

necessary to defray the charges which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Other Civil Works'".

**DEMAND No. 98—STATIONERY AND PRINTING**

"That a sum not exceeding Rs. 7,12,63,000 be granted to the President to complete the sum necessary to defray the charges which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Stationery and Printing'".

**DEMAND No. 99—MISCELLANEOUS DEPARTMENTS AND EXPENDITURE UNDER THE MINISTRY OF WORKS, HOUSING AND SUPPLY**

"That a sum not exceeding Rs. 1,09,05,000 be granted to the President to complete the sum necessary to defray the charges which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Miscellaneous Departments and Expenditure under the Ministry of Works, Housing and Supply'".

**DEMAND No. 136—DELHI CAPITAL OUTLAY**

"That a sum not exceeding Rs. 6,71,17,000 be granted to the President to complete the sum necessary to defray the charges which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Delhi Capital Outlay'".

**DEMAND No. 137—CAPITAL OUTLAY ON BUILDINGS**

"That a sum not exceeding Rs. 7,53,92,000 be granted to the

President to complete the sum necessary to defray the charges which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Capital Outlay on Buildings'".

**DEMAND No. 138—OTHER CAPITAL OUTLAY OF THE MINISTRY OF WORKS, HOUSING AND SUPPLY**

"That a sum not exceeding Rs. 6,55,39,000 be granted to the President to complete the sum necessary to defray the charges which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Other Capital Outlay of the Ministry of Works, Housing and Supply'".

**MINISTRY OF SCIENTIFIC RESEARCH AND CULTURAL AFFAIRS**

Mr. Deputy-Speaker: The House will now take up discussion on Demands Nos. 74 to 80 and 129 relating to the Ministry of Scientific Research and Cultural Affairs for which three hours have been allotted.

Hon. Members desirous of moving cut motions may hand over at the Table within 15 minutes the numbers of the selected cut motions I shall treat them as moved, if the Members in whose names those cut motions stand are present in the House and the motions are otherwise in order. Shri Panigrahi. As the overall time is only three hours, I request the hon. Members not to take more than 15 minutes.

**DEMAND No. 74—MINISTRY OF SCIENTIFIC RESEARCH AND CULTURAL AFFAIRS**

Mr. Deputy-Speaker: Motion moved:

"That a sum not exceeding Rs. 26,88,000 be granted to the President to complete the sum necessary to defray the charges

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which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Ministry of Scientific Research and Cultural Affairs'".

DEMAND NO. 75—ARCHAEOLOGY

**Mr. Deputy-Speaker:** Motion moved:

"That a sum not exceeding Rs. 98,13,000 be granted to the President to complete the sum necessary to defray the charges which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Archaeology'".

DEMAND NO. 76—SURVEY OF INDIA

**Mr. Deputy-Speaker:** Motion moved:

"That a sum not exceeding Rs. 1,47,71,000 be granted to the President to complete the sum necessary to defray the charges which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Survey of India'".

DEMAND NO. 77—BOTANICAL SURVEY

**Mr. Deputy-Speaker:** Motion moved:

"That a sum not exceeding Rs. 14,07,000 be granted to the President to complete the sum necessary to defray the charges which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Botanical Survey'".

DEMAND NO. 78—ZOOLOGICAL SURVEY

**Mr. Deputy-Speaker:** Motion moved:

"That a sum not exceeding Rs. 10,40,000 be granted to the President to complete the sum necessary to defray the charges which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Zoological Survey'".

DEMAND NO. 79—SCIENTIFIC RESEARCH AND CULTURAL AFFAIRS

**Mr. Deputy-Speaker:** Motion moved:

"That a sum not exceeding Rs. 11,98,06,000 be granted to the President to complete the sum necessary to defray the charges which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Scientific Research and Cultural Affairs'".

DEMAND NO. 80—MISCELLANEOUS DEPARTMENTS AND EXPENDITURE UNDER THE MINISTRY OF SCIENTIFIC RESEARCH AND CULTURAL AFFAIRS

**Mr. Deputy-Speaker:** Motion moved:

"That a sum not exceeding Rs. 33,79,000 be granted to the President to complete the sum necessary to defray the charges which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Miscellaneous Departments and Expenditure under the Ministry of Scientific Research and Cultural Affairs'".

DEMAND NO. 129—CAPITAL OUTLAY OF THE MINISTRY OF SCIENTIFIC RESEARCH AND CULTURAL AFFAIRS

**Mr. Deputy-Speaker:** Motion moved:

"That a sum not exceeding Rs. 2,18,03,000 be granted to the President to complete the sum necessary to defray the charges which will come in course of payment during the year ending the 31st day of March, 1960, in respect of 'Capital Outlay of the Ministry of Scientific Research and Cultural Affairs'".

The Minister of Scientific Research and Cultural Affairs (Shri Humayun Kabir): Before the hon. Member begins his speech, I would like to make an opening statement.

**Mr. Deputy-Speaker: Yes.**

**Shri Panigrahi (Puri):** Then the time-limit for his reply may be restricted. After all, the time allotted is only three hours.

**Mr. Deputy-Speaker:** How long would the hon. Minister like to take?

**Shri Humayun Kabir:** Perhaps about 20 minutes for the opening statement and probably half an hour to forty minutes for the reply.

**Shri V. P. Nayar (Quilon):** It is out of all proportion to the Demand.

**Shri Humayun Kabir:** I will not reply in that case.

**Shri Tangamani:** We would like to hear the Minister.

**Shri Humayun Kabir:** Mr. Deputy-Speaker, Sir, in asking for the Parliament's approval for the demands presented on behalf of the Ministry of Scientific Research and Cultural Affairs, I would like to report to the House some of the major achievements of the Ministry since its formation as well as briefly refer to some of the major programmes of the year which starts today. I should also like to place before the Parliament the difficulties we have faced and seek its advice and guidance in overcoming them.

It will be recalled that the Ministry of Scientific Research and Cultural Affairs was created by a Presidential Order of 5th April, 1958 and began to function as such from 10th April, 1958. The division of budget allocations between this Ministry and the Ministry of Education could not, however, be completed immediately and the Presidential Order became effective in financial matters only from 1st July, 1958. The account I have to give is therefore for a period of about 11 months out of which two months were taken in sorting out and setting our affairs in order.

Hon. Members may remember that the work of the Ministry is organised in three broad departments and

the Council of Scientific and Industrial Research which functions as an autonomous body with the Prime Minister as its President. The first department deals with cultural activities and includes important fields like archaeology, development of modern Indian languages, Indology, assistance for various cultural activities within the country and promotion of cultural exchanges and friendly relations with other countries of the world. A second department is concerned with some of our great scientific services and surveys and is also interested in the dissemination of scientific knowledge and growth of scientific temper among the people of the country.

Finally, there is the department of technical education which seeks to assess and meet the requirements of technical manpower at various levels. I am happy to report to Parliament that there are some important achievements in every department during the year which ended yesterday.

For the Ministry as a whole, perhaps the outstanding event was the formulation and adoption of the Scientific Policy Resolution, which was moved in this House by the Prime Minister. The Department of Scientific Research and Surveys organised in July 1958 a conference of scientists and educationists to frame recommendations for giving effect to that policy. Among action already taken may be mentioned the introduction of better scales of pay for scientific and technical personnel and a scheme of greater encouragement by special merit promotions on the basis of distinctive work.

The House will be glad to hear that Prof. S. P. Chatterjee, Director of the National Atlas Organisation, was awarded the Murchison Prize of the Royal Geographical Society for his work on the Hindi edition of the National Atlas.

A science and technology pavilion was organised in India 1958 Exhibition and I am sure many hon. Members have visited it. They will be

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glad to hear that the pavilion obtained the gold medal for presentation of themes in science and technology.

Members will also be pleased to hear that this Ministry participated in the Indian Chou Oyu exhibition when two of our scientists, a botanist and a zoologist, have for the first time gone to heights of over 20,000 feet. Members will also be glad to hear that as against 18 Vijnan Mandirs with which we started in July 1958, we have today, 28 Vijnan Mandirs already established. Sites have been approved for another ten and thus, 38 Vijnan Mandirs will be in position very soon.

Before I pass on to the work of the C.S.I.R., I would like to mention the appointment of Prof. S. N. Bose and Dr. K. S. Krishnan as National Professors during the current year. This mark of recognition to two of our outstanding scientists and freeing them from administrative work and financial worries to enable them to devote themselves wholly to research will, I am sure, serve as an encouragement and incentive to many of our younger scientists in various fields.

The number of National Laboratories has increased from 18 to 20 by the establishment of the Central Mechanical Engineering Research Institute, Durgapur and the Central Public Health Engineering Research Institute, Nagpur. The Regional Research Laboratory at Jammu has also been taken over by the Council. In addition, we approved during the year the establishment of the Central India Medicinal Plants Organisation and the Birla Industrial and Technological Museum, Calcutta.

The existing National Laboratories have continued to do valuable work and there have been some developments for which we can reasonably take pride. Notable among them are the production of optical glass and

nickel-free coinage alloys. I must also mention the erection of a low shaft pilot plant for the production of pig iron using non-coking coals.

A number of chemical, engineering, ceramic, leather and other industries have been established or developed as a result of the work of the Laboratories. Many processes are given free to industry and where a royalty is charged for the use of a licence, it is a nominal fee. Generally, it is only about 1½, 2 or 2½ per cent. Even then, the Council has earned about Rs. 1½ lakhs as royalty fees from licences. The annual income of such industries would be a crore or more.

The savings in foreign exchange as a result of the work of the National Laboratories cannot be given in exact figures, but hon. Members will have some idea if I refer to only one item of the work of the Central Fuel Research Institute. It has planned a number of coal washeries in the public sector at a total cost of about Rs. 14 crores or more. If we had to seek the advice of foreign consultants, for setting up these washeries, the consultation fees alone would have been of the order of Rs. 40 lakhs to Rs. 50 lakhs and most, if not all of it, would mean foreign exchange.

Even more important for our industrial development is the success achieved in the blending of non-coking coals for metallurgical purposes. Hon. Members know that our reserves of iron ore are almost unlimited and distributed widely in different parts of the country but lack of suitable metallurgical coal has till now been a major bottleneck and a cause of anxiety for the future. We can now confidently hope that the work of the Institute at Jaisalgora and the Institute at Hyderabad will help us largely in over-coming this difficulty.

The Council has also created a Scientists' Pool for temporary placement of highly qualified Indian scientists and technologists who will

be kept on the Council's payroll and given facilities of work till they can be permanently employed.

In the Department of Cultural Activities, perhaps the major event is the taking over the Salar Jung Museum at Hyderabad and a marked acceleration in our construction programme. The National Museum building is expected to be ready by August.

Members will also be glad to hear that the fireproof building for the invaluable collection of Zoological specimens has at least been taken in hand. Under contemplation for more than 30 years, its foundation stone was laid by the Vice-President of India in December 1958.

The foundation stone of Azad Bhavan, permanent headquarters of the Indian Council for Cultural Relations was laid by the President in November 1958 and of the Nagarjumasagar Museum in January this year.

I would like to compliment the Department of Archaeology for work of high quality, which has won unstinted praise from eminent foreign scholars. I am sure hon. Members will be glad to hear that some of the recognized authorities in this field have described our Department of Archaeology as among the three of four best Archaeological organisations of the world.

In the field of External Cultural relations, the outstanding event is the collection for the Villa Hugel Exhibition entitled "Indian Art of Five Thousand Years". This exhibition may well be a major event in the history of cultural exchanges between India and Europe. I should also like to mention the visit to India of the Kandyan Dancers and the Russian Puppet Theatre. We tried for the first time to give rural areas a glimpse of culture abroad by taking the Kandyan Dancers to a village 17 miles from Delhi. The Puppet Theatre gave

their performance in a number of different cities and proved equally popular everywhere. Organisation of the itinerary for the Theatre was a difficult and complicated task and hon. Members will be pleased to hear that the visitors expressed the highest appreciation of the efficiency and friendliness of our officers.

17.23 hrs.

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Hon. Members will also be pleased to hear that during the current year we have given much greater publicity to scholarships and fellowships offered by foreign countries. In the past, these were confined to persons sponsored by their actual or prospective employers, but we have recently removed this condition about sponsorship. It will thus be possible for brilliant young people to take advantage of training abroad on the basis of their merit and qualifications. The pace of selection has also been accelerated and the result is that more scholarships are now being utilized.

Hon. Members will also be glad to hear that the programme for the development of modern Indian languages has now been taken in hand in right earnest. For the first time during the Second Plan period, the bulk of the money earmarked for the purpose has been spent (Rs. 2.4 lakhs out of Rs. 2.8 lakhs). The first issue of Sanskrit, Hindi edition of the Cultural Forum, is expected to appear during the current month.

I now come to the Department of Technical Education where perhaps we have made the greatest progress in recent years. The outstanding event during the year was the establishment in July of the Indian Institute of Technology, Bombay, in temporary accommodation which was available through the courtesy of the Silk and Art Silk Mills Research Association. The foundation stone of the main building of the Institute was laid by the Prime Minister in March

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this year and we are expecting that under-graduate classes will move into their permanent quarters by July-August.

The Institute's part-time refresher courses in Machine Tool Engineering and Metallurgy have attracted keen interest from the industry and it is proposed to develop them on a large scale.

During the year under review, we have been able to take a final decision on the proposal to establish 8 Regional Colleges and 27 Polytechnics as well as a new Engineering College at Delhi.

In addition, there was considerable expansion of facilities in 19 engineering colleges and 41 polytechnics already in existence. Hon. Members will get some idea of the rate of expansion in engineering colleges from the following figures. I am giving the admissions only in the first year of the engineering colleges and the diploma institutions. In 1956, the admissions were 6,632 in degree colleges and 10,242 in diploma institutions. In 1957, the admissions in degree colleges increased from 6,632 to 9,780.

Shri Panigrahi: Only in Delhi you mean or in the whole of India?

Shri Humayun Kabir: Of course whole of India. How can there be 9,780 admissions only in Delhi! The admissions in diploma institutions in 1957 were 16,150. In 1958, the admissions to the degree colleges were 11,100 and to the diploma institutions 19,560. In other words, between 1956 and 1958, admissions have been almost doubled at both the degree and the diploma level.

Under the open door policy of the establishment of engineering colleges and polytechnics, the Government of India will help by finding the balance, if any agency in conjunction with the

State Government concerned can find 50 per cent of the recurring cost and 80 per cent of the non-recurring cost. 3 engineering colleges and 14 polytechnics were started during the year as a result of this policy. In addition, two more engineering colleges and 14 polytechnics have been established during the year by the Central and the State Governments. In other words, there have been five engineering colleges and 25 polytechnics established during the current year. I am sure that the House will appreciate that this is a fairly rapid rate of progress. I am particularly happy at the increase in the number of polytechnics and it is my hope that every district in India will have its own polytechnic before long.

Hon. Members will again be glad to hear that in order to encourage the development of post-graduate and specialised courses, we have, during the current year, liberalised the conditions of grants-in-aid to State Governments or approved State Associations. Formerly, we assisted such courses by providing 75 per cent of the non-recurring and 66-2/3 per cent of the recurring expenditure. We have now decided to give cent per cent assistant for both recurring and non-recurring expenses in respect of post-graduate and other research courses.

Before independence, there were hardly any post-graduate or research courses in engineering or technology in the whole of India. You will be glad to hear, Sir, that we have at present about four hundred students in such courses in 21 institutions distributed in all the regions of the country. Out of the 89 courses sanctioned, about 70 have already been started.

I am particularly happy to announce that the question of improvement of salary scales of teachers in technological institutions which has been hanging fire for a number of years has been at last settled. After taking into consideration the recommendations

of the All India Council for Technical Education, it has been decided to introduce the scale of Rs. 350-850 for Lecturers and Rs. 600-1150 for Assistant Professors in engineering and technological colleges. We are informing the State Governments that the Government of India will for the next five years bear the entire burden for the additional expenditure involved. One of our greatest difficulties till now has been the shortage of suitable teaching personnel. With this new decision, it is my hope that this difficulty will now be overcome.

I shall now turn to our programme for the next year and again report briefly on some of the major projects we have in view. In the Department of Scientific Research and Surveys, I would place the greatest importance to the proposal to establish one or more schools for advanced research in theoretical physics. As a preliminary step, we have decided to hold a Summer School of Theoretical Physics during the next summer holidays where we propose to invite brilliant young teachers from Indian Universities to discuss some of the latest developments in theoretical physics under the guidance of half a dozen of the most distinguished Indian physicists of to-day. I believe that this will be the first summer school of the type ever held in India though such summer schools are well known and are greatly appreciated in countries of the West. I for one would be satisfied if before the end of the Second Plan period we succeed in establishing two to three such schools of advanced theoretical physics in the country and I am confident that if this is done a new chapter will open in the development of physics in this country. Another important programme is the publication of the English edition of the National Atlas which in some respects will be perhaps the first at least of its kind in the whole first atlas of its kind in the whole world. A good deal of work has been done, and the first set of maps will be printed during the next few months.

We are also taking up a fairly ambitious programme of translations of popular science books into the major Indian languages. The Department of Culture and the Department of Scientific Research will co-operate to bring out quarterly popular science digests during 1959-60. Special mention may be made of the proposal to translate *The World We live in* and the nine volumes of the *Wonder World of Science*.

I have referred earlier to the Vigyan Mandirs of which about 38 will be in position within a few months. It is my hope to have at least one Vigyan Mandir in each district of India during the next two or three years. I aim at reaching a target of 80 to 100 Vigyan Mandirs before the end of the current financial year. The Vigyan Mandirs are intended to popularise science and help to create a scientific temper in rural areas. The same service for the entire country, and that on a more ambitious scale, will be rendered by the proposal to establish a Central Library of science reading material, a Central Library of Science films and film-strips, a Central Science Museum and a Central Science Club.

The Council of Scientific and Industrial Research will be concerned during the year mainly with further development of work already taken in hand. The new National Laboratories which were started during 1958-59 will begin to function before the end of 1959-60. The Central Glass and Ceramics Research Institute will undertake the production of 5 tons of optical glass per year. A supersonic Wind Tunnel for Aeronautical Research will be set up at Bangalore.

Another important development will be the establishment of regional stations of the Central Food Technological Research Institute, Mysore, at Delhi, Poona, Gauhati, Kodur, Simla and Saharanpur with four sub-regional stations at Jadavpur, Nagpur, Trichur and Coorg.

In the Department of Culture, we propose to give additional assistance

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and functions to the three National Academies. They have till now suffered from lack of a permanent headquarters, but I am happy to report that we have now decided to house all the academies in Rabindra Bhawan, named after the poet; and its foundation-stone will be laid by the President of India on 14th April, 1959.

Among other activities of the Department, I propose to give the greatest attention and impetus to the development of modern Indian languages. I am sure that the whole House will agree that our aim must be to make accessible to the ordinary man and woman throughout India the treasures of our cultural heritage as well as the findings of modern science and technology in his or her own language. There can be no real basis for the democratic civilisation which we are seeking to build up in this country till all our major languages are developed to an extent where they can compare with the languages of the Western world. I know that they have the potentiality and our writers have the capacity, but it is a programme that must necessarily extend over many years, and should, in my view, in the first stages, concentrate on translations of books of science and culture from foreign languages as well as from one another *inter se*. I am also happy to report that we have recently initiated action for internal cultural exchanges within the country, so that people of one State may know something about the literature, song, music and dance and other artistic activities of people of other States.

Hon. Members will be glad to hear that the work of excavation at Nagarjunakonda will be completed during this year. I share the grief of many friends in India and abroad that this valuable site cannot be saved, but it is some consolation that the site has been thoroughly excavated and almost all the important monuments and re-

lics will be preserved in the museum or on the grounds of the hill-top island which will remain submerged.

For the Department of Technical Education, our most important programme for the next year is the establishment of the Indian Institute of Technology, Madras. It is my hope that this institute will start functioning in July, 1959. We shall also go ahead with the preparatory work for the Indian Institute of Technology, Kanpur, so that this last of the four higher technological institutes recommended by the Sarkar Committee can start functioning in July, 1960.

Hon. Members will be glad to hear that arrangements have been made for the training of teachers for technical institutions within the country. We have sent during 1958-59 a number of young engineering and technological graduates to the USA, USSR, and West Germany for advanced work. During 1959-60, the Indian Institute of Technology, Kharagpur, the Bengal Engineering College, Sibpur, the College of Engineering, Poona, the College of Engineering, Guindy, and the Roorkee University, Roorkee, will offer necessary facilities in this respect. We are also creating 75 teaching fellowships to attract brilliant young men to the teaching profession.

Before I conclude, I would like to place before Parliament some of the major difficulties we have to face. There is the difficulty about foreign exchange which has restricted the import of specialised equipment for advanced work. We have tried to overcome it partially by encouraging our National Laboratories to manufacture as much of their equipment as possible, and also by appointing a committee with the Director-General, CSIR, a chairman, to propose measures for accelerating the development of the scientific instruments industry. Nevertheless, we have to admit that the industry is not yet sufficiently developed to supply all the equipment



that we require. In this situation, we can only appeal to our scientists and our teachers to make the fullest possible use of whatever is available and in other cases to improvise.

Another difficulty is in the recruitment of qualified technical personnel for specialised jobs. Many key posts cannot be filled in time or cannot be filled adequately. This is an inheritance of the past, and I feel fairly confident that over the next five years this difficulty will be largely overcome. It has been felt particularly in respect of teachers in technical institutions, but the new salary scales which we have just approved and the institution of teaching fellowships should go a long way in overcoming the difficulty.

There is one other general difficulty which concerns not only my Ministry but perhaps all spheres of governmental activity, and where Parliament can render the greatest possible help to the progress of our Plans. Democratic Government must, from the nature of the case, be somewhat complicated, as consultations at many levels among many persons are necessary before a decision can be taken. Some are inclined to say that democracies move slowly and are less efficient because of this. I do not agree, and I think that the testimony of history proves that democracies have been more efficient than any other form of government. What, however, is essential is that the individual must have freedom and initiative and also appreciation for good work. Trust is essential to create an atmosphere of progress and optimism, but unfortunately this is sometimes lacking in our public life. Any one who experiments and innovates may make mistakes—not only may, but is bound to make mistakes—but on the other hand, there can be no progress without such experiments and innovations. If one carries out mere routine duties, one makes no mistakes, but on the other hand, neither is there any achievement. All men are liable to make mistakes, but so long as the mistake is *bona fide* and occurs in the course

of an attempt to serve the nation, parliament should give the necessary encouragement and protection. Many officers suffer from fear of criticism in case something goes wrong, and sometimes the criticism is long after the event and as a result of hind sight I can fully appreciate that a democracy must be vigilant, and laws and regulations enforced as strictly as possible. At the same time, Parliament must encourage initiative and imagination among officers of all ranks. I am convinced that the majority of our officers are devoted and efficient and with Parliament's backing, they can help to achieve the goal of a classless, democratic, co-operative commonwealth enunciated in our Constitution.

**Shri V. P. Nayar:** May I raise a point of order? Only three hours have been allotted, and we have been supplied with a hundred page printed report. Now, it is supplemented by a 20 page typed speech, and we cannot off-hand give a criticism on the new points which he has made. And I found, as you also would have found, that while the Minister was speaking, he did not confine himself to the activities of the Ministry, but gave us also a sermon on democracy. He has already taken 30 minutes, and he wants another 30 minutes at the end.

**Shri Humayun Kabir:** I have taken only 20 minutes.

**Mr. Speaker:** Now, the difficulty is this. Already we have exceeded the scheduled time by five hours.

**Shri Satya Narayan Sinha:** Five hours and 30 minutes.

**Shri V. P. Nayar:** It is mostly due to them.

**Mr. Speaker:** Nothing is done without consulting the Business Advisory Committee. Year after year we have been increasing the number of hours for the general debate and these debates on Demands.

Now, under our existing law, after the introduction of a taxation measure, for two months we can collect the taxes, and at the end of the two

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months it should automatically stop unless the measures are passed. Therefore, the Budget has to be passed and the taxation measures have to be passed not only in this House, but in the other House also. It has to go to the other House, and they have to discuss it. The Budget was presented on the 28th February. The two months period will lapse by 28th April, whether we pass the measures or not. By the 28th April, the other House also must have an opportunity to look into this matter. So in consideration of the time that will be taken, from this House to that House and back to this House, the 18th April has been fixed by which time all the Demands will be disposed off finally. So ignoring the few holidays in the interval,—about five or six days—we have not much time. Then it must go to the other House. We are trying to accommodate. The House has also been good enough to sit longer hours, till 6 P.M. We shall see what can be done next year. But this year, to make up for these 5½ hours, we have either to sit on next Saturday—all the other Saturdays are booked, because when there is a holiday in the week, we compensate by sitting on the next Saturday—or sit half an hour longer everyday.

Shri P. K. Deo (Kalahandi): No, we cannot sit half an hour longer.

Shri Harish Chandra Mathur (Pali): We will sit on Saturday.

Shri V. P. Nayar: That was not the point I raised.

Mr. Speaker: I am coming to that. That must also fit in with some scheme or other. We have five hours to make up. We will sit on Saturday, the 4th April.

The Minister of Parliamentary Affairs (Shri Satya Narayan Sinha): I have no objection.

Mr. Speaker: If the House is willing to sit on Saturday, we can make up for the time lost.

So far as the present Demands are concerned, hon. Members must be glad that the hon. Minister has given a broad survey of all the activities. The books have been supplied to all Members. Instead of each Member being too ambitious, let those who want to speak divide the subjects, so that some may speak now and some may wait for another opportunity next time. The time we have is limited. How can I expand the time, unless hon. Members are willing to sit till midnight everyday?

Shri V. P. Nayar: Out of the 3 hours allotted for this Ministry, if one hour is taken by the Minister what is the position? The whole House gets only two hours. He could have done away with his opening statement. Now new points have been made. How can we offer our criticism on matters of scientific importance in such circumstances? We are not scientists.

Shri Barman (Cooch-Bihar-Reserved—Sch. Castes): A copy of the statement made by the hon. Minister may be circulated. That will help discussion.

Mr. Speaker: That is true. We shall see what can be done.

Last year, we allotted three hours for Health. This time I made up my mind that I must allow a full day for each Ministry. But even then we were not able to find sufficient time. We shall have to find some other method. But today let us go on. Who wants to speak?

Shri Satya Narayan Sinha: May I make a submission? As you have yourself said, by this time we are behind schedule by 5 hours 30 minutes. Under the new scheme which the House has very kindly approved, that is, we sit on Saturday, the 4th, this time will be made up. But all the other Saturdays are already booked. So if we do not stick to the time-limit for the Demands, then even sitting on Saturday will not serve our purpose. So from now on if we adhere to the

schedule with respect to all the Demands, we may be in time. Otherwise, it is impossible to stick to the schedule even if we sit on Saturday.

**Shri N. B. Maiti:** There will be no questions on Saturday?

**Mr. Speaker:** There will not be any questions on Saturday.

**Shri Satya Narayan Sinha:** Even if there is no Question Hour, it means 6 hours. We will sit from 11 to 6. That will be 7 hours.

**Shri T. B. Vittal Rao:** We will sit for 6 hours.

**Shri Surendranath Dwivedy (Kendrapara):** We will sit from 11 to 5.

**Shri Satya Narayan Sinha:** That means 6 hours. We have already exceeded the time by  $5\frac{1}{2}$  hours.

**Shri Surendranath Dwivedy:** From 11 to 5, we will get 6 hours.

**Mr. Speaker:** Very good. We can also take up some more Demands if we sit longer.

**Shri Satya Narayan Sinha:** We must know that on the 18th at 6 P.M. the guillotine will be applied, irrespective of whether all the Demands are discussed or not.

**Mr. Speaker:** Very well. Therefore, if hon. Members are willing to sit on Saturday from 11 to 6, we may get through some more Demands.

**Shri Surendranath Dwivedy:** We will sit from 11 to 5. We go on for 6 hours.

**Shri V. P. Nayar:** Why not the hon. Minister of Parliamentary Affairs at least tell his colleagues that hereafter there should not be an opening speech, a closing speech and an intervention?

**Shri Satya Narayan Sinha:** I quite agree.

**Mr. Speaker:** If it is one-sided, it will appear as if the Government have no case.

**Shri V. P. Nayar:** There are spokesmen of the Party. The Congress is represented by 360 Members.

**Shri S. M. Banerjee:** May I request that the hon. Minister's statement may be circulated at least tomorrow?

**Mr. Speaker:** I will get it circulated. When Ministers read their statements, they may themselves bring copies to the House.

**Shri V. P. Nayar:** He could have given us copies already.

**Shri Panigrahi:** Mr. Speaker, Sir, just now the hon. Minister made his preliminary remarks about the activities of the Ministry of Scientific Research and Cultural Affairs. He was pleased to begin with science; and in the middle he said something about the art and in the end he referred to something about political philosophy. I hope the hon. Minister will bear with me if I say that the greatest of possessions of any country is its man-power, and the best way of planning the development of any country is planning scientifically its man-power possession. We must judge the activities of the Ministry in this light.

If you allow your man-power to go waste and if you fail to utilise the existing man-power according to the needs of the country, then, all your planning goes wrong.

You may be pleased to look at the amount of grants which have been asked for by the hon. Minister for carrying out his activities. The House would never have grudged to grant him more. If you calculate on a *per capita* basis and also on the basis of investment you will find how meagre this grant is. The Ministry hopes to carry out the great task of scientific research and discovery in this country with this meagre amount.

Planning the man-power of a country broadly means, firstly putting the proper talent in its proper place; secondly, utilising all the existing

[Shri Panigrahi]

technical personnel; thirdly, training adequate technical personnel for meeting the increasing demand for such people along with the industrial, economic and scientific advancement of the country; fourthly, providing reasonable incentives to the personnel engaged in scientific pursuits in our technical institutions; and, fifthly, ensure a proper atmosphere in the various National Laboratories and the different technical institutes, an atmosphere conducive to the scientific development and research activities.

Sir, if we study the activities of the Ministry in this light, it is quite disappointing. The hon. Minister was pleased to present to the House one side of the coin and, perhaps he left the other side to be presented by others so as to make a full reading of the activities of the Ministry of Scientific Research and Cultural Affairs.

Here, in Delhi itself, if you are pleased to go to the National Physical Laboratory you will find quite a horrible atmosphere. There is no recruitment policy; there are no rules governing seniority or promotion. Certain persons who happen to be the favourites of certain officials in power have got repeated promotions at fairly short intervals. I think the hon. Minister who is very keen about the scientific development of the country and who is very keen to ensure proper atmospheres in the N.P.L. and the different scientific institutes, will take the trouble of personally enquiring into these matters. I hope he will try his best to restore a proper atmosphere conducive to the scientific development of the country—in the development in which our scientific personnel are engaged.

It is because of this atmosphere in the N.P.L. that I have come to know that platinum, copper, silver and mercury worth thousands of rupees have been stolen away. You will find that orders worth lakhs of rupees are being given to particular firms which

oblige the higher officers in the National Physical Laboratory. I need not name these firms.

Mr. Speaker: Wherefrom does he get the information that so much has been stolen away? Is it published somewhere?

Shri Panigrahi: I have got these records and I can place it before the House.

Mr. Speaker: The hon. Member will kindly pass it on the Minister.

Shri Panigrahi: Yes, Sir. That is why I did not mention the names of the firms. You will find that this atmosphere is really vitiating and it is not suitable for carrying out scientific research activities in the N.P.L. Now, let us look to the proper utilisation of man-power. According to the estimate made by the National Income Committee, nearly 18 per cent of the working population in India are engaged in jobs which are low-paid, such as domestic servants etc. Eighteen per cent of the people are not utilised properly. Out of the total educated persons in India, 69 per cent had no technical or professional qualifications. That is the system of education that we are imparting to the vast sections of youth in India. But the country needs technical personnel more and more every year with the expanding economic and industrial activities of the Government. Among the unemployed there were 1,83,000 matriculates, 39,000 intermedates, 11,000 graduates and post-graduates in science and 25,000 graduates and post-graduates in arts. This number of 36,000 unemployed graduates and post-graduates has gone up in 1957 to 44,000.

Now, let us come to the individual biologists, geologists, etc. How do they fare in this country? Take the case of geologists. In 1955, 19 per cent of them remained unemployed. It was further observed by the man-power study undertaken by the Planning

Commission's man-power division that the administrative functions carried a much higher salary than any other functions. They have also observed that research is rewarding for a technical man at the early age when he carries out research but when he is promoted to an administrative post, he does not carry out any research because the salaries are very much higher and he is rest assured for his life. We can now look to the requirements of the agricultural graduates. During the Second Plan period, we need 9,800 agricultural graduates to meet the requirements and as against this the total out-turn of these graduates during the same period is not likely to exceed 7,200.

**Shri Humayun Kabir:** That does not concern our Ministry.

**Shri Panigrahi:** I am coming to that Technicians are not confined to scientific personnel only. So far as agricultural graduates are concerned, that is the position and I only bring this thing forward to show that we are not properly utilising the existing manpower and we are not trying to impart training to them to meet our requirements in all spheres of development.

Then they have observed that 15 per cent of the botanists and 14 per cent of the geologists were unemployed and most of them are within the age group of 25-30. They are young men who have a great future and who can really do something so far as the progress of India is concerned; even when they are unemployed. Again, it has been calculated that out of nearly 5,95,000 students enrolled in higher learning institutions in India only four per cent belonged to engineering and agricultural groups.

**Shri Humayun Kabir:** Those figures are completely out of date. These are old figures.

**Shri Panigrahi:** These figures are of 1955, the latest figures in the reports on man-power studies that they have presented before the House.

**Shri Narasimhan (Krishnagiri):** What is the date of that report?

**Shri Panigrahi:** Man-power Study Report No. 2, No. 3, No. 4 and No. 5.

**Shri Narasimhan:** I want to know the year.

**Shri Panigrahi:** 1955.

**Mr. Speaker:** Will these not be more appropriate to the Demands relating to the Labour Ministry? The hon. Member is giving details of unemployment etc. That will come under the Labour Ministry.

**Shri Panigrahi:** I am not speaking of unemployment just now. The hon. Minister just now stated that they are looking to the best utilisation of the existing man-power in India, but I say that the existing man-power is not even being utilised what to speak of the future man-power we are going to train. That is the important point that I am driving at, I am not going into the details.

**Mr. Speaker:** Evidently the hon. Member's argument is that there are less of technical personnel than persons who merely get degrees which degrees are no good without professional skill or technical knowledge.

**Shri Humayun Kabir:** I may inform the House, Sir, that between 1956 and 1958 we have practically doubled the admissions in engineering colleges and polytechnic, and further these figures relate to the period before 1956.

**Shri Panigrahi:** I am coming to that. I would like the hon. Minister in the course of his reply to enlighten me on this subject. On December 31, 1958, the number of graduates and diploma holders in engineering registered on the employment exchange records came to 518. I am not quoting old figures, these figures are up to the end of December 1958. If you take the question of semi-skilled and skilled technical personnel, their number comes to about 8,923 on 31st December, 1958.

[Shri Panigrahi]

What I plead before you is, the existing technical man-power is lying idle. They are not being provided in any way so that they can help in increasing the production of this country.

As you suggested, Sir. I will not touch on this point in detail because the Labour Ministry is also concerned with that.

**Mr. Speaker:** Does the hon. Member suggest that though these people are qualified other people who are not qualified fully are employed, or does he suggest that there is want of occupation for them, even after best efforts, and therefore more industries will have to be put up?

**Shri Panigrahi:** My point is that there are not opportunities for the existing personnel and we have not been able to provide them with employment in the existing undertakings that we have or in the factories that are there in the country.

I would also like to refer to the trained technicians who are being given training by the Government and a lot of money is being spent. 13,000 technicians who got training in steel today remain unemployed. I will not go into that point in detail.

Now, I would like to refer to the equipments that the scientific and educational institutions are lacking today. It has been reported....

**Mr. Speaker:** Do you mean to suggest that the colleges and schools should close for a period until we put up more industries? Whatever argument is advanced before the House, there must be a conclusion and a suggestion.

**Shri Panigrahi:** I am coming to that.

**Shri Harish Chandra Mathur:** In one breath the hon. Member says...

**Shrimati Renu Chakravartty (Basirhat):** We want more personnel for the steel plants, whereas we have none.

**Shri Panigrahi:** My point was this that we need technical men as well as good equipment. Whether the seed is fast or the tree is fast is a different matter. What I am suggesting is, before training scientific personnel in our institutions we must have good equipment. So far as scientific equipments are concerned, our laboratories and our scientific institutions are lacking in that. They must be well equipped.

18 hrs.

Sir, I would just refer to one or two more points. Just now, the hon. Minister referred to the question of expanding Vigyan Mandirs. The object of the Vigyan Mandirs . . . .

**Mr. Speaker:** Has the hon. Member much to say? He has already taken 15 minutes. How many more minutes does he want?

**Shri Panigrahi:** About seven or eight minutes.

**Mr. Speaker:** He will continue the next day.

18.01 hrs.

*The Lok Sabha then adjourned till Eleven of the Clock on Thursday, April 2, 1959/Chaitra 12, 1881 (Saka).*