the rules and regulations for the selection and appointment of the staff.
- (iii) For the non-University Institutions, equipment for laboratories of various types and workshops shall be generally as prescribed by the All-India Council for Technical Education.
- (iv) Grant under a particular head shall not be utilised for a purpose other than that for which it is intended except with the general approval of the All-India Council for Technical Education.
- (v) (a) A Visiting Committee or an Inspector appointed by the All-India Council for Technical Education shall periodically visit the non-University Institutions receiving grants and report to the Council whether the grants given by the Government are being properly utilised and also whether proper standards of teaching and examination are being maintained.
- (b) In the case of University Departments or Institutions administered directly by universities, the university concerned shall appoint a Visiting Committee in accordance with its own rules. Where such rules do not exist already, the university will be required to frame them in consultation with the University Grants Committee. Such Visiting Committees shall inspect the institutions annually and report to the universities whether the Government grants were being properly utilised in accordance with the conditions laid down. The universities shall forward copies of all such reports to the All-India Council for Technical Education.
- (vi) Where degree course as well as diploma course of a definitely lower standard than the degree in the same subject are being taught, the capital and recurring grant shall be utilised for the promotion of higher technical education only.
- (vii) Recipients of recurring grant shall bring the salary scale of teaching staff and their qualifications to the level approved by the Central Government in consultation with the Provincial Government, and/or Universities concerned, within three years from the date from which the first recurring grant is made.
- (viii) In the case of non-University institutions, the appointment of Professors or Heads of Departments to permanent vacancies that may occur, shall be made within a period of six months and in accordance with the conditions laid down in (i) (a) above. The placing of the present incumbents on professorial status or status of Heads of the Departments for which grants are being made by the Government shall also be subject to the approval of the Council.
- (ix) The Central Government shall determine in consultation with the Provincial Governments and institutions the quota for each Province for purposes of admissions to the institutions concerned.
- (x) Capitation fees shall not be charged in respect of students admitted under the quota system fixed by the Central Government.



(xi) (a) The Central Government shall have at least two seats for its nominees on the Managing Committee or the Governing Body of non-University institutions and the All-India Council for Technical Education shall also have two seats thereon. The Principal or the Head of the institution shall be an *ex-officio* member of the Managing Committee or the Governing Body.

In all institutions there shall be constituted a College Council on which will be represented the Principal and all Heads of Departments. All Academic matters pertaining to the College will be considered by this Council, and the proceedings of the Council shall be submitted to the Managing Committee or the Governing Body as the case may be. The Council shall meet at least twice a year.

(b) Where there is an Advisory Committee the All-India Council for Technical Education and the Government of India will be represented on it. Where there are no Advisory Committees, the All-India Council for Technical Education shall have the right to appoint an *ad hoc* Visiting Committee for the purpose of reporting how the grants given to the institutions were being utilized.

(xii) Where a grant has been given by the Government of India under specific conditions accepted by the University or the institutions concerned, the University or institution that does not conform to these conditions shall be liable to refund the grant already received, in such manner as may be required by the Central Government, and further grants shall be stopped.

'The members felt that in order to plan ahead it was necessary for the institution to have an idea of the amounts they were likely to receive by way of grants from the Central Government. The Educational Adviser informed that this question was receiving the attention of the Government. The Committee recommended the following resolution for the consideration of the Council in this connection.'

*Resolution.—*

'The Council desires to make it clear that for purposes of improvement of the existing facilities in these institutions and for increasing the intake of students, both non-recurring and recurring liabilities are involved and requests the Government of India to expedite the disposal of the question of total grants both recurring and non-recurring and communicate their decision to the institutions concerned at an early date.'

*Item No. 4 (a).—*

In order that all interests in every region throughout India may be better acquainted with the work of the Council, the Committee felt that it was necessary to appoint at least the planning staff for each of the proposed four regions immediately even though from other considerations it might be desirable to postpone to a later date the questions of demarcation of the regions, the constitution of the Regional Committees, and the assignment of functions to each of these Committees.

*Resolution.—*

'The Council accepts the principle of constituting four Regional Committees but in view of the impending changes in the country defers the demarcation of the regions and the constitution of the Regional Committees for a period of one year. The Council further recommends to the Government that a planning Officer with necessary staff be immediately appointed for each of the four regions.'

*Item No. 4 (b).—*

The Committee was of the opinion that since the Provincial and State Governments had in the main the responsibility of executing the schemes for the development of Technical Education, there was considerable force in the request of the Bombay Government that the Provincial Governments etc. should have larger representation on the Coordinating Committee of the Council. The Committee recommended that the Coordinating Committee should have four representatives of the Provincial and State Governments on the Council as against two at present so as to permit one representative for the Provincial and States Governments of each region to be elected by the representatives of the Provincial and State Governments on the Council.

*Item No. 5.—*

*Higher Technical Institutions.*—In regard to the site for the Eastern Higher Technical Institution, the Coordinating Committee was of the opinion that the Hijli site which is 72 miles from Calcutta, about 50 miles from Jamshedpur, about 100 miles from the Asansole industrial area and is also quite near to the Provinces of Bihar and Orissa and possesses some permanent and temporary buildings and roads which will be available for immediate use as well as adequate sources of water supply and electricity, should be secured immediately for starting the Eastern Higher Technical Institution.

*Resolution.*—

‘The Council recommends that the site at Hijli which affords all necessary facilities and is within easy reach of Calcutta and in proximity to the provinces of Bihar and Orissa may be chosen for starting the Eastern Higher Technical Institution.’

The Committee was of the opinion that the Government of India should make within this quinquennium a beginning with the Northern as well as the Southern Higher Technical Institutions in addition to the Eastern and the Western.

*Resolution.*—

‘This Council is of the opinion that steps should be taken by the Government of India for the establishment of the four Higher Technological Institutions in the following order:—

1. Eastern & Western Institutions (Hijli & Bombay).
2. Southern & Northern Institutions (Madras & Kanpur).

and that immediate negotiations should be carried on with the Provincial Governments concerned for the sites required. The Council recommends that the necessary land (1000 to 1250 acres in each case) should be made available to the Government of India by the Provincial Governments concerned free of cost. The Provincial Governments should also be required to arrange for the supply of electricity, water, etc. as may be required for these institutions.’

*Craftsmen Training Schemes.*—The Committee was of the opinion that sufficient progress was not being made in the training of craftsmen who would be required in large numbers for the implementation of all the post-war schemes—both Governmental and industrial.

*Resolution.*—

‘In view of the great need for training craftsmen in sufficient numbers to meet the requirements of industrial expansion, this Council recommends to all Provincial Governments that immediate steps be taken for instituting training centres in the shape of trade schools, technical schools etc. to train such craftsmen. The Council directs the Secretary to prepare in consultation with the Government of India experts a note on the type of training that will be needed for the various categories of craftsmen and supervisors and to forward it to the Provincial Governments and other industrial interests concerned.’

*Item 6 (b).—*

The Committee recommended that the Council might consider the following persons for nomination as their representatives on the Boards of Technical Studies :—

1. Mr. K. D. Jalan . . . . Commerce and Business Administration.
2. Mr. H. N. Dallas . . . . Architecture and Regional Planning.
3. R. B. A. N. Khosla . . . . Engineering and Metallurgy.
4. Prof. J. N. Mukerjee . . . . Chemical Engineering and Chemical Technology.
5. Sir Shri Ram . . . . Textile Technology.
6. Major D. L. Deshpande . . . . Applied Art.

*Item 6 (c).—*

The Coordinating Committee's views are given under item No. 3 on page 12 of the draft proceedings of the 1st session of the meeting held on the 20th April.

*Item 7.—**Resolution.—*

“ The Council directs that the Secretary in consultation with other experts should prepare a draft scheme for the organization of engineering education and place it, together with the note from the Government of West Bengal, before the Board of Technical Studies in Engineering and Metallurgy, for their consideration in the first instance ”

*Item No. 8.—**Resolution.—*

- (a) “ The Council is of the view that the Engineering Diploma Holders in the service of the C. P. W. D. should either take part time courses and appear for the All-India Diploma examination or qualify for the Associate Membership of the Institution of Engineers ”.
- (b) “ In the case of Architectural Assistants the Council desires that the matter may be considered in the first instance by the Board of Technical Studies in Architecture who may suggest the necessary conditions which such assistants should fulfil in order to be eligible to sit for the different parts of the All-India Diploma examinations.”

*Item No. 9.—**Resolution.—*

“ The Council is of the opinion that the apprenticeship training course can be a success only if the Central Government or the Provincial Government concerned is prepared to offer stipends to the apprentices during their period of apprenticeship and also pays for one or more officers in the appropriate industrial concerns to supervise the training. The Council recommends that the Government of India should, in consultation with the Provincial Governments, draw up an approved list of industrial concerns which are capable of imparting apprenticeship training in appropriate branches. The Council suggests that the Ministries of Industry & Supply, Labour and Education might draft definite proposals for the organisation of this training and for the introduction of suitable legislation, if necessary.”

*Item No. 11.—**Resolution.—*

“ The Council authorizes the Chairman to appoint a small committee to consider the matter and report to the Coordinating Committee.”

*Item No. 12.—**Resolution.—*

“ In view of the fact that the All-India Manufacturers' Organization is affiliated to the Employers' Organization which is already represented on the Council, the Council regrets that they cannot recommend the grant of separate representation to this body ”.

*Item No. 15 (b).—**Resolution.—*

“ The Council directs that a joint Committee representing the Boards of Technical Studies in Engineering, Commerce, Chemical Technology and Textile Technology, be constituted for the purpose of drawing up a scheme for the training of technically qualified personnel in Business Organization ”

*Item No. 15 (c).—**Resolution.—*

“ The Council directs that the question of providing training facilities for certain classes of technical personnel with a view to their employment under the Port authorities, be examined by the Committee referred to in Item No. 7 ”.

*Item No. 15 (d).—(i) (ii) (iii)*

Reference may be made to the views expressed by the Coordinating Committee on Item No. 4 (b), Item No. 5 (Higher Technical Institutions) and Item No. 4 respectively.

*Item No. 15 (e).—*

Reference may be made to the views expressed by the Co-ordinating Committee on Item No. 5 (Higher Technical Institutions).

*Item No. III.—*

To report the membership of the different All-India Boards of Technical Studies as reconstituted with effect from the first of January, 1948.

4. At the outset the Chairman informed that in the lists of members of the various Boards, the names appearing against Nos. 9—12, as nominees of the Co-ordinating Committee were Provisional and he would like to have the views of the members of the Committee thereon before finalising the nominations. He also invited the attention of the members to the issue raised by the two major Employers' Organizations for the Council's consideration and decision, namely, that they would prefer having definite representation on only some of the Boards rather than have their nominees for all the Boards pitted against these of the other organizations. The Committee considered the matter in all its aspects and decided to recommend to the Council :—

- (a) that the Federation of Indian Chambers of Commerce and Industry, New Delhi, may have a representative on the All-India Board of Technical Studies in Commerce and Business Administration ;
- (b) that the Employers' Federation of India may have their representatives on the All-India Boards of Technical Studies in :—
  - (i) Chemical Engineering & Chemical Technology ;
  - (ii) Textile Technology ;
- (c) that the All-India Organisation of Industrial Employers may have representatives on the All India Boards of Technical Studies :—
  - (i) Architecture & Regional Planning.
  - (ii) Engineering & Metallurgy.
  - (iii) Applied Art ;

(d) that when the Boards are again reconstituted after a period of three years, the Employers' Federation of India may have representation on the All-India Boards of Technical Studies in Architecture & Regional Planning, Engineering and Metallurgy, and Applied Art, & the All-India Organisation of Industrial Employers may then have representation on the All-India Boards of Technical Studies in Chemical Engineering & Chemical Technology, and Textile Technology.

In regard to the nominees of the Coordinating Committee on the Boards, the Chairman accepted the suggestions made by the members. The following is a list of the nominees as finally decided :—

(a) *Commerce & Business Administration.*

1. Mr. Narahari Rao (New Delhi).
2. Mr. Chidambaram Chettiar (Madras).
3. Mr. R. G. Sarayya (Bombay).
4. Mr. K. M. Naik (Calcutta).

(b) *Architecture & Regional Planning.*

1. Dr. Konigsberger (Mysore).
2. Mr. G. B. Deolalikar (New Delhi).
3. Mr. Sivishchandra Chatterji (Calcutta).
4. Prof. C. M. Master (Bombay).

(c) *Chemical Engineering & Chemical Technology.*

1. Mr. S. P. Sen (Calcutta).
2. Dr. H. L. Roy (Jadavpur).
3. Dr. B. C. Guha (Calcutta).
4. Dr. N. N. Godbole (Banaras).

It was suggested that the Board might consider co-opting Mr. L. Gupta, Dr. K. A. Hamid and Mr. Hathiangali of the Associated Cement Coys.

(d) *Engineering & Metallurgy.*

- (1) Mr. N. S. Gupchup (Bombay).
- (2) Mr. J. A. Taraporevala (Poona).
- (3) Mr. G. C. Mitter (Bombay).
- (4) Dr. J. J. Rudra (Madras).

(e) *Textile Technology.*

- (1) Mr. J. O. Lal (Kanpur).
- (2) Seth Amritlal Hargovindas (Ahmedabad).
- (3) Dr. Lavji Thoria (Travancore).
- (4) Mr. M. P. Nair (Travancore).

It was suggested that the Board might consider co-opting a silk Technologist as well as a Jute Technologist.

(f) *Applied Art.*

- (1) Mr. Ratan Batra (Bombay).
- (2) Dr. Stella Kramerisch (Calcutta).
- (3) Dr. Rathindranath Tagore (Santiniketan)
- (4) Mr. V. N. Adarkar (Bombay).

It was suggested that the Board might consider co-opting Mr. Gaitama Sarabai.

*Item No. IV.—*

To receive and to consider a note relating to the College of Engineering, Travandrum, University of Travancore, prepared by the Principal of the College, and to make recommendations in regard to the financial assistance from the Central Government to the institution.

5. Major Deshpande informed that the University's object in making this approach was to ensure that the case of this particular institution is not overlooked when the question of giving grants from the Central Revenues to the Provincial and State Government institutions is considered by the Council. The Committee decided that the matter be considered at the appropriate time.

*Item No. V.—*

To report the recommendations of the All-India Board of Technical Studies in Engineering and Metallurgy regarding advanced instructions in Highway Engineering.

6. The Committee agreed with the views of the Chief Engineers of Provinces that the Highway Engineering course should be a specialized post-graduate course to be taken by students who have undergone a broad-based engineering course and put in some time in the construction of highways. The course should, therefore, normally be open to those who are already engaged on this type of work. The Committee were not in favour of providing Highway Engineering as an elective subject in the fourth year of the course for Advanced Diploma or Honours Degree and suggested that the Director of the Road Research Laboratory, when it is set up, may also undertake the duties of Professor of Highway Engineering at the Delhi University where specialized instruction in the subject may be imparted instead of starting such courses in the different colleges.

*Item No. VI.—*

To consider the draft regulations for the conduct of All-India Diploma and Certificate Examinations, as recommended by the various Boards of Technical Studies of the Council.

7. The Committee was of the view that in the All-India Examination Scheme, sufficient weight should be given to the performances of the candidates throughout the period of instruction at the Institutions. The Committee thought that the draft rules and regulations were generally on the right lines and directed that these be scrutinized by a small expert sub-committee consisting of:—

- (1) Sir J. C. Ghosh.
- (2) Principal P. N. Joshi, and
- (3) Principal B. D. Buri,

with power to co-opt additional members, if necessary, and report to the Government on behalf of the Coordinating Committee.

*Item No. VII (a).—*

To consider whether the Central Government should entertain applications for grants from newly started Technical Institutions in the Provinces which are not provided for in the Provincial Post-war reconstruction plans.

8. The Educational Adviser mentioned in this connection that the Government were committed to set up two high-grade technological institutions and to provide funds for strengthening 14 existing institutions and remarked that the Government of India would, at any rate, find it difficult to agree to finance directly any new

projects until the Scientific Manpower Committee's estimate of the requirements for Technical personnel for the next five or ten years is known.

Sir J. C. Ghosh expressed the opinion that although as a general rule no new projects may be financed, deserving cases should not be completely debarred from receiving consideration for financial assistance from the Centre. After considering the different aspects of the question, the Committee came to the conclusion that the Government of India should for the present concentrate on the establishment of the two high-grade technological institutions and the strengthening of the 14 existing institutions as already recommended by the Council and that for the next two years the Council should not recommend any other institution for financial assistance from the Government of India.

*Item VII (b).—*

To consider a letter from Mr. B. N. Gupta addressed to His Excellency the Ambassador of India in U. S. A. regarding the establishment of a Teachers' Training College of Rural Technology in India.

9. Sir J. C. Ghosh informed that issues similar to those raised in Mr. Gupta's letter have been under the consideration of certain non-official organisations. The Committee thereupon decided that copies of Mr. Gupta's letter be forwarded to the Trustees of Kasturba Fund and Gandhi National Memorial Fund for their consideration.

*Item VII (c).—*

To consider a note from the Ministry of Communications, Government of India, recommending the introduction of Geophysics for the M.Sc. Degree in Universities having facilities for teaching up to M.Sc. standard in Geology, Physics and Mathematics.

10. The Committee felt that the establishment of a Central Geophysical Institute was a necessity and decided that the question of institution of Geophysics course for the M.Sc. degree should be referred to the Inter University Board with copy to such of the Universities as provide courses in Geology, Physics and Mathematics.

*Item VII (d).—*

To consider a note from the Ministry of Works, Mines and Power, Government of India, regarding—

(1) Practical and theoretical training of Officers recruited to the Explosive Department in—

- (i) Petroleum Technology,
- (ii) Technology of Explosives manufacture,
- (iii) Technology of compressed gas cylinders, and

(2) Establishment of institutions to impart training in Printing and Allied Trades.

11. In regard to the educational and training facilities in Petroleum Technology the Committee was of the view that no useful purpose would be served by introducing post-graduate courses in Petroleum Technology in any institution unless and until refineries for the production of petroleum from crude oil are started in the country.

In regard to the Technology of Explosives manufacture Sir J. C. Ghosh informed that the Government of India were contemplating to set up one or two factories for the manufacture of explosives for civilian needs and thought that suitable universities or higher technical institutions in proximity to the proposed factories should be able to train technologists for the manufacture of explosives in close collaboration with these factories. The Committee agreed with this view.

In regard to the training of personnel in the Technology of compressed gas cylinders the Committee recommended the institution of a suitable apprenticeship course at the Sindri Fertilizer Factory.

As regards the establishment of institutions to impart training in Printing and allied trades the Committee were informed that a comprehensive scheme for the establishment of a school of Printing has already been prepared by the All-India Board of Technical Studies in Allied Art, and circulated to the Provincial Governments. The Committee expressed the hope that some tangible result would accrue from this approach.

*Item VII (e).—*

To consider a note from the Ministry of Labour, Government of India, regarding Safety Education in Engineering Colleges and Technical Institutions.

12. The Committee decided that the memorandum be circulated to the various Engineering Colleges for their consideration.

*Item VII (f).—*

To consider letter No. P/410, dated the 12th April, 1948, from the Pro-Vice-Chancellor, Banaras Hindu University, regarding grant to the College of Technology, Banaras Hindu University.

13. Major Deshpande, a member of the Visiting Committee for this institution, apprised the Committee of the extent of facilities available at the institution and his views as to how they could be best utilised. In view of the numbers already admitted by the University to the Industrial Chemistry Course a suggestion was made that the annual intake might be increased by providing two shifts at the institution.

The Committee were emphatically of the view that the annual intake should under no circumstances be increased to such an extent as may prove detrimental to the standard of education. It was decided that the Visiting Committee which had reported on the College of Technology, Banaras Hindu University, should consider the letter from the Pro-Vice-Chancellor and make recommendations.

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



## APPENDIX I —TO ANNEXURE V.

CO-ORDINATING COMMITTEE OF THE ALL INDIA COUNCIL FOR TECHNICAL EDUCATION.

*Fifth Meeting.*

Place: Bombay.

*Dated the 20th and 21st April, 1948.*

## AGENDA.

1. To report that the proceedings of the fourth meeting of the Co-ordinating Committee held at New Delhi on the 15th November, 1947 were confined by circulation to members.
2. To consider the agenda for the third meeting of the All-India Council for Technical Education.
3. To report the membership of the different All-India Boards of Technical Studies as re-constituted with effect from the first of January 1948.
4. To receive and to consider a note relating to the College of Engineering, Trivandrum, University of Travancore, prepared by the Principal of the College, and to make recommendations in regard to the financial assistance from the Central Government to the Institution.
5. To report the recommendations of the All India Board of Technical Studies in Engineering and Metallurgy regarding advanced instructions in Highway Engineering.
6. To consider the draft regulations for the conduct of All-India Diploma and Certificate Examinations, as recommended by the various Boards of Technical Studies of the Council.
7. Any other business :—
  - (a) To consider whether the Central Government should entertain applications for grants from newly started Technical Institutions in the Provinces which are not provided for in the Provincial Post-war reconstruction plans.
  - (b) To consider a letter from Mr. B. N. Gupta addressed to His Excellency the Ambassador of India in U. S. A. regarding the establishment of a Teachers' Training College of Rural Technology in India.
  - (c) To consider a note from the Ministry of Communications, Government of India recommending introduction of Geophysics for the M. Sc. Degree in Universities having facilities for teaching upto M. Sc. standard in Geology, Physics and Mathematics.
  - (d) To consider a note from the Ministry of Works, Mines & Power, Government of India; regarding :—
    - (1) Practical and theoretical training of officers recruited to the Explosives Department in :—
      - (i) Petroleum technology,
      - (ii) Technology of Explosives manufacture,
      - (iii) Technology of compressed gas cylinders, and
    - (2) Establishment of Institutions to impart training in Printing and Allied Trades
  - (e) To consider a note from the Ministry of Labour, Government of India regarding Safety Education in Engineering Colleges and Technical Institutions.
  - (f) To consider letter No. P/410, dated the 12th April 1948 from the Pro-Vice-Chancellor, Banaras Hindu University regarding grant to the College of Technology, Banaras Hindu University.

## ANNEXURE VI

*Item No. 4 (a) of Agenda.**Third Meeting.*

## ALL INDIA COUNCIL FOR TECHNICAL EDUCATION.

## MEMORANDUM.

*Establishment of Regional Committees of the All India Council for Technical Education.*

At its second meeting held in Bangalore in May, 1947, the All India Council for Technical Education decided that the four regions into which it was proposed to divide India for the purpose of establishment of the Regional Committees of the Council should be redemarcated in the light of geographic and economic conditions and the political changes which were then impending. It was further suggested that Labour should have two representatives on each Regional Committee and that all non-official members of the All India Council for Technical Education in their respective regions should be ex-officio members of the Regional Committees.

The views of the Council stated above were communicated to the Provincial and States Governments.

2. In a letter dated the 4th February 1948 [Annexure 5, item 4 (b) of agenda] the Government of Bombay has suggested a somewhat different composition for the Regional Committees from that proposed by the Council. The two proposals are shown in the comparative statement below for the consideration of the Council.

*Composition of the regional committees.*

As proposed by A. I. C. T. E.	As proposed by the Government of Bombay.
<p>(a) Chairman . . . . .</p> <p>(b) One representative of the Ministry of Education of the Central Government.</p> <p>(c) Two representatives of each of the Provincial Governments within the region, one of whom will be the representative of the Provincial Government on the A. I. C. T. E.</p>	<p style="text-align: center;">2</p> <p>(a) } As in column 1.</p> <p>(b) }</p> <p>(c) Three representatives of each Provincial Government within the region. In the event of integration of States within the region with the Provinces of that region, the States representatives may be suitably apportioned among the other Governments.</p>

As proposed by A. I. C. T. E.

As proposed by the Government of Bombay.

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| <p>(d) Upto three representatives of the Indian States in the region. In the southern region the States representation will be limited to the three members of A. I. C. T. E. representing the States of Hyderabad (Deccan), Mysore &amp; Travancore and in the Western region, the State of Baroda will have one representative &amp; the other States not more than two.</p> | <p>(d) As in column 1 but subject to the provision of (c) above.</p>   |
| <p>(e) Two representatives of Industry &amp; Commerce.</p>   | <p>(e) As in column 1.</p>   |
| <p>(f) One representative each from the Universities within the region having technological faculties.</p>   | <p>(f) }<br/>As in column 1.<br/>(g) }</p>   |
| <p>(g) Two representatives of Labour . . .</p>   |  |
| <p>(h) Four members to represent the technical institutions within the region.</p>   | <p>(h) Three representatives of technical institutions. (All academic matters on All India basis will be considered by the Boards of Studies which will consist mainly of expert representatives and Committees to afford such representation).</p>  |
| <p>(i) Two representatives of the Institution of Engineers.</p>  | <p>and (j) No separate representation for the Institute of Engineers and the Institute of Architects.<br/>(Very probably the representatives from the Universities or the technical institutions will already contain members who may represent the interests referred to. Moreover, the Regional Committees are proposed to be authorised to co-opt specialists in particular cases).</p> |
| <p>(j) One representative of the Indian Institute of Architects.</p>   |  |
| <p>(k) All non-official members of the All India Council for Technical Education within the region.</p>  | <p>(k) Two members of A. I. C. T. E. to be nominated by the Chairman of the Co-ordinating Committee.<br/>(Many of the members in the earlier categories will also be members of A. I. C. T. E.)</p>  |
| <p>(l) If on any Regional Committee there be no specialists on any of the subjects for which the six Boards of Studies have been set up by the Council, then the Regional Committee will be authorised to co-opt such specialist or specialists.</p>   | <p>(l) As in column 1.</p>   |

3. The Government of United Provinces has suggested that there should be an Executive Committee of each Regional Committee to serve as an executive organ. This is also for consideration.

4. The Provincial and State Governments are generally agreeable to the performance of the following functions by the Regional Committees as resolved by the Council at its first meetings:—

- (i) To supervise the work of the technical institutions running All-India Courses, and of Higher Technical Institutions which the Government of India may set up within the region.

- (ii) 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.
- (iii) To publish the results of the examinations.
- (iv) To send reports to the Co-ordinating Committee about the conduct of examinations periodically.
- (v) To make preliminary examination of any institution seeking recognition and to forward recommendations to the Co-ordinating Committee.
- (vi) To survey the facilities for Technical Education and to make recommendations thereon to the Co-ordinating Committee.

The Government of Orissa has suggested that the functions of the Regional Committees may also include the following :—

- (a) To make recommendations for co-ordinated improvement of higher technical education in the region.
- (b) To survey the needs of technologists and arrange for their training.

The Government of Bengal has suggested that the Regional Committees and the Provincial Technical Education Committees (if any) should cooperate in advising the Provincial Governments.

The Government of Banaras State has suggested that the Regional Committees should afford technical help and advice to Provinces and States desiring to set up technical institutions after such local survey as may be necessary.

As the Regional Committees will perform in general the functions assigned to the All India Council for Technical Education, it is more or less implied that their duties include the additional functions suggested by the Governments of Orissa, Bengal and Banaras. It is however for consideration whether any or all of these be specifically included in the list of functions of the Regional Committees.

5. It has already been made clear to the Provincial and State Governments that the Council do not propose to entertain applications for running All India Courses from any institution, unless the request of such institutions has the support of the Provincial Government concerned and there is no intention whatsoever of encroaching on the rights and privileges of any statutory bodies who may be controlling the Provincial and non-University institutions.

6. As regards re-delineation of the regions it is suggested that these may comprise the territories mentioned below :—

- (i) *The Northern Region*.—Comprising East Punjab, Delhi, The United Provinces, Ajmer-Merwara, the Eastern Punjab and Rajputana States, and the States of Jammu and Kashmir when these have finally acceded to the Indian Union.
- (ii) *The Southern Region*.—Comprising Madras and the States of Mysore, Travancore, Cochin and other Southern India States, and Hyderabad (Deccan) State if and when it accedes to the Indian Union.
- (iii) *The Eastern Region*.—Comprising Assam, West Bengal, Bihar, Orissa, Tripura, Manipur, and other Eastern India States.
- (iv) *The Western Region*.—Comprising Bombay, the Central Provinces and Berar, Baroda and Gwalior States and the other Western and Central India States.

7. The decision of the Council is sought on the above points namely (i) the composition of the Regional Committees, (ii) the function of the Committees, (iii) the demarcation of regions.

## Item No. 4 (b) of Agenda

## ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

## MEMORANDUM

The Government of Bombay in their letter No. 7764-K, dated the 4th February 1948, have made certain suggestions regarding the composition of the Co-ordinating Committee and the proposed Regional Committees of the Council. Those relating to the Regional Committees have been incorporated in the note on Item 4(a) of the agenda (Annexure 4).

Relevant extracts from the Bombay Government's letter are reproduced below for consideration of the Council.

Extracts from a letter No. 7764-K, dated the 4th February 1948, from the Joint Secretary to the Government of Bombay, Education and Industries Department, to the Secretary to the Government of India, Ministry of Education, New Delhi.

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3. It is desirable that in the Co-ordinating Committee which is the Executive Committee of the All India Council for Technical Education more adequate representation may be afforded to the Government concerned, including the Government of India. It is considered suitable that the Governmental representatives may be one half of the total number, the remaining seats being distributed among other interests.

4. As regards also the composition of the Regional Committees it would be desirable to have these committees more compact. As the All India Council for Technical Education is a large and representative body and can deliberate on an All India basis on general questions, it would be desirable to modify the proposed tentative composition of the Regional Committees on the lines indicated below.

5. The representatives of each Provincial Government may be three in place of two; and in the event of integration of the States within the Region with the provinces of that Region, the States's representative may be suitably apportioned among the other Governments.

6. *Representatives of Technical Institutions.*—Three representatives would appear adequate. All academic matters on All India basis will be considered by the Boards of Studies which will consist mainly of expert representatives, and it does not appear necessary to enlarge the Regional Committees to afford such representation.

7. *Representatives of Institute of Engineers and the Indian Institute of Architects.*—It is very probable that the representatives from the Universities or the Technical Institutions will already contain members who may represent the interests referred to; moreover, the Regional Committees are proposed to be authorised to co-opt specialists in particular cases.

8. *Representatives of the All India Council for Technical Education.*—Here again many of the members in the earlier categories will also be members of the All India Council for Technical Education. It would therefore be sufficient to provide for two additional members of the All India Council for Technical Education for nomination by the Chairman of the Co-ordinating Committee.

## Annexure VIII

## Item No. 5 of Agenda

## ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

*Action taken by the Government of India on the recommendations of the All India Council for Technical Education made at its second meeting.*

I. *Membership of the Council.*

The Council had recommended that its membership should be enlarged so as to include one representative of the Indian Chemical Society, Calcutta.

The Government of India have accepted this recommendation and the Department of Education Resolution No. 16-10/44-E. III(P), dated the 30th November, 1945 establishing the All India Council for Technical Education has been amended suitably by Resolution No. F. 1-2/46-E. III(P), dated the 24th July, 1947, and a nominee of the above-named organisation appointed as member of the Council.

As recommended by the Council, representation has also been granted to the Central Board of Irrigation and a nominee of the Board has been appointed to be a member of the Council.

The Ministry of Industry and Supply desired to have one more representative to enable them to nominate a technical officer on the Council. This request has been granted.

The recent constitutional changes necessitated certain amendments to the Government of India, Department of Education Resolution No. F.16-10/44-E. III, dated the 30th November, 1945 establishing the All India Council for Technical Education. These have been carried out and a copy of the above mentioned resolution incorporating all amendments up to 6th December, 1947, is submitted for the information of the Council (Appendix A).

The Constituent Assembly of India (Legislative) have elected five new representatives as members of the Council to replace the representatives of the old Central Legislature.

II. *Committees of the Council.*

*All India Board of Technical Studies.*—The term of office of the All India Boards of Technical Studies expired on the 31st December, 1947 and the Boards were reconstituted with effect from 1st January, 1948.

*Regional Committees.*—In consultation with the Provincial and State Governments it has been decided to set up four Regional Committees of the Council. A note setting out the action taken in this connection is submitted separately.

III. *Co-ordination of Higher Technical Education.*

It was suggested by the Council at its first meeting that there should be co-ordination of the activities of the different Central Government Departments in the field of technical education.

The Government of India have accepted the suggestion. A classified list of technical subjects indicating the Government Department(s) interested in each subject and the Ministry primarily responsible for education therein has been circulated to the Ministries concerned and it is hoped that the list and the arrangements for co-ordination will shortly be finalised and put into effect. It is proposed to set up inter-departmental committees for the purpose of ensuring co-ordinated development of technical education on an all India basis.

With a view to securing uniform standards for higher technical education throughout India, a memorandum was sent to the Inter-University Board with the request that they may consider the desirability of appointing a Committee with which a small committee of the All India Council for Technical Education may co-operate, if necessary, in drawing up the general principles to be observed in regard to technical Education for the degree courses of universities.

#### IV. *Higher Technical Institutions.*

Consequent on the decision of the Ministry of Railways not to locate their proposed locomotive workshop at Kanchrapara, it was considered necessary to explore alternative sites for the location of the Eastern Higher Technical Institution. The matter was considered by the Co-ordinating Committee at its fourth meeting held on the 15th November, 1947. The Committee agreed that it was not now desirable to locate the institution at Kanchrapara and suggested that the Government of India should request the Government of West Bengal to acquire a suitable piece of land, measuring at least, 600 acres, within a few miles from Calcutta. The Government of West Bengal were accordingly approached in the matter and they have suggested a few possible sites for the Eastern Higher Technical Institution and have also expressed their willingness to offer a site free of cost, if necessary, for the institution. The Hijli Detention Camp site near Khargpur about 73 miles from Calcutta, is considered to be the most suitable site.

In consultation with the Government of Bombay, a number of sites for the location of the Western Higher Technical Institution were inspected and a site measuring approximately 1000 acres including the North Kurla Military Depot is considered to be most suitable from all points of view. Negotiations are going on with the Ministry of Defence, Government of India, for the release of temporary buildings occupied by the Army Camp for the use of the proposed Higher Technical Institution. On receipt of a favourable reply from the Ministry of Defence, the Government of Bombay will be requested to acquire the site in question.

Steps have been taken to advertise the posts of Director and eight Heads of Departments for the Eastern Higher Technical Institution simultaneously in India through the Federal Public Service Commission and in the U. K. and U. S. A. through the High Commissioner for India in London, and the Indian Embassy in Washington respectively.

The Provincial and State Governments in the Southern Region were requested to state the facilities they could offer in the matter of a suitable site, buildings water supply etc. for the proposed Southern Higher Technical Institution. Their replies will be considered by the sub-committee appointed by the Co-ordinating Committee to deal with the question in due course.

#### V. *Strengthening of existing Institutions.*

Three more visiting committees were constituted as shown below:—

1. *For the Jeypore Bikramdev College of Science and Technology, Waltair, Andhra University and the Chemical Technology Department of the Madras University.*

- (i) Sir J. C. Ghosh,
- (ii) Dr. M. N. Saha,
- (iii) Dr. B. C. Guba.

2. *For the Department of Applied Physics and Applied Chemistry of the University College of Science and Technology of the Calcutta University.*

- (i) Prof. M. S. Thacker,
- (ii) Dr. B. B. Dey.

3. *For the Lakshminarayan Institute of Technology, Nagpur University.*

(i) Rai Bahadur N. K. Mitra,

(ii) Dr. B. C. Guha, ~

(iii) Dr. S. R. Sen Gupta.

The reports of these visiting committees along with the reports of the five visiting committees appointed earlier were considered by the Scrutinising Committee appointed by the Co-ordinating Committee at its third meeting, and the recommendations of the Scrutinising Committee were placed before the Co-ordinating Committee at its fourth meeting held in New Delhi on the 15th November 1947. The Co-ordinating Committee recommended that grants from the Central Revenues to the extent of Rs. 1.5 crores on capital expenditure and Rs. 30 lakhs on recurring expenditure be made to fourteen institutions. The Committee further recommended that these grants should be spread over a period varying from 3 to 5 years beginning with the financial year 1947-48.

The Standing Finance Committee of the Legislature has approved in principle the scheme for strengthening and improvement of the existing technical institutions, and agreed that the institutions should receive such grants for the year 1947-48 as may be decided after necessary scrutiny by the Ministry of Finance.

V1.—*Craftsman Training Scheme.*

A note stating the action taken by the Ministry of Labour (Resettlement & Employment Directorate) in implementing the recommendations of the Advisory Committee on Technical Training concerning (i) the training and apprenticeship of craftsmen for industry and (ii) training of instructors, is submitted for the information of the Council (Appendix B).



3. *For the Lakshminarayan Institute of Technology, Nagpur University.*

- (i) Rai Bahadur N. K. Mitra,
- (ii) Dr. B. C. Guha,
- (iii) Dr. S. R. Sen Gupta.

The reports of these visiting committees along with the reports of the five visiting committees appointed earlier were considered by the Scrutinising Committee appointed by the Co-ordinating Committee at its third meeting, and the recommendations of the Scrutinising Committee were placed before the Co-ordinating Committee at its fourth meeting held in New Delhi on the 15th November 1947. The Co-ordinating Committee recommended that grants from the Central Revenues to the extent of Rs. 1.5 crores on capital expenditure and Rs. 30 lakhs on recurring expenditure be made to fourteen institutions. The Committee further recommended that these grants should be spread over a period varying from 3 to 5 years beginning with the financial year 1947-48.

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MINISTRY OF EDUCATION  
RESOLUTION

New Delhi, the 30th November 1945

The resolution below incorporates all amendments made from time to time upto 6th December 1947.

## ESTABLISHMENT OF AN ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

No. F.1610/44 E. III—In their plan for Post-War development in India the Central Advisory Board of Education have given reasons for their belief that technical education at the higher stages cannot in modern conditions be effectively organised on a provincial basis. They have emphasised the need for planning this particular branch of education on an All-India basis if there is to be substantial industrial development in the post-war period and have remarked that "to stimulate, co-ordinate and control the provision of the educational facilities, which such a development as well as existing industry will need, there must be an All-India body in supreme charge". They have accordingly recommended the establishment of a National Council for Technical Education which, they suggest, should control policy in technical education generally and deal with all technical institutions above the high school stage except the Technological Departments of Universities. It is obvious that this recommendation raises issues, agreement on which is likely to be reached only after considerable discussion with the various authorities concerned. At the same time the development of technical or practical instruction at all stages is important not only in view of the accepted need for making Indian education generally more realistic but also because it has an essential and urgent contribution to make towards other branches of post-war reconstruction which will demand a large increase in the available supply of Indian technologists and technicians. A necessary preliminary to any planned and balanced development of technical education is a survey by a single competent body of existing facilities, probable post-war requirements and present and prospective proposals for development in this important sphere of education. For the immediate task of survey and advice it is not necessary that an All-India Council for Technical Education should be endowed with executive, administrative or controlling powers of any kind or that its establishment should be delayed until all the issues raised by the Central Advisory Board's recommendations have been settled. It has accordingly been decided that the All-India Council for Technical Education should be set up immediately, organised in the way suggested by the Central Advisory Board, but entrusted in the first instance with advisory functions only. It will be understood that the decision to set up the Council immediately with advisory functions is without prejudice and at the same time without commitment to the full implementation at a later date of the proposals in this behalf of the Central Advisory Board.

2. *Functions.*—The immediate task of the Council for Technical Education will be to survey the needs of the country as a whole for higher technical education, with special reference to prospective post-war needs, and to advise in what areas technical institutions should be established for what branches of technology each should provide and upto what standards they should operate. In particular it will be empowered :—

- (a) to survey the whole field of technical education in consultation with Provincial Governments and such Acceding States as may be willing to co-operate with it;
- (b) to consider such immediate projects as are already under consideration by various Ministries of the Government of India, e.g., the provision of senior All-India polytechnics on the lines of the Massachusetts Institute of Technology or the establishment of a Technical College for Electrical (Power) Engineering, and to assign to these their appropriate place in all All-India Scheme; and
- (c) to conduct preliminary investigations with a view to ascertaining the conditions on which the authorities in control of existing technical institutes would be prepared to co-operate in an All-India Scheme.

3. *Constitution.*—The Central Advisory Board have envisaged the establishment of a Council representative of all the main interests concerned with technical education. Acceptance of this view precludes the setting up of a small and compact body. Technical Education has many facets, and the representation of the interests best qualified to assist the attainment of the objects in view can be achieved only at the expense of enlarging the size of the Council. It will be open to the Council to appoint such executive committees or other subordinate bodies as may be required to facilitate the discharge of its business. The Council will be composed as under :—

- (i) *Members.*—(a) Chairman, who will be an eminent person connected with Industry or Commerce, will be selected by the Government of India. On occasions when he is unable to preside over a meeting of the Council the Educational Advisor to the Government of India will deputise for him.
- (b) Educational Advisor to the Government of India.
- (c) Representatives of the Ministries of the Government of India.

## APPENDIX B TO ANNEXURE VIII

*Report on progress made in implementing the recommendations of the Advisory Committee on Technical Training*

The Advisory Committee on Technical Training made certain recommendations in its report (1941-45) concerning (i) the training and apprenticeship of craftsmen for Industry and (ii) training of Instructors. The following is the present position regarding implementation of the Committee's recommendations:—

(i) *Training and apprenticeship of craftsmen for Industry.*—The Provincial Governments were addressed by the Ministry of Labour in May, 1947, regarding the action proposed to be taken on the recommendations of the Advisory Committee. It was suggested to them that the Committee's recommendations could be implemented immediately by admitting a limited number of young boys to some selected Training Centres, which the Ministry of Labour has set up for the training of demobilised Services personnel, and giving them training as proposed by the Committee. As the requirements of ex-Servicemen became smaller, more vacancies could be provided for boys and ultimately the Centres would be engaged exclusively on their training. A long term plan of training as recommended by the Committee, could thus be gradually built up. The Ministry of Labour undertook to provide the necessary machinery and equipment and to organise and supervise training through its directional and inspection staff and arrange for trade testing on the completion of training. The Provincial Governments were required to bear only the recurring expenditure involved in the training of boys.

Replies have now been received from all the Provincial Governments. The Governments of Assam, West Bengal, Bihar, Orissa, Bombay and East Punjab have accepted the suggestion and agreed to participate in the Scheme of training recommended by the Advisory Committee. The Governments of Madras, U.P., C.P. and Berar have not agreed to join the Scheme as they have their own plans for providing facilities for craftsmen training in their respective Provinces. The Government of C.P. & Berar, it is understood, are reconsidering their decision and will very likely participate in the scheme. No official communication, however, has so far been received from them.

The Advisory Committee has recommended that training of craftsmen should be planned and organised on a national basis and its aim should be to train boys for a National Certificate of Craftsmanship. This will ensure uniformity of standards throughout the country and facilitate mobility of labour. This object, however, cannot be achieved if all the Provincial Governments do not agree to join the Scheme. The question also arises what arrangements should be made for the administration of the Training Scheme for juveniles after the training of ex-Servicemen has come to an end and the Training Centres set up by this Ministry for their training are closed.

The matter is being placed before the Conference of the Provincial Labour Ministers to be held in New Delhi in April 1948 and it is hoped that the Conference will be able to give definite guidance regarding the action to be taken on the recommendations of the Advisory Committee on Technical Training.

(ii) *Central Institute for the Training of Instructors.*—A Scheme for the establishment of a Central Institute for the training of Instructors, as recommended by the Advisory Committee, was submitted to Government last year. The Provincial Governments were also consulted whether they would support such a Scheme by sending Instructors employed, or to be employed by them, for training at the Institute and share the recurring cost of training of their nominees on a proportionate basis. The Governments of Assam, Bihar, Orissa, U.P., C.P. and Berar and East Punjab have agreed to participate in the Scheme. The Governments of Madras and Bombay have not agreed to join the Scheme as they have their own plans for training Instructors. A reply from the West Bengal Government is still awaited.

The Government of India has now sanctioned the scheme for a period of 3 years in the first instance. The Institute will be located at the Combined Technical and Vocational Training Centre, Koni Camp, Bilaspur, C.P. where sufficient accommodation is already available and where the Combined Training Centre will serve the purpose of a practising school for the Instructor trainees. The Institute will provide training to the Instructors employed at the Training Centre for ex-Servicemen with a view to improving their efficiency and teaching ability and will also train new Instructors to meet replacement needs and the requirements of the Provincial Governments and recognised private Institutions. It will have a capacity for training 200 Instructors at a time and courses will be provided in a number of trades. Arrangements will also be made to provide refresher courses with a view to ensuring that Instructors are always up to date and conversant with the latest methods of production and teaching work. Efforts are being made to start the Institute in April, 1948.

## Item No. 6 (a) of Agenda

## ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

*Note on the Activities of the All-India Boards of Technical Studies since the last Report to the All-India Council for Technical Education in 1947*

## MEETINGS

The following meetings were held during the period under report :—

- (i) All-India Board of Technical Studies in Architecture and Regional Planning—29th July, 1947 at New Delhi.
- (ii) All-India Board of Technical Studies in Commerce and Business Administration—31st July 1947 at New Delhi.
- (iii) All-India Board of Technical Studies in Engineering and Metallurgy and its Syllabus Committee—4th, 5th and 6th August 1947 at New Delhi.
- (iv) All India Board of Technical Studies in Textile Technology and its Specialists Committee—11th, 12th and 13th August 1947 at Bombay.
- (v) All India Board of Technical Studies in Chemical Engineering and Chemical Technology—23rd August 1947 at New Delhi.
- (vi) All India Board of Technical Studies in Applied Art and its Specialists Committee—17th and 18th November 1947 at New Delhi.
- (vii) Examination Committee of the Commerce Board—5th February 1948 at New Delhi.
- (viii) Examination Committee of the Architecture Board—6th February 1948 at New Delhi.
- (ix) Examination Committee of the Chemical Engineering Board—13th February 1948 at Calcutta
- (x) Examination Committee of the Chemical Engineering Board—14th February, 1948, at Calcutta.

As desired by the Co-ordinating Committee it was originally arranged to hold the meetings of the All-India Board of Technical Studies in Applied Art and of its Specialists Committee at Calcutta. But these meetings had to be postponed, twice, due to the unsettled conditions prevailing at that time in Calcutta. Ultimately it was decided by the Chairman of the Board to hold the meeting in New Delhi.

## 2. COORDINATING COMMITTEE'S DIRECTIVES ON THE STANDARD OF ALL-INDIA

### COURSES

At their meetings held in July-November 1947 the All-India Boards of Technical Studies considered the Co-ordinating Committee's directives in regard to the Standard of All-India Courses as embodied in the memorandum on the subject (Appendix I). The Boards were in general agreement with the views expressed by the Co-ordinating Committee.

While agreeing with the Coordinating Committee that the Rules and Regulations for the Diploma examinations should be so framed that the holders of All India Certificates or equivalent qualifications engaged in full or part-time occupations in appropriate branches of Technology, are able to take the All India Dip-

Ioma by taking the course on a part-time basis, some of the Boards were of the view that due to a number of practical difficulties it may not be possible to arrange for instructions in the entire Diploma course on a part-time basis. In the opinion of these Boards attendance on a full-time basis for a period of at least one year was essential after acquiring the All-India Certificate to qualify for a Diploma. The Engineering and the Architecture Boards however recommended that facilities should be made available for going through the *entire* Diploma course on a part-time basis also. The Chemical Technology Board held the view that it was not possible to cover the course of the standard stipulated by the Co-ordinating Committee either wholly or in part in that manner. The detailed provisions made by the different Boards in their Regulations are being submitted later in the report together with the complete schemes for the All-India Courses.

The minimum academic qualification for admission to the All-India Diploma courses has been fixed for the time being at Intermediate Science or Pre-Engineering examination except in the cases of Commerce, Architecture and Applied Art where Matriculation has been prescribed for the same. The raising of the admission qualification to Higher Secondary Certificate is now under consideration of the Commerce Board and it is possible that the other two boards may consider it desirable to do the same.

For persons who for some reason or the other have had to interrupt their studies and have thus been unable to acquire the minimum academic qualification an entrance examination of a standard equivalent to that of the minimum qualification has been prescribed for purposes of admission.

In regard to the Certificate courses the Boards agreed *in toto* with the recommendations made by the Co-ordinating Committee. Provision is being made in the schemes for enabling the All India Certificate holders to study further up to the Diploma standard in a subject or subjects in which they are interested.

### 3. CURRICULA AND SYLLABUSES FOR THE ALL-INDIA COURSES

Considerable progress has been made by the Boards in working out details of Curricula and syllabuses for the All India Courses. In the light of the directives given by the Coordinating Committee in regard to the standard of Diploma and Certificate courses the Boards reviewed the content of the courses that were either already in existence or were recently framed by their committees.

The Architecture and the Commerce Boards were of the opinion that the courses already framed by them were of the required standard and no change was therefore necessary.

The Engineering Board framed new syllabuses for the All-India Diploma courses in Civil, Mechanical and in Electrical Engineering. The first year of the new course in Electrical Engineering has been introduced in the affiliated institutions. The Syllabus Committee of the Board is now engaged on the work connected with the framing of Certificate courses.

The Chemical Technology Board has decided on the total content for All-India courses in Industrial Chemistry, Electro-Chemistry, Textile Chemistry and Fuel Technology. A small committee is now engaged in apportioning the total syllabus to the different sessions comprising the course.

The Textile Technology Board has settled the curriculum for the Diploma course in Cotton, Silk and Woolen and Worsted Technology. The detailed syllabuses for the All India Diploma Courses in Rayon Technology and in Woolen and Worsted Technology have been completed by the Specialists concerned and will be considered by the Specialists Committee of the Board at its next meeting.

The Applied Art Board has accepted the recommendations of its Specialists Committee that there should be a general Art Course of three years' duration with

Painting and Sculpture as the main subjects and that it should be followed by a two years course in specialised branches of Art Education. The Board has accepted a draft syllabus for the general Art Course prepared by one of its members subject to certain additions in respect of general subjects such as History of Art, Sociology and Business Methods, and Costing. A small Committee has been appointed for the purpose of carrying out the above modifications to the general course and for framing courses in specialized subjects.

#### 4. PRACTICAL TRAINING.

Practical training for one year forms an integral part of the All India Diploma Courses in Engineering, Chemical Technology and Commerce. The Engineering Board considered the question of provision of facilities for practical training to enable the students to acquire the Diploma and expressed the view that provision of such facilities should be the joint responsibility of the affiliated institutions and the Government of India.

#### 5. RULES AND REGULATIONS FOR RECOGNITION OF INSTITUTIONS

Rules and Regulations governing recognition of institutions desirous of imparting instructions for the All India courses have been framed by the Commerce and the Architecture Boards. The other Boards are expected to take up the matter after they have completed framing of curricula, syllabuses etc.

With a view to ensuring expeditious disposal of applications for affiliation, it was proposed that each of the Boards might have a small "Affiliation Committee" which should consider all such applications duly endorsed by the Provincial or the State Governments concerned. The Affiliation Committees of the different Boards would frame supplementary rules in addition to the Rules and Regulations for Recognition of Institutions that may be laid down by the Council. These Committees shall either inspect the institutions or arrange for their inspection and make their recommendations to the Boards.

The Architecture and Commerce Boards have accepted the suggestion and have appointed Affiliation Committees. The Textile Board has formed a panel of names from which the Chairman is empowered to select the personnel for committees to deal with specific applications, and the Engineering Board has empowered the Chairman to appoint an appropriate committee for each application received by the Board.

#### 6. EXAMINATIONS

The following examinations were conducted during the period under report :—

- (i) All-India Intermediate Examination in Architecture.
- (ii) All-India Diploma Examination in Electrical Engineering.
- (iii) All-India Certificate Examination in Electrical Engineering.
- (iv) All-India Diploma Examination in Commerce.

The All-India Diploma Examination in Chemical Technology was scheduled to be held on the 23rd June 1947 but the students abstained from taking the examination.

With a view to ensuring smooth conduct of the examinations and also to maintaining the standards, Examination Committees have been appointed by the different Boards for holding the All-India Examinations. The functions assigned to the Examination Committees are :—

- (a) to fix the dates and centres for the examinations,
- (b) to appoint examiners from amongst the panel formed by the Board,

- (c) to make arrangements for the conduct of examinations,
- (d) to arrange for the moderation of question papers,
- (e) to consider the results and to declare the same,
- (f) to report to the Board on the conduct of examinations.

Arrangements are being made to hold the following Examinations in May 1948 :-

- (i) All India Diploma Examination in Electrical Engineering.
- (ii) All India Certificate Examination in Electrical Engineering.
- (iii) All India Diploma Examination in Chemical Technology.
- (iv) All India Diploma Examination in Commerce.
- (v) All India Certificate Examination in Commerce.
- (vi) All India Intermediate Examination in Architecture.

#### 7. DRAFT REGULATIONS FOR THE CONDUCT OF EXAMINATIONS

The Coordinating Committee at their meeting held on the 5th February 1947 had directed that the draft regulations for the conduct of examinations placed before them, be considered by the Boards in the first instance, before they were finalized by the Committee. The Coordinating Committee had specifically raised certain issues arising out of the draft for the consideration of the Boards.

All the Boards have considered the draft regulations except the Applied Art Board which decided to defer the consideration of this matter to a later date. The Boards do not favour the holding of supplementary examinations in addition to the annual principal examination. The Chemical Technology Board, however, recommends that a special examination be arranged every year for the compartmental candidates.

The draft regulations for the conduct of examinations have been examined by the five Boards and certain modifications have been suggested. Except in regard to certain minor regulations which may be different for different Boards, it is desirable that regulations should be uniform. The modifications to the general draft proposed by the different Boards are being placed before the Coordinating Committee for consideration at its next meeting.

#### 8. ARCHITECTURE BOARD—PROPOSAL TO PERMIT PRIVATE STUDENTS TO APPEAR FOR THE ALL INDIA EXAMINATIONS

At its meeting held on the 27th & 28th May 1947, at Bangalore the Coordinating Committee observed that attendance at part-time classes should be obligatory for all the candidates who might not be pursuing full-time instruction to enable themselves for taking the All India Examination in Architecture. The All India Board of Technical Studies in Architecture and Regional planning considered the question at great length at the meeting on the 29th July 1947, and passed the following resolution unanimously for consideration of the Council :-

“In view of the fact that the Indian Institute of Architects does not conduct any professional examination and that there is a total dearth of Architectural Schools in the country, the system of permitting private candidate to appear for the All India examinations in Architecture may be continued as an interim measure and that in places where Architectural Schools are available, the candidates shall be required to attend at least part-time courses to be eligible for appearing at the All India examination”.

### 9. APPLIED ART BOARD—NEW SCHEMES

A complete scheme for the establishment of a central school of printing was drawn up by Mr. H. K. Das, a member of the Specialists Committee of the Applied Art Board and was considered by the Committee at its meeting held on the 17th November, 1947. The Committee commended this excellent scheme to the Printers of India and appealed to them to come out with at least a part of the Finance required for its implication.

The Board appreciated that one school of this type would not be sufficient for the whole of India. As desired by the Board copies of the scheme have been sent to the Provincial Governments with the request that they may consider the question of establishment of such schools within their jurisdiction. The Board has invited their comments on the scheme also. No reply has so far been received.

### 10. RECOGNITION—ALL INDIA DIPLOMA IN ENGINEERING

The All India Diploma in Engineering has been recognised by the Institute of Engineers (India) as exempting from Parts 'A' & 'B' of their Associate Membership Examination.

The Governments of Orissa and the Travancore State have recognised the All India Diploma as equivalent to a Degree for the purpose of employment under them.

### 11. RECONSTITUTION OF THE ALL INDIA BOARDS OF TECHNICAL STUDIES

The term of office of the previous All India Boards of Technical Studies expired on the 31st December 1947 and the Boards were to be reconstituted with effect from the 1st January 1948. Accordingly various bodies and organisations comprising the different constituencies were requested to send in their nominations for the membership of the reconstituted Boards.

The Co-ordinating Committee at its meeting held on the 15th November 1947 while considering the question of reconstitution of the All India Boards of Technical Studies, authorised its Chairman to constitute the new Boards. Accordingly the panels of names formed as a result of the recommendations made by the different organisations, were forwarded to the Chairman for final selections. The approved personnel of the reconstituted Boards is given at Appendix 'A', to Annexure 7(a), item No. 6(b) of Agenda.



## Appendix I to Annexure IX

A note on the activities of the All India Boards of Technical Studies was considered by the Co-ordinating Committee of the All India Council for Technical Education at its meeting held at Bangalore on the 27th and 28th May 1947. The Committee made the following recommendations which were later endorsed by the Council at their meeting held on the 29th and 30th May 1947 :—

- (i) (a) The All India Diploma courses should be equivalent in standard to Degree courses in Universities but greater emphasis should be laid on the practical side.
- (b) While it is intended that the Diploma course should be taken on a full-time basis, the rules and regulations for the Diploma Examinations should be so framed that the holders of All India Certificates or equivalent qualifications, engaged in full or part-time occupations in appropriate branches of Technology, may be able to take the All India Diploma by taking the whole or part of the course on a part-time basis, if they so desire.
- (c) The minimum qualification for admission to the All India Diploma courses should therefore be fixed, keeping both the above considerations in view.
- (ii) (a) The All India Certificate courses, which are intended to afford opportunities to persons engaged in appropriate full-time or part-time occupations to improve themselves, should be equivalent in standard to that of foremanship courses.
- (b) The Certificate courses should therefore be so designed that these can be taken mainly on a part-time basis.
- (c) The minimum qualification for admission to such courses need not, therefore, be fixed rigidly except that a candidate should be required to prove his ability to follow the courses of instruction.
- (d) Provision should also be made for an All India Certificate holder to further specialize in his chosen subject or subjects with a view to obtaining a higher All India Certificate. The standard obtained should be equivalent to that prescribed for the subject or subjects which form a part of the All India Diploma course.
- (iii) Minimum requirements in respect of staff, equipment and class rooms, laboratories and workshops etc., should be prescribed for the different courses in relation to the standard of education proposed by the Boards and only such institutions granted affiliation to the Council as are able to fulfil the conditions thus prescribed.
- (iv) The Boards may consider the desirability of coopting outside experts as member if necessary for the purpose of drawing up detailed syllabuses in Humanities, such as Economics, Sociology, etc.
- (v) The Boards should complete the preparation of the All India Schemes and submit the same to the Coordinating Committee before the end of the year.

2. It may be recalled in this connection that the following functions were assigned to the Boards by the All India Council for Technical Education at its first meeting held on the 30th April, 1st and 2nd May, 1946.

- (1) To examine the existing regulations and syllabuses for certificates and diplomas in the different provinces and to frame definite regulations governing the grant of—
  - (a) All India Certificates.
  - (b) All India Diplomas.
  - (c) Higher Diploma of the Higher Technical Institutions.
- (2) To recommend what conditions should be prescribed for recognition of the different types of technical institutions taking into consideration—
  - (a) qualification, nature and number of teaching staff required and conditions of service.
  - (b) accommodation needed for teaching purposes and for staff and students.
  - (c) the nature and extent of the equipment required,
  - (d) facilities for practical, and
  - (e) such other conditions as may be required for the recognition of the institutions.
- (3) To recommend persons who should be appointed as inspectors and visitors to report on the conditions of the institutes with a view to the grant of initial recognition or continuation of recognition ;
- (4) To recommend persons who should be appointed as external examiners ;

- (5) To suggest names of assessors who will visit the centre, report on the soundness and standard of examinations;
- (6) To perform such other duties as may be necessary for the fulfilment of the above purpose or as may be prescribed by the Co-ordinating Committee.

3. It should also be mentioned that pending the formation of Regional Committees of the All-India Council for Technical Education, the Boards have been assigned the following additional functions :—

- (i) To appoint Boards of Examiners and to arrange for proper conduct of Examinations.
- (ii) To publish the results of Examinations.
- (iii) To submit to the Coordinating Committee comprehensive reports on the Examinations if any conducted by them.
- (iv) To make preliminary examination of any institution seeking recognition and to make recommendations thereon to the Coordinating Committee.

Item No. 6(c) of Agenda

## ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

### MEMORANDUM

The term of Office of the All India Boards of Technical Studies expired on the 31st December 1947, and the Boards were therefore to be reconstituted with effect from the 1st January 1948.

The various bodies and organisations connected with the different constituencies were requested to send in their nominations for membership of the Boards.

The All India Council for Technical Education at its first meeting held in 1946 laid down that in the case of organisations of Employers and Employees where there was more than one organisation concerned, each such recognised organisation would be requested to forward a name and from the panel thus formed the final selection would be made by the Co-ordinating Committee.

For the Employers Constituency two major Employers Organisations *viz.* Employers Federation of India, Bombay, and All India Organisation of Industrial Employers, New Delhi, were invited to suggest names for nomination on all the Boards. In addition to these bodies the Federation of Indian Chambers of Commerce and Industry, New Delhi, was asked to suggest a nominee for the All India Board of Technical Studies in Commerce and Business Administration only. The three Organisations named above expressed their inability to recommend names for reasons stated in their letters reproduced below.

As the question involved a change in the mode of constitution of the Boards as laid down by the Council, the Chairman of the Co-ordinating Committee who was authorised by the Committee at its meeting held on the 15th November 1947 to make final selections and to nominate specialists on behalf of the Co-ordinating Committee, desired that the matter be placed before the All India Council for Technical Education and their directive obtained in the matter.

1. COPY OF A LETTER DATED THE 12TH DECEMBER, 1947, FROM THE SECRETARY, THE EMPLOYERS FEDERATION OF INDIA, BOMBAY.

**SUBJECTS :—***All India Boards of Technical Studies—Reconstitution.*

I am directed to refer to your letter No. F.4-83/47-E.III(P), dated the 11th November wherein you have stated that it is proposed to reconstitute the six All-India Boards of Technical Studies with effect from 1st January 1948. I note that one seat has been allotted to the representative of Employers on each of the Boards, that several Employers' Organisations have been requested to submit names, and that, out of the panel of names thus received, the final selection of a representative would be made by the Co-ordinating Committee of the Council.

I understand that my Federation's nominees on the Council, *viz.*, Mr. G. V. Apte and Dr. K. Venkataraman, are already members of the All-India Board of Technical Studies in Engineering and Metallurgy, and the All India Board of Technical Studies in Chemical Engineering and Chemical Technology, respectively. My Federation presumes that they will continue to be members of the reconstituted Boards, and it is not, therefore, considered necessary to submit fresh nominations in connection with these Boards.

As regards the other Boards, my Federation does not wish to make any recommendations, having regard to the fact that, under the proposed procedure there is no certainty of our nominations being accepted.

2. COPY OF LETTER No. I.E. 919, DATED THE 16TH DECEMBER, 1947, FROM THE SECRETARY, ALL INDIA ORGANIZATION OF INDUSTRIAL EMPLOYEES, NEW DELHI.

SUBJECTS :—*All India Boards of Technical Studies—Reconstitution.*

I am directed to acknowledge receipt of your letter No. F.4-83/47-E.III (P), dated the 11th November 1947, inviting the Organisation to recommend the names of persons for nomination of the six Boards of Technical Studies, and to thank you for the same. I understand from para. 4 of your letter that other Employers' Organisations have also been addressed by you with a similar request, and out of the panel of names thus suggested by the various Employers' Organisations, the final selection will be made by the Co-ordinating Committee of the All-India Council for Technical Education. The Organisation, since its inception, has all along maintained that it is the most representative organisation of industrial national employers in India, and if Government are anxious to secure its association in the working of any of their plans in which industrial employers are interested, it should be given direct representation instead of inviting it to suggest certain names to be on the panel for selection by your Co-ordinating Committee. The Organisation, therefore, regrets its inability to accede to Government's request to suggest the names of any persons to constitute a panel for selection on any of the six Boards proposed to be constituted from 1st January 1948.

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3. COPY OF LETTER No. F.2450/691, DATED THE 16TH DECEMBER, 1947, FROM THE SECRETARY, FEDERATION OF INDIAN CHAMBERS OF COMMERCE AND INDUSTRY, NEW DELHI,

SUBJECTS :—*All India Boards of Technical Studies—Reconstitution.*

I am directed to acknowledge receipt of your letter No. F.86/47-E.III(P), dated the 13th November 1947, informing the Federation of the reconstitution of six All-India Boards of Technical Studies, and to thank you for the same. The Government have invited the Federation to recommend for nomination on the All-India Board of Technical Studies in Commerce and Business Administration names of persons who would form a panel along with recommendations from other organisations, and out of the panel thus formed the final selection will be made by the Co-ordinating Committee of the All-India Council for Technical Education. The Federation of Indian Chambers of Commerce and Industry is the central organisation to represent all Indian interests in trade, commerce and industry, and you will appreciate, if the Government want the Federation to be represented on any of the Boards, it should be given a definite representation and should not be asked to suggest names to form a panel.

Item No. 7 of Agenda

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

MEMORANDUM

*The organisation of Technical Education*

The following suggestions have been received from the Government of West Bengal :—

“The technicians that will be required in each main employment may be divided into the following five categories :

1. Research workers including the Professors of Engineering Colleges.
2. Chief Executives consisting of fully qualified Engineers and Professional teachers of Engineering Institutions.
3. Minor Executives consisting of Foreman, Charge men, Overseers and Demonstrators of the professional subjects in Engineering Colleges.
4. Skilled craftsmen.
5. Job workmen.

Therefore for the training of technicians of the above different categories it is obvious that we shall require the institutions of the following different types :—

- (a) Research Institutions.
- (b) Engineering Colleges.
- (c) Engineering Schools.
- (d) Junior Technical Schools.
- (e) Trade Job Schools.

The Research Institutions should be stated on an All-India basis so as to avoid duplication and overlapping, facilities being provided to all the Provinces by fixing the quota of admission and all the Provinces being asked to contribute *pro rata* for the maintenance of these institutions, the initial expenditure being borne by the Central Government.

As regards the institutions for the production of Engineers, every Province should have at least one such institution, its size depending on the industrial progress of the Province. These institutions instead of being of the Polytechnic type should be technological departments of Universities, i.e. Engineering Colleges. The impress of the University has a certain amount of dignifying aspect and adds lustre to the character of the individual which has a far greater sociological value than can be achieved by education in a Polytechnic. It is therefore desirable that these institutions for the training of qualified engineers should be Engineering Colleges under the Universities but adequate steps should be taken to remove the two important charges that are levelled against them, *viz.* their too academic character and absence of contact with men with whom the students will have eventually deal after the completion of their degree course. I.Sc. should be the admission qualification for the Engineering College and the course should be regulated so as to be covered in four years under the “Sandwich” system in which the practical training in the factories should be of at least three months’ total duration in a year. The bar which now exist for the admission of the alumni of the Engineering Schools should be removed and they should get one year’s remission so that they may be admitted to the B.E. Degree on completion of a three years’ course. The background of engineering knowledge which these students have acquired in three years in an Engineering School should be regarded as sufficient to outweigh the objection

about lack of possession of advanced scientific background which is acquired by a Matriculate in two years at the I.Sc. stage.

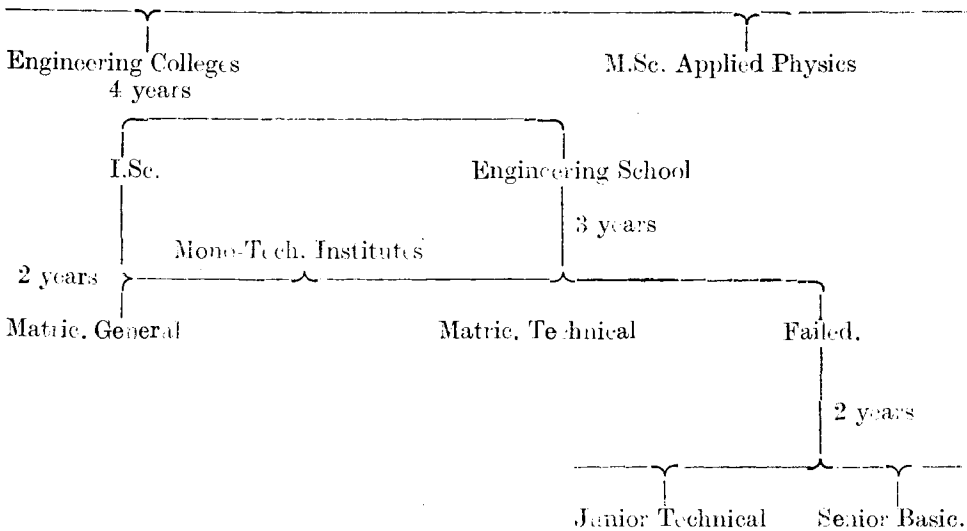
As regards the production of the personnel of the third category, *viz.*, Foremen, Chargemen, Supervisors, etc., three years' training in an Engineering School after Matriculation should be sufficient, more stress being given to the practical side so as to enable the products to acquire that amount of skill which will earn for them the admiration of the workers whose charge they will assume. The admission qualification for this group will be as indicated above, Matriculation (general or technical), preference being given to the Matriculation students who have followed the technical course which should be an alternative branch of study for the Matriculation Examination. The course of instruction should follow programmes of cultural instructions, of art, technique and administration together with Engineering subjects and practice in laboratories and workshops.

The fourth category will comprise the skilled craftsmen most of whom will not aspire to executive positions. These may be recruited from Technical High School pupils, passed or failed, or from the Senior Basic School pupils where they have mastered the rudiments of craftwork and put through a 2 years' course in Junior Technical Schools following a twofold programme of general knowledge and professional practice.

Below the four categories will come the great mass of semi-skilled and unskilled labour. No special academic training is required for them before entering employment apart from the knowledge of craft work they will have acquired in the schools. Factories employing large numbers of such semi-skilled workers are expected to run their own Trade Schools the establishment of which should not be the charge of Government.

The entire scheme of Technical Education as adumbrated above may be represented in the following genealogical form:—

*Technical Research Institutions*



In addition there is the necessity of various Mono-Technical Institutions, such as Textile Institute, Silk Institute, Art School, Tanning Institute, Ceramic Institute, Commercial Institute, etc. The admission to these will follow the Matriculation Examination.

Item No. 8 of Agenda

## ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

## MEMORANDUM

*Representation of the Technical Employee's Association, Central Public Works Department for Grant of Permission to Diploma-Holders in Service to appear for the Degree Examination.*

A representation was received from the Technical Employees' Association of the Central Public Works Department, that Diploma-holders, who had put in some service under Government, should be allowed to sit for the degree examinations irrespective of age and without being required to undergo the prescribed courses of studies at any institution. Their request was confined to (i) Architectural and (ii) Engineering courses only.

The Chief Engineer, Central Public Works Department, had consulted the Indian Institute of Architects and the Institution of Engineers (India) on the above subject, but both of them had expressed their inability to do anything in the matter. The Association had, therefore, requested that the Central Government should set up an Examination Board and prescribe a syllabus so that all the Diploma-holders in service could appear direct at the examination.

2. As the term of office of the All India Boards of Technical Studies expired on the 31st December, 1947, and the Boards were still in the process of re-constitution, it was not possible to ascertain the views of the two Boards concerned *viz.* the All India Board of Technical Studies in (i) Architecture and Regional Planning and (ii) Engineering and Metallurgy. The views of some leading members of the previous Board and other experts were however obtained and are summarised below.

3. *Architecture.*—All the experts were unanimous in their opinion that facilities should be given to such candidates to appear for the All India Examinations in Architecture conducted by the All India Board of Technical Studies in Architecture and Regional Planning. There were only three architectural schools in India. One at Bombay which admitted 59 students a year, the second at Baroda (Kalabhavan Technical Institute) which had almost been closed down for want of staff, and the third one at the Delhi Polytechnic which was recently started. The above three institutions were deemed totally insufficient to cater for the needs of the country to produce qualified architects. The dearth of Architectural Schools precluded many an ambitious young man to get the benefit of proper education and training and left no option but to start work as a tracer and a junior Draughtsman somewhere in an Architect's office. If architectural schools could not be started for want of qualified staff, then the next best thing was to give an opportunity to the persons already working in this line for several years to pass the All-India Examinations in Architecture conducted by the Board as private students.

The All India Board of Technical Studies in Architecture and Regional Planning has already provided for the examination of private candidates. An extract from the proceedings of the second meeting of the Board held in July 1947 is given below :—

“As an interim measure private candidates from cities in which there is no architectural school shall be permitted to sit for the Intermediate Examination on production of proof of having worked for four years in an Architect's office approved by the Board and on production of testimonies. Such candidates will have passed the elementary and preliminary examinations of the course before offering themselves for the Intermediate Examination.

To qualify for admission to the All India Diploma Examination in Architecture candidates shall have to work for three years in an Architect's office approved by the Board after passing the Intermediate Examination and on production of proof of having worked for that period and on production of testimonies.

4. *Engineering.*—The experts held very divergent views. One view was that private studies should be encouraged but before allowing such employees to take the final examination of the Board, their fitness for this stage should be tested either by means of some prescribed records of work and study and/or by their having passed graduated stages of examinations leading to the final stage.

There was a second school of thought who held the diametrically opposite view namely that admission qualifications and training of the two categories were entirely different and that all diploma holders inspite of their long service would not come up to the degree standard as they had been out of touch with the subjects required for the degree courses for a long time. It was suggested that diploma-holders should take one of the recognised examinations of City and Guilds of the Final Grade or the Associate Membership Examination of the Institution of Engineers (India). However, in the case of Institution of Engineers (India) the difficulty was that the person should be under 28 years of age (there was a proposal to raise the age limit to 35 years). The All India Council for Technical Education should not become an examining body only since it was chiefly concerned with laying down a suitable standard of studies for engineering institutions.

Yet another view was that the most important points in connection with University degree or All India Diploma courses were systematic instruction and broad-based education and it would not be right to award degrees or All India Diplomas to those who did not satisfy these. Likewise Diploma-holders could not pass the practical examinations without attending an institution and it would not be right to award university degrees or All India Diplomas without these practical examinations. The request of the diploma-holders indirectly brought out a deficiency in this country which should be removed. There were several leading technical colleges in England that offered through evening classes, opportunities for education of the university standard to capable and ambitious youngmen who could not afford full time university education. The evening classes of technical institutions in England had supplied to that country a large number of technical personnel of grit and determination than the University Graduates, and England was the richer for it. India had neglected this source of supply of higher technical personnel. All technical colleges in India should therefore have evening classes for capable and ambitious youngmen, who owing to their poverty could not afford a University Education. The Central Public Works Department should provide facilities to their employees to attend such classes.

Further the Provincial Governments should be advised to offer scholarships to a limited number of candidates who passed with distinction in the diploma examinations conducted by the respective provinces and make arrangements for their going through a full time course in the college under them."



Item No. 9 of Agenda

## ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

## MEMORANDUM

*Organisation of Apprenticeship Training—Training in Tele-Communications Engineering*

The Central Advisory Board of Education at its 14th meeting held in January 1948 decided to refer the question of Apprenticeship Training raised by the Madras Government to the All India Council for Technical Education in the first instance. The memorandum received from the Government of Madras on this subject is reproduced below.

*Memorandum by the Government of Madras*

"In these days when there is a dearth of technical men and the Government of India have appointed a Scientific Man-power Committee to survey the whole position, it will not be necessary to stress the need for the practical training of technical men. Although there is a clear necessity for a close and continuous co-operation and contact between institutions of technical training on the one hand and industry and trade on the other, yet past experience has proved again and again that except for a few enlightened managements, the majority of industrial and commercial firms are unwilling to take apprentices for training or promise but limited support to such a proposal. This is the considered opinion of the Technical and Industrial Education Committee appointed by the Government of Bengal who reported in 1945 that from the replies received to the questionnaires they sent it appeared that conditions had not changed much till then. Conditions may no doubt be expected to be different with the coming into existence of a Free India, but it is doubtful whether there has been a real change of heart in the matter from the point of view of commercial firms.

2. In this connection it should however be noted that even in England about 40 years ago industrial concerns were unwilling to take apprentices and charged heavy premia for taking them. But later on the value of apprenticeship as an asset to the country has come home to them and nowadays industrial concerns regularly take apprentices and pay them as much as 50 sh. per week for the work that the apprentices do when put in responsible charge.

3. Even in advanced America though in its own plants, such as Navy yards, arsenals and engraving establishments the Federal Government had been training apprentices for many years, it was only in 1937 that Congress decided by legislation that the training of all-round skilled workers is a matter of concern to all the people. Now the Apprentice Training Service of the Department of Labour arranges with the various commercial firms the training of apprentices for periods of a minimum of 4,000 hours (corresponding to 2 years) to a maximum of 8,000 hours (or 4 years) and the firms co-operate whole heartedly in this work. The apprentices trained in any particular firm are free to get employed in any other firm after the training though in most cases they get absorbed in the firm where they had the training.

4. The most remarkable fact that we have to face is that in India although Government departments, railway workshops and other public utilities, do take a limited number of apprentices, these apprentices have again and again complained that they are not put in responsible charge of the machinery. It is probable that the Officers directly in charge of such machinery are reluctant to put apprentices in

sole charge of such especially when they feel that such apprentices, not being paid any stipend even, may not feel the responsibility which they themselves have got to face if anything goes wrong. Secondly, most of the commercial firms in India are very small in comparison with the firms in the West and they cannot afford to waste the productive time of the small number of their machines on students who, they believe, have to be taught from the very beginning the need for minimising wastage of materials and the time of production and also for giving quality to the article produced by working to precision limits. That is why they consider in the words of the Bengal Report that "the sandwich system of training in which a batch of students are pushed in and taken out of factories from time to time for the purpose of giving practical training has a great dislocating effect" on their production. If, however, students have already been trained in educational institutions in methods of commercial production, the training given in firms is continuous and each of the trainees work in the factory for a sufficiently long time, the managements of such firms can put in such trainees for the work of the leave receive men whom they would otherwise have to engage.

5. In order that co-operation between business firms and educational institutions may be made greater, the Bengal Report has made a number of suggestions all of which will have to be put into practice.

6. The most important means of bringing about this desirable end is by legislation which is being increasingly taken up by the less advanced countries. One of the most important features of the legislation is the raising of a special tax in order to promote vocational education. In some of the countries this is what is being done. A tax of 1 per cent. is levied on wages and salaries paid in all industrial establishments which employ more than 5 wage-earning employees exclusive of the members of the family of the employer; this tax together with other sums set aside annually for this purpose in the National Budget together with donations and requests from private individuals or private firms etc. and the proceeds of all firms imposed are all collected quarterly and put into an Apprentice Training Fund. The apprenticeship tax is payable likewise by Government workshops and factories and by workshops and factories belonging to autonomous institutions or under the jurisdiction of a local board or municipality. Rules are set forth in the legislation that if proper arrangements are made by a firm for maintaining apprentice training courses, a certain portion of the tax levied is remitted.

7. A special executive body looks after the administration of the apprentice courses to meet the needs for the various trades and drawn by special committees under the approval of the Ministry of Education. It arranges also for the grant of stipends to the trainees and bonuses and subsidies towards the maintenance of apprenticeship courses organised by industrial institutions. It also looks after general welfare of all the apprentices by having under it an employment Bureau and inspectorate which have definite powers under the legislation for doing all that is necessary to see that the apprentices are trained properly and their social welfare is looked after.

8. From the above it will be seen that it is necessary for Government Departments both Provincial and Central, first to set an example by giving stipends to every apprentice trained in their own workshops or factories or similar places. It is regrettable to find that even after August the 15th, the Government of India regretted their inability to accept the proposal of the Provincial Government to give practical training facilities for the Electrical Communication Engineering students in the All India Radio—(vide letter from the Government of India.)

9. Secondly, if early industrialisation of the country is to become an accomplished fact, it would appear that the best way would be for the Government of India to deal with the question of Legislation expeditiously. However, it may also be considered whether the provinces also should not be given discretion to pass legislation so far as their sphere is concerned."

Item No. 12 of Agenda

## ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

## MEMORANDUM

At its first meeting held in April/May, 1946 the All India Council for Technical Education was unable to accede to the request for representation of the All India Manufacturers' Organisation, Bombay, as it was felt that the Council was already of a large size and that almost all members of the Organisation were also members of the different employers' Organisations which were already represented on the Council. The All India Manufacturers Organisation has asked for reconsideration of their request *vide* extract from their letter dated the 7th January 1948, reproduced below.

*Extract from a letter No. 79, dated the 7th January 1948, from the Secretary, All India Manufacturers' Organisation, Bombay, to the Secretary, Ministry of Education, Government of India, New Delhi.*

\* \* \* \* \*

Further I am directed by my Working Committee to communicate to you that they note with the deep regret that the Organization has not been given a representation on the Council in spite of our requests.

You are aware, Sir, that the All India Manufacturers' Organization, since its inception, is carrying on side by side with their propaganda for industrialization of the country, the need for technical and scientific education of our people. My Committee also met a couple of years ago the Chairman, Hon'ble Mr. R. K. Shanmukham Chetty, and members of the All India Industrial and Scientific Research Committee in Bombay and discussed with them our views on the subject of research and education. I may bring to your notice that we have got a separate Sub-Committee appointed for Scientific and Technical Research and Education. We have considered research schemes from individual industries as well as from technical committees of some of the Provincial Governments. Also we have prepared a scheme for the establishment of an Industrial Research Corporation. Our Committees consist apart from manufacturers also of technical men of repute who are today holding high places in some of the well-known heavy and key industries of the country. Recently our Delegation which visited foreign countries in 1946-47 have also studied the subject of Technical Education and have impressed on the necessity for Technical Education.

My working committee, therefore, request you to kindly reconsider your decision and co-opt a representative of our Organization to the said Council.

Item No. 15(a) of Agenda

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

MEMORANDUM

*Copy of a letter dated the 10th March, 1948 from Dr. Sir John Sargent to the Chairman of the All India Council for Technical Education.*

The British Council have been invited by the Prime Minister on behalf of the Government of India to start operations in this country and I have agreed to act temporarily as their representative for the next two or three months. During that period, I hope to create the nucleus of an organisation (including essential personal contacts) in the main centres so that the task of the Council's permanent representative, when he arrives, may be to that extent eased.

I feel, and I think you will agree, that if the Council is to work efficiently and to render both to this country and to Great Britain the services which are contemplated in its Charter, it should from the very beginning seek to enlist the interest of and establish cordial relations with those bodies which are concerned on an All India basis either with Education as a whole or with one of main branches of educational activity.

You will no doubt share the opinion which I have long held and expressed publicly that in an independent India, English will in all probability cease to occupy the place it has hitherto held both as an official language and as a means of communication between members of the educated classes all over India. At the same time, I know that many Indians have a real regard for the English language and for British culture generally and would welcome any effective steps for maintaining and strengthening cultural relations under the new circumstances. I believe that the British Council can give real and practical help in this connection.

I much regret that as the time at my disposal is so short, I am unlikely to have an opportunity of meeting you or the members of your Council and explaining in greater detail what the Council's aims are and seeking your advice as to the way or ways in which they can be pursued to the best advantage of India. Fortunately, however, I am known personally to most of your members and they will hardly need assuring how much their co-operation in the important task we have undertaken will be appreciated both by myself and by my more permanent successors.

Item No. 15(b) of Agenda

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

MEMORANDUM

*Provision of facilities for the training of technically qualified personnel in industrial and business organisations*

There are no facilities available in this country at present to provide training for technically qualified personnel in general business organisation so as to enable them to function as competent executives. The management of industry, both at the directional and administrative levels is at present left to financiers and other persons and it is believed that with the proposed training in industrial and business organization, production and management can be more efficient.

In order to create a class of people who by virtue of their all round training can set up as independent small producers or assist in the more efficient management of large scale industry or be available for employment in state managed concerns, it is necessary to organise suitable training in general industrial and business organisation.

The details of such training and the ways and means of providing for such training may be investigated. It would be possible to organize such training in cooperation with a Central Institute like the staff College for Administrative Service, Delhi, or with the appropriate departments of Universities.

Item No. 15(c) of Agenda

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

MEMORANDUM

*Training facilities for Technical Personnel for employment under Port Authorities.*

Major Port Administrations of Calcutta, Bombay, Madras and Cochin have recently brought to notice the difficulty of getting certain technical port personnel with Marine qualifications *e.g.*:-

- (i) Civil Engineers.
- (ii) Marine Engineers with first class B.O.T. or equivalent certificates.
- (iii) Shipwrights.
- (iv) Blacksmith and Boiler Maker Foreman.
- (v) Dredge Masters.
- (vi) Shipwright Foremen.
- (vii) Foreman Divers (Salvage).
- (viii) Loco Foremen.

2. There is considerable dearth in India of such personnel, as is borne out by the very poor response to advertisements issued by Port Authorities, and the Federal Public Service Commission. The policy of Government of India recently laid down is to appoint non-Indians only under very exceptional circumstances, and this policy applies also to employment under the Major Port Trusts, which are local bodies under their control, but in view of the lack of suitable qualified Indians, the Port Trusts have had to appoint or retain in their service a large number of non-Indians in technical posts under their control. At present there are practically no facilities in India for such education, and the scope for affording such training at the Major Ports is extremely limited, although the Calcutta Port Commissioners have a scheme for training their own shipwright apprentices, and the Bombay Port Trust are taking steps to train Indians as Dredger Masters, Foremen Divers and Shipwright Foremen, (Dry Dock).

3. It is very essential that facilities should be provided for technical education of these classes of personnel, in order that suitable candidates may be forthcoming as and when required.

Item No. 15(d) of Agenda

### ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

*Copy of a letter No. 977(E)/XVIII-219/44, dated the 6th April 1948 from the Deputy Secretary to the Government of the United Provinces, Industries (A) Department, to the Secretary, All India Council for Technical Education, New Delhi.*

With reference to your letter No. F.1-5/48-E.III(P) dated February 13, 1948, I am directed to say that the United Provinces Government desire the inclusion of the following items in the agenda for the third meeting of the All India Council for Technical Education.

(1) *Necessity of appointing representatives of the Provincial Government on the Co-ordinating Committee.*—The procedure of work followed by the Council is that the Co-ordinating Committee, which meets a day before the meeting of the Council, first examines the Agenda and formulates its own resolutions or definite views on the various items and then places its resolutions before the full meeting of the Council for ratification or acceptance after such modification as the Council may like to make. In actual practice, therefore, it is the Co-ordinating Committee which exercises real power and influence. The United Provinces Government is not represented on the Co-ordinating Committee. The United Provinces Government have a large number of Technical Institutions. They would, like, therefore, to be represented on the Co-ordinating Committee so that they may be associated at every stage with the activities of the All India Council for Technical Education.

(2) *The location of Northern Higher Technical Institution at Kanpur or Roorkee or both.*—Since the last meeting of the All India Council for Technical Education was held at Bangalore, the position in regard to constitutional changes has been clarified after August 15, 1947. In their letter No. 1170/XXIII/22TC/46, dated August 13, 1946, the Government suggested that the Harcourt Butler Institute at Kanpur should form a nucleus for imparting training in subjects other than Engineering. The U. P. Government would again press for the location of an institute for the higher technical education at Kanpur. Kanpur has already got (i) Harcourt Butler Technological Institute in the Chemical Technology of Oils and General Chemical Research and (ii) Government Central Textile Institute for Textile Technology (carding, weaving and spinning) and Chemical Technology of Textiles (dyeing, printing and finishing). The Sugar Industry is also represented at Kanpur by the Indian Institute of Sugar Technology. Thus Kanpur provides facilities for training in the three major industries of the province and can be developed into a centre of a very high grade institution if adequate funds are made available.

(3) *Establishment of Regional Committees.*—In order that the United Provinces Governments first class institutions may be organized on lines of All India Diploma Courses and Certificates in the various subjects and may develop Post Diploma courses, it would be advisable to have Regional Committees appointed on which all these institutions of the Provincial Government are represented. The following are the institutions which should be brought to the notice of the All India Council for Technical Education.

- (1) Harcourt Butler Technological Institute (already in their notice).
- (2) Government Central Textile Institute, Kanpur.
- (3) Government Technical Institute, Gorakhpur.
- (4) Government Technical Institute, Lucknow.
- (5) Government Technical Institute, Jhansi.
- (6) Government School of Arts and Crafts, Lucknow.

The development of these institutions on large scale is already under the consideration of this Government. Some of them have recognized Diploma Courses for full Technological subject equivalent to degrees. In the interest of the development it seems necessary to give them a representation on the Regional Committees to be formed.

(4) *Aid to existing institutions.*—The Provincial Government Institutions appear to have been excluded for purposes of aid by the Committee which has considered only non-official institutions *viz.*, Banaras and Aligarh Colleges and Dayaalbagh Engineering College. The latter are also in receipt of grants from the United Provinces Government. There appears to be no justification for excluding Government institutions for grants and aid as some of the United Provinces Government's institutions, like the Harcourt Butler Technological Institute and the Central Textile Institute, Kanpur serve not only the United Provinces but various parts of the country from where students are attracted to these institutions.

(5) *Classification of Technical Institutions to be on the basis of their courses rather than on academic standard of admission or academic affiliation to bodies such as universities.*—The All India Council of Technical Education has classified institutions in their Draft Interim Report on the Survey of Technical Institutions, into various grades according to academic standards of admission or academic affiliation to bodies like Universities. This needs reconsideration. Several of the diploma courses in the United Provinces Government Technical Institutions are strong in theory, and in practice, according to the conditions required in the province or in the country. Their comparison with foreign courses would not therefore be fair. If the present classification is enforced such institutions will be placed under a handicap and it should, therefore, be the aim of the All India Council of Technical Education not to perpetuate one of the defects from which the technical education has suffered so far. The classification may not, therefore, be based on academic standard of admission *viz.* Intermediate or Degree as is done in the report and may be based on merits of the courses according to the needs of the country.



Item No. 15(e) of Agenda

## ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

*Copy of a letter No. 2038-E, dated the 5th April 1948 from the Secretary to the Government of Bihar, Department of Education to the Secretary, All India Council for Technical Education, New Delhi.*

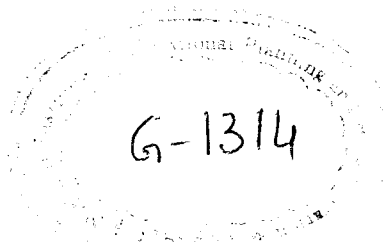
With reference to your letter No. F.1-5/48-E.III(P), dated the 13th February 1948, I am directed to suggest the following items for inclusion in the agenda for the meeting :—

- (i) Immediate steps be taken to establish one of the four proposed zonal Higher Technical Institutes mentioned in the Government of India, Department of Education's letter No. F.1-13/46-E.III (P), dated nil, in Bihar which has various natural facilities for Industrial development.
- (ii) In order to enable adequate exploitation of the educative possibilities of the work in which the trainees are engaged in the Industrial and Technical Schools and for facilitating full development of the personality of the pupils attending them both as individuals and social beings, industrial and technical schools should be placed under the co-ordinated and joint control of the Education and Industries Departments.
- (iii) The All India Council for Technical Education in collaboration with the Central Advisory Board of Education or the Hindustani Talimi Sangh or both should formulate proposals for diversion of pupils at appropriate stages from senior Basic and Post-basic schools to Technical schools and so frame their curricula that pupils of basic and post-basic schools having the required aptitude may find the transition from such schools to Technical Schools easy.
- (iv) In view of the recommendation of the Central Advisory Board of Education contained in the Sargent Report that technical education must include commercial education and Art in relation to Industry, commerce teaching in colleges and schools which is purely under the Education Department, now, be placed under the joint control of the Education and Industries Departments.

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