

INDIAN STATISTICAL INSTITUTE

THIRTY-FOURTH ANNUAL REPORT

April 1965—March 1966



203 BARRACKPORE TRUNK ROAD
CALCUTTA—35

INDIAN STATISTICAL INSTITUTE

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Joint Secretaries : 1. Shri S. Basu, M.Sc., F.N.I.; 2. Shri N. C. Chakravarti, M.A.; 3. Shri S. K. Chowdhury, B.A.; 4. Shri Pitambar Pant, M.Sc.

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Government Nominees on the Council : 1. Cabinet Secretary (Shri Dharma Vira or his representative), 2. Joint Secretary, F. & A., Ministry of Finance (Shri F. H. Vallibhoj), 3. Director, Central Statistical Organisation and ex-officio Joint Secretary, Department of Statistics, (Dr. K. R. Nair).

* Honorary Vice-Presidents and Additional Vice-Chairmen under Clause 2 of the Bye-laws relating to the election of the Institute.

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I. INTRODUCTION

1.1. *Genesis* : The idea of starting the Indian Statistical Institute was conceived by a group of young men who had gathered round Professor P. C. Mahalanobis in the nineteen twenties in applying statistical methods to the solution of practical problems. This group had their workshop, so to say, in what came to be known as the Statistical Laboratory, which was located in the room of Professor Mahalanobis, then Professor of Physics in the Presidency College. A public meeting organized by this group, and held in December 1931 under the chairmanship of late Sir R. N. Mookerjee, adopted a resolution which led to the establishment of the Institute which was registered on 28 April 1932 as a non-profit distributing learned society under the Societies Registration Act XXI of 1860. A part-time computer was the only worker the Institute had in the first year of its existence, the total expenditure being Rs. 238. At the end of the thirty-fourth year (31 March 1966), there were on the pay-roll of the Institute over 2,300 paid workers, the total expenditure (including capital expenditure) being of the order of Rs. 172.61 lakhs. The Indian Statistical Institute Act of 1959 recognized the Institute as an institution of national importance and empowered it to confer degrees in statistics, thus giving the Institute the status of a university. From 1 July 1960 the Institute, through its Research and Training School, has been conducting courses leading to the degrees of Bachelor of Statistics (B.Stat.) and Master of Statistics (M.Stat.). Doctorate degrees, Ph.D. and D.Sc., are also being awarded. In 1961 the Institute adopted a crest, the design of which was suggested by Shri C. D. Deshmukh, President of the Institute from 1945 to 1964. Shri Deshmukh also suggested the motto incorporated in the crest.

1.2. *History of Activities* : Since its inception, the Indian Statistical Institute has been carrying out a well-integrated programme of work. This has centred on practical applications of statistics through project work, and these projects have raised problems whose solution has led to original contributions to statistical theory. The Institute's project work has also involved close collaboration with the Government; project work used to be done on business-like lines for both private enterprises and the Government, with contract grants for specified purposes. The Institute was built up, in fact, on such "business" earnings. The lack of trained statisticians and computers led to the establishment of training courses; the Institute's educational activities have steadily increased with passing time, and now involves cooperation with international agencies for training schemes for the whole of South East Asia.

In the early days, project work was mainly concerned with two problems. The first was the control of floods, particularly in Bengal and Orissa. The results of this work were partly immediate, in the implementation of proper measures for flood control, and partly long-term, coming to fruition in such schemes as the Damodar Valley Corporation and the Hirakud Dam Project. The second set of problems centred round agricultural

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field trials, and established contact with Sir Ronald Fisher as early as in 1925, and resulted in the introduction in India of his great contribution of the design of experiments, before these methods were adopted in other countries outside Britain. Theoretical work on the design of experiments was started in the nineteen thirties and led to important contributions. Earlier work on anthropometry and meteorology provided the basis for contributions to statistical theory, especially multivariate analysis. The work on these problems still continues in the Institute.

In 1936, theoretical and field studies were started at the desire of the Government to develop sample surveys for the improvement of estimates of production of agricultural crops. These studies led to continuing annual crop surveys in Bengal from 1941, and also to important theoretical developments in the design of sample surveys which secured for the Institute a leading position in the world in this subject.

During the Second World War, the Institute became involved in demographic problems. The detailed tabulation of the 1941 population census of India had to be abandoned owing to the exigencies of war. The Institute had been able to persuade the Government to retain a small sample of the original census slips. On the basis of this sample, the Institute prepared the detailed tables of demographic statistics for the 1941 census. Since that time, research in demography has become an integral part of the Institute's activities.

During the nineteen fifties, the Institute developed two major types of project work. The National Sample Survey is the most comprehensive and continuing socio-econometric survey in the world today, and is believed to have proved very valuable to the Government. Statistical Quality Control has developed into a consulting service to industry on an India-wide basis, and its rapid growth is a measure of the way in which it is fulfilling a basic need in promoting industrial progress of the country.

The most important development of the Institute's work during the nineteen fifties has been the significant contribution to economic planning. The studies on planning were inaugurated at the Institute in Calcutta in 1954 by the late Prime Minister Jawaharlal Nehru, and the Draft Plan Frame for the Second Five Year Plan was prepared on the basis of these studies. The Institute's Planning Unit continues to work in close collaboration with the Perspective Planning Division of the Planning Commission and the National Sample Survey data have been found to be of great help in this work.

Educational Programmes : All over the world, since the nineteen forties, statistical methods are being increasingly used in new fields of work. This is well seen in the number of books which have been published during this period, surveying the applications of statistics in many individual fields of natural science which would once have been thought to be remote from statistical treatment, such as geology. Sir Ronald Fisher summed up the position of statistics as "the key technology of the present century."

The Institute was given powers to award degrees by an Act of Parliament passed in 1959 and sponsored by the late Prime Minister Nehru. This, together with the recognition of statistics as a key technology, has resulted in a new approach to the teaching of statistics in the Institute, which is also expressed in its research programme.

In universities the practice for a long time used to be to give courses in single subjects like mathematics, physics, biology, economics, etc. During the latter part of the nineteenth century, it became necessary to develop new educational programmes in two important

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fields, namely, medicine and engineering because it was essential for the professional students to have some knowledge and skill in a number of scientific disciplines.

In 1962, Sir Ronald Fisher pointed out that a technologist must talk the language of both theoreticians and practitioners. The education of a technologist must, therefore, have a broad base. A technologist has to see both sides of the fence, and is the channel through which alone the knowledge and skills of others can be made effective. Fisher said, "It is, I believe, in recognising statistics as the key technology of our century, that we can appreciate the special features of the Indian Statistical Institute. . . . What the scientists have to do with statistics lies in the part they must play in the education of any competent statistician."

Statistics, as a new technology, is concerned with the use of the most economic and efficient methods of observation, measurement, survey, and experimentation, and of the processing of data for the drawing of valid inferences. The scope of statistics thus extends over the whole range of the natural and social sciences.

The courses leading to the B.Stat. or M.Stat. degrees have been formulated to cover a wide range of subjects, somewhat analogous to courses in medicine and engineering. Pure mathematics and the theory of probability have an important place. Theoretical and different branches of applied statistics, naturally, form a large part of the teaching programme. Because of the special needs of India, a great deal of attention is given to the economics of planning. In these three groups of subjects, mathematics, statistics and economics of planning, the course includes a good deal of the content of knowledge, besides theory and methodology.

In addition, facilities are provided for the students to become familiar with methods of observation, measurement, survey, and experimentation in a number of scientific subjects. Here the emphasis is not so much on the content of knowledge, but on methods; stress is, therefore, given on practical courses and statistical analysis and the interpretation of data.

The Research Policy: Fisher had pointed out "that the science with which the student is to become acquainted must be genuine research in its own right, not what is eloquently called a 'mock-up' for the use of students only." It is, therefore, the policy of the Institute to establish small, high level, research units in both the natural and social sciences, to offer facilities for research and training in the use of statistical methods in practice. The Government of India approved this policy in a communication dated 15 June 1962 from the Cabinet Secretariat in the following terms:

"Government accept the view that statistics being a new technology, it should be open to the Indian Statistical Institute to establish and maintain research and study units in subjects other than theoretical and applied statistics, to offer facilities for research and application of statistical methods and for provision of training in such methods. The number of such units would depend on the availability of really able research scientists and also on the funds available to the Institute. Similarly in furtherance of the purposes as set out in Section 5 of the Indian Statistical Institute Act, the Institute may establish and maintain units for the study of different languages (including translation units, library science, documentation, etc.) and for auxiliary studies and teaching in different subjects including humanities."

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In this plan, each research unit would be concerned with a particular theme. Where there is more than one professional scientist, they may either work jointly on the same topic or on different topics, which would, however, be related to a central problem. Each research paper may be independent, but the results would be capable of being added together to supply a more comprehensive picture of different aspects of the central theme.

This thematic programme of research is particularly useful in underdeveloped countries. In a large department or the faculty of a University, scientists often work on unrelated topics with practically no possibility of communication, or exchange of views and criticisms among them. Scientists in a small research unit working on related groups of subjects can easily communicate with one another; a miniature scientific community can then become established with the possibility of a free exchange of views and criticisms. Such scientific cells can then gradually build up a scientific community in the country as a whole.

The concept of a thematic programme for each research unit is also useful in preventing the growth of large units with a big staff dealing with a multitude of subjects. The Institute's policy is to have small units of pioneering research arranged in a horizontal or parallel pattern of organisation. The Institute's policy is also to encourage joint projects of research and advanced studies by collaboration between two or more research units.

The Institute's small research units are thus intended to play a quadruple role. Each unit will actively engage in a programme of fundamental research, which will throw up problems of a statistical nature from time to time, some of which may well stimulate the evolution of new statistical methods. Each will contribute to the teaching of degree courses in statistics, familiarising students with types of problems, and methods of observation, measurement, and experiment, in its own field of natural science. It is also hoped that the research units will be able to act as a liaison between workers in similar fields of science in Universities and Government organisations, on the one hand, and the research statisticians of the Institute, on the other, to promote the spread of knowledge of statistical methods in scientific research in India.

Some of these research units have been functioning in a very encouraging way as the meeting place for active collaboration between scientists in India and guest scientists from abroad. This role may be considered as the fourth and a very important role.

2. GENERAL ADMINISTRATION

2.1. *Membership* : The year 1965-66 started with 69 life members (including 5 honorary life members), 6 institutional members and 305 ordinary members, on the roll. During the year, 19 ordinary members were enrolled, while 8 ordinary members resigned and 2 members (Dr. J. Janco of Czechoslovakia and Shri S. C. Chakravarty, Deputy Director, National Sample Survey) died. At the end of the year, therefore, the total came to 399, consisting of 69 life (including 5 honorary life members), 314 ordinary and 6 institutional members.

Seventy-five sessional members and 152 student members were enrolled during 1965-66, as compared to 79 sessional members and 156 student members during the previous year. Sessional and student members are enrolled for only one year at a time.

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2.2. *Annual General Meeting* : The Annual General Meeting was held on 30 October 1965 to transact the business specified in the constitution, namely, the election of office bearers and members of the Council, adoption of the Annual Report submitted by the Council and Auditors' Report with Audited Statement of Accounts for 1964-65 and Balance-Sheet as at 31 March 1965 submitted by Messrs. Lovelock & Lewes, Chartered Accountants, who were appointed as auditors of the Institute on the basis of a selection made by the Government of India.

The election of office-bearers was not due this year. Two of the Vice-Presidents, *viz.*, Dr. Balabhadra Prasad, D.Sc., F.N.I. and Dr. Q. M. Hussain, M.A., Ph.D., were due to retire this year and National Professor D. N. Wadia and Shri Azoka Mehta were elected in their places. The Council also elected Shri S. Dutt as an Additional Vice-Chairman. The names of the Vice-Presidents, Vice-Chairmen and members of the Council as after the election of 30 October 1965 are given in *Annexure 1*. The Auditors' Report, Audited Statement of Account for the year 1965-66 and the Balance-Sheet as at 31 March 1966, submitted by Messrs. Lovelock & Lewes, are given in *Annexure 8*. While the Annual General Meeting approved of the submission of the Audit Report etc., to the appropriate authorities, it wanted a report to be sent in certain respects.

2.3. *Meetings of the Council* : The Council of the Institute met seven times during the period on 5 May, 28 May, 4 August, 26 August, 29 October, 10 December 1965 and 26 March 1966.

2.4. *Meetings of the Governing Body of the Research and Training School* : The Governing Body of the Research and Training School met six times during the period on 5 May, 28 May, 4 August, 26 August, 29 October 1965 and 26 March 1966.

Important items of business transacted at the meetings of the Council and the Governing Body of the Research and Training School are briefly mentioned in *Annexure 2*.

2.5. *Meetings of the Finance Committees* : The Finance Committee of the Council and the Finance Committee of the Governing Body of the Research and Training School met jointly on 29 October 1965 and 25 March 1966 to consider the (a) Auditors' Report, (b) Audited Statement of Accounts for 1965-66 and Balance-Sheet as at 31 March 1965, (c) the revised budget estimates for 1965-66 and budget estimates for 1966-67, (d) the budget estimates of the UNTAA sector for 1966-67, (e) plan (including capital expenditure) budget for 1966-67, and (f) the budget estimates for the IBM Unit and other related matters.

The names of the members of the Council, the Governing Body of the Research and Training School and of the Finance Committees of these bodies are given in *Annexure 1*.

2.6. *Institute Staff* : Professor P. C. Mahalanobis held the offices of Honorary Secretary and Honorary Director of the Institute throughout the period.

Dr. C. R. Rao continued as the Director of the Research and Training School.

Shri N. C. Chakravarti continued as a Special Officer on a part-time basis to look after certain constitutional, secretarial, legal and other matters.

Shri Saradindu Basu continued as a Special Officer in charge of the administration of the Delhi sub-offices, liaison with the Central Government and for certain other work.

Shri S. K. Chowdhuri continued as a Special Officer in charge of the administration and other work in Calcutta.

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Shri N. N. Majumdar, I.A.A.S. (Retd.), joined the Institute as Administrative and Financial Adviser on 1 April 1965 and left the Institute on 31 December 1965.

Shri M. S. Bhatnagar who joined the Institute as Financial Adviser on 4 January 1966 has been continuing in that capacity.

Shri Pitambar Pant, Honorary Joint Secretary, remained in charge of the Planning and Regional Survey Unit, Statistical Quality Control and certain other work in New Delhi.

Shri N. C. Chakravarti, Shri S. Basu and Shri S. K. Chowdhuri continued to function as Honorary Joint Secretaries.

Shri Biswajit Roy, Deputy Librarian, was appointed Assistant Secretary from 18 September 1965 and was empowered to function as the Administrative Officer of the Institute from 20 January 1966.

2.7. *New Appointments* : The technical and senior staff of the Institute was strengthened during the year by the addition of the following persons. The date of joining is shown against each name.

Administration : Majumdar, N. N., I.A.A.S. (Retd.), formerly ex-officio Finance Secretary, Government of West Bengal, 1 April 1965. (Administrative and Financial Adviser).

Bhatnagar, M. S., Deputy Auditor-General (Retd.), Government of India, 4 January 1966. (Financial Adviser).

Planning Unit, Delhi : Rangarajan, C., M.A. (Econ.), Ph.D. (Econ. Penn), 1 July 1965.

Research and Training School : Maitra, Ashok, M.Sc., Ph.D. (California), 20 December 1965.

2.8. *Medical Assistance* : A Medical Expenses Reimbursement Unit was set up at the headquarters in June 1965 to render financial assistance for medical treatment to employees of the Institute. A similar scheme is being put into effect in branches of the Institute.

3. HONOURS AND AWARDS

Professor P. C. Mahalanobis was presented a Gold Medal by the Czechoslovak Academy of Sciences as an appreciation of his contribution towards the improvement of science.

Shri P. B. Gupta (*Demography—R.T.S.*) was elected a member of the International Union for the Scientific Study of Population.

Professor R. Mukherjee (*Sociology—R.T.S.*) was elected a member of the Social Science Research Committee set up by the Deputy Chairman, Planning Commission, Government of India. He was elected a member of the Coordinating Committee, Studies in the Sociology of Education, sponsored by the Education Commission and the National Council of Educational Research and Training, Ministry of Education, Government of India. He was nominated as a member of the Advisory Committee, Educational Survey Unit, National Council of Educational Research and Training, Government of India.

Shri M. V. Raman (*Demography—R.T.S.*) was elected a member of the International Union for the Scientific Study of Population.

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Dr. J. Roy (*Computer Science—R.T.S.*) was elected a member of the Council, Computer Society of India, at its annual meeting held at the Indian Statistical Institute from 16 to 17 December 1965.

4. CONFERENCES AND SCIENTIFIC TOURS ABROAD

Professor P. C. Mahalanobis attended, as the leader of the Indian delegation, the United Nations Statistical Commission held in New York from 20 April to 10 May. He went to Washington D.C. on 30 April. He had to go at short notice to Moscow on 5 May as a member of a delegation from the Planning Commission led by Shri Asoka Mehta, Deputy Chairman, which partly overlapped with the visit of Prime Minister Lal Bahadur Shastri. Professor Mahalanobis visited a number of research institutes, gave a lecture at the Friendship University and also had discussions with Academician M. V. Kjel'diah, President, USSR Academy of Sciences, and other scientists. Professor Mahalanobis had discussions as a member of the Panel of Special Consultants for International Study on the Main Trends of Research in the Sciences of Man and His Culture on 18 May at the UNESCO Secretariat, Paris. He also visited London and Cambridge for discussions with a number of scientists and economists, and returned to Delhi on 27 May 1965.

Professor Mahalanobis participated in a meeting convened by the Organisation for Economic Co-operation and Development (O.E.C.D.) on the Needs for Science and Technology in relation to Economic Growth from 15 to 18 December 1965 in Paris. He then visited East Berlin and had discussions with H. E. Dr. Wittkowski, Deputy Prime Minister, Dr. Donda, Chief of the State Central Administration for Statistics, German Democratic Republic and also in the Institute of Mathematics, G.D.R. Academy of Sciences, about collaboration between the Indian Statistical Institute and scientists from the G.D.R. and the exchange of scientific publications etc.

Professor Mahalanobis went to Moscow on 23 December as a guest of the U.S.S.R. Academy of Sciences, and had discussions with Academician M. V. Kjel'diah (President) and Academician Sisakian (Chief Scientific Secretary) of the Academy and visited some research institutes. The Academy arranged for Professor Mahalanobis to have interviews with Vice-Premier Dimschitz and Vice-Premier Academician Kirilin, Chairman, State Committee for Coordination of Scientific Research. From Moscow, Professor Mahalanobis again went to Paris (4, 5, 6 January 1966) at the invitation of the O.E.C.D. for further discussions on science and technology in developing countries. He also had discussions at the UNESCO. He made a short visit to London before returning to India, and had discussions there with, among others, Sir Solly Zuckerman, F.R.S., (Defence Science Adviser), Dr. Richard Synge, F.R.S., Nobel Laureate, and also with Mr. Robert Maxwell, M.P., of the Pergamon Press Ltd., about a project for the printing of selected Pergamon publications in India. He returned to Calcutta on 13 January 1966.

Chicago and Washington D.C.: Professor Mahalanobis attended the China Conference in the Centre for Continuing Education, University of Chicago, from 7 to 12 February. There were 38 participants in the closed session, of whom about half came from outside the United States, and had visited China recently in 1964 or 1965. The participants represented a wide range of views which gave opportunities for stimulating discussions and the assessment of economic conditions, population and manpower, science and education, changing structure of society, politics and government and the foreign policy of China. After the China Conference, Professor Mahalanobis gave a lecture in the Department of Statistics and

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attended a group discussion on economic conditions in India in the Department of Economics, University of Chicago. He had several discussions with Professor S. Chandrasekhar and other scientists in Chicago. Professor Mahalanobis went to Washington D.C. on 16 February and spent most of his time at the Natural Science Foundation, and also had discussions with Dr. Leon Keyserling, Dr. Edward Deming, Dr. Harrison Brown and other scientists.

State University of Pennsylvania : He reached University Park, Pennsylvania, on 20 February, where a crowded programme had been arranged by Dr. G. P. Patil which included a lecture and seminar in the Department of Statistics, two public lectures—one on Statistics as a Key Technology and one on Economic Planning in India, and also discussions in the Faculty of Economics, and on the use of statistical methods in geology and minerals prospecting.

New York : He reached New York on 24 February and had discussions with Dr. Gerard Piel (Publisher, *Scientific American*), Dr. E. C. Colbert, Dr. Harry Shapiro and others about cooperation with the Indian Statistical Institute in scientific matters. He also visited Mountain Lakes to meet Dr. and Mrs. W. A. Shewhart.

London : He visited the Birkbeck College on several occasions for discussions about the statistical design of observations in a series of physical experiments by Dr. K. Ahsanullah and the interpretation of the results. He had discussions with Professor P. M. S. Blackett on research and development in India. Professor Mahalanobis had to cancel his visit to Paris and Geneva owing to indisposition. However, Professor Clemens Heller (International Council of Social Sciences), came from Paris to see him about arrangements for an international conference in India; also Dr. C. C. H. Oldham, on one occasion, and Dr. G. E. M. Cooper, on another, came from the O.E.C.D. (Paris) for discussions. Professor Mahalanobis had discussions with Dr. C. Freeman at the National Institute of Economic and Social Research and also with the British Council and the Ministry of Overseas Development about more flexible arrangements for technical assistance, and with the International Computers and Tabulators Ltd. about collaboration in the manufacture in India of software for electronic computers. He returned to Calcutta on 4 April 1966.

Dr. C. R. Rao, Director, Research and Training School, attended an International Symposium on Multivariate Analysis in Dayton, U.S.A., and presented a paper on "Covariance adjustment and related problems in multivariate analysis" (16 June 1965). He attended the Fourth Berkeley Symposium on Probability and Statistics in Berkeley, U.S.A., and presented a paper on "Least squares theory using an estimated dispersion matrix and its application to measurement of signals" (7 July 1965). He took part in the Conference on Nosology (in psychiatry) in Washington, U.S.A., and gave an invited address on "Discrimination among groups and assigning new individuals". He attended, as a member, the meeting of the International Committee of Experts on the International Computation Centre (ICC) held in Rome and Paris (20-23 October 1965). He also attended, as a member of the Expert Group on the Education and Training of Statisticians in the countries of the ECAFE region, a meeting held at Bangkok, Thailand (25-31 January 1966). He acted as the Chairman of the meeting held in Bangkok.

Shri P. B. Gupta and Shri M. V. Raman (*Demography—RTS*) attended the Second World Population Conference held at Belgrade, Yugoslavia, from 30 August to 10 September 1965, and each contributed a paper.

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Dr. J. Roy (*Computer Science—RTS*) attended the International Symposium on Multivariate Analysis held at Dayton, Ohio, U.S.A., in June 1965. He visited a number of electronic computer installations in the U.S.A. and the U.K. on his way back. He was away from India from 6 June to 8 July 1965.

Shri D. Rej (*Library*), attended the Fifth International Seminar of Russian Language Teachers held in Moscow from 1 to 30 June 1965, under the auspices of the Peoples' Friendship University, Moscow. He also visited the Translation and Information Centres in Moscow and on his way back visited the Translation Section, National Lending Library, United Kingdom.

Sarvaswari Murari Majumdar, Suranjan Sengupta and Netai Chandra Das (*National Sample Survey*) attended the Second World Population Conference, held at Belgrade, Yugoslavia, from 30 August to 10 September 1965, and each contributed a paper.

5. STUDY TOURS AND ASSIGNMENTS ABROAD

Research and Training School: Shri R. L. Brahmachary worked at the University of Palermo, Italy, during October–December 1965, for research on embryonic information transfer. He gave a lecture on the same subject at the Makerere University College, Uganda.

Dr. S. W. Dharmadhikari who joined the University of Arizona, U.S.A., for two years on a visiting teaching appointment was on leave from the Institute from 17 January 1966.

Dr. K. R. Parthasarathy left the Institute on leave from 1 November 1965 to accept an appointment in the University of Sheffield, U.K.

Dr. R. Ranga Rao left the Institute on leave for one year from 1 September 1965 to accept an appointment at the University of Illinois, U.S.A.

Dr. J. Sethuraman rejoined the Institute on 30 August 1965 after the expiry of his leave for study and research abroad.

Shri T. Kriahnamurthy (*Computer Science*) went on a tour, from 7 January to 25 April 1965, to study the electronic computer installations in Australia.

Shri A. K. Haldar (*Computer Science*) stayed in Rome from 19 October 1965 to 5 April 1966, to participate in a Training Seminar on Advanced Data Processing, organized by the International Computation Centre.

Planning Division: Professor M. Mukherjee concluded his assignment as a Visiting Professor in the University of Pennsylvania, USA, in May 1965. He addressed the Economic Research Services Unit and the Graduate Economic Society Seminar of the University on Indian National Income.

Dr. H. Mazumdar concluded his assignment at the University of Hawaii and he also worked at the University of Wisconsin at Madison during a tour from October 1964 to September 1965. He addressed a seminar on economic development in India at the University of Connecticut. On his way back, he delivered lectures at the Institute of Asian Economic Affairs, Ayoyama Gakuin University, Hitotsubashi University, and the Institute of Business Research at the Kobe University, Japan.

Shri N. Bhattacharyya joined the Department of Applied Economics, University of Cambridge, as a Colombo Plan fellow and worked under Professor J. R. N. Stone, from October 1965 to July 1966.

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Planning and Regional Survey Unit, Delhi : Dr. A. K. Chakravarti went on leave on 26 May 1965 for one year to join as a Specialist Adviser for Input-output Techniques to the Turkish State Planning Organisation, Ankara.

Dr. M. Dutta Chaudhuri, who had been on long leave, rejoined Institute on 11 January 1966, after receiving the Ph.D from the Massachusetts Institute of Technology, U.S.A.

Statistical Quality Control Units : Shri P. H. Rao was granted leave for two years from February 1965, for higher studies in statistics at the Rutgers University, U.S.A.

Shri K. G. Murty was granted leave for one year from September 1965 for higher studies in engineering sciences at the University of California, U.S.A.

6. RESEARCH AND TRAINING SCHOOL

During the period under review, the Research and Training School (RTS) carried out its research work under the guidance of the Director C. R. Rao. The units for applied research and science laboratories attached to the Research and Training School (together with the names of the heads of units) are as follows :—Biswanath Proasid Adhikari (*Anthropometry*), Prabhat Ranjan Pal (*Biochemistry*), Bhupendra Chandra Das (*Biometry*), Subodh Kumar Roy (*Botany*), Trupapur Antony Davis (*Crop Science*), Pran Kumar De (*Chemistry*), Jogabrata Roy (*Computer Science*), Manapadom Venkateswarier Raman (*Demography*), Ratan Lal Brahmachary (*Embryology*), Nalini Kanta Bose (*Flood Research*), Bimalendu Roychaudhuri (*Geological Studies*), Sujata Chaudhuri (*Haematology*), Shibabrata Chatterjee (*Psychometric Research and Service*) and Ramkrishna Mukherjee (*Sociology*). Sujit Kumar Mitra was in charge of training at the International Statistical Educational Centre.

The RTS conducted research in the following fields—advanced probability, theoretical statistics and statistical methods, statistical inference, design of experiments, sample surveys, economic planning etc., and also in the fields of application like biometry, haematology, geology, anthropometry, demography and sociology, etc., for which special research units exist. The lists of research papers and documents prepared and/or published by the R.T.S. staff are given in *Annexure 4*.

Some new research projects were started in collaboration with guest-scientists from abroad, among whom may be mentioned Professor R. L. M. Syge, Nobel Laureate, F.R.S. (Rowett Research Institute, Bucksburn, Aberdeen, U.K.), Dr. F. Vogel (Director, Institute of Anthropology and Human Genetics, University of Heidelberg, West Germany), and Dr. H. L. Shapiro (Chairman, Department of Anthropology, The American Museum of Natural History, New York).

The following research and training courses were conducted by the Research and Training School in 1965-66.

1. Research Guidance

- (i) Research and advanced studies, general.
- (ii) Research leading to the Ph.D. degree of the Institute.

2. Degree Courses

- (i) Four-year course leading to the B.Stat. degree of the Institute.
- (ii) Two-year course leading to the M.Stat. degree of the Institute.

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3. *Training Courses* (for specialized studies, training personnel, and for candidates preparing for Diploma and Certificate examinations)
 - (i) Summer Course (Advanced) for Statisticians
 - (ii) One-year Apprentice Course
 - (iii) Statistical Officer's Course (jointly with the Central Statistical Organisation; 8/9 months)
 - (iv) Special Short-duration individual training for officers on deputation
 - (v) Occasional courses on special subjects
 - (vi) One-year Evening Course in Statistics at Delhi (in collaboration with the CSO)
 - (vii) Advanced Course in Statistics at Delhi (in collaboration with the CSO)
 - (viii) One-year Evening Courses in Statistics at Bombay, Hyderabad, Madras and Trivandrum
 - (ix) One-year Diploma Course in Statistical Quality Control
 - (x) One-year Training Course in Documentation at Bangalore
 - (xi) Nine-month Course on Punched Card System
 - (xii) Computer's Training Courses at Calcutta
 - (xiii) Courses at the International Statistical Education Centre (9 months), in collaboration with the International Statistical Institute under a Board of Directors with the representatives of the International Statistical Institute, Indian Statistical Institute and the Government of India.
4. *Diploma and Certificate Examinations* (all-India examinations, open to external candidates)
 - (i) Statistical Field Survey, Junior Certificate
 - (ii) Statistical Field Survey, Senior Certificate
 - (iii) Statistical Field Survey Diploma
 - (iv) Computer's Certificate
 - (v) Statistician's Diploma.
5. *Awards for Higher Professional Attainments*
 - (i) Associateship of the Indian Statistical Institute (AISI) on the basis of report submitted, of professional work.
 - (ii) Associate Fellowship of the Indian Statistical Institute (AFISI) on the basis of report/thesis submitted of professional work.
6. *Awards for Outstanding Contributions*
 - (i) D.Sc. degree of the Institute in recognition of outstanding published work in the field of statistics.
 - (ii) Fellowship of the Indian Statistical Institute for fundamental contributions in the field of statistics.

A table showing the number of students in the various courses is given in *Annexure 3*.

8.1. *Computer Science Unit* : After the formation of the Electronic Data Processing and Computation Unit, outside of the grant-in-aid sectors, to operate the IBM 1401 EDPM

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and auxiliary machines on business-like lines, the work of the Research and Training School in this field was reorganised. The Computer Science Unit (C.S.U.) was formed to take up teaching and research in the field of electronic computer-logic, software and applications.

In all the degree and other courses in statistics at the Institute, the use of electronic computers in statistical computations is now a compulsory subject of study. Occasional courses on FORTRAN programming are also arranged for the scientific staff of the Institute. There is a nine-month course on automatic data processing systems. The following additional courses were also held during the year :

1. Specialization in Computer Science in the M.Stat. Course;
2. A Three-month Intensive Course on Automatic Data Processing for trainees sponsored by governmental agencies. The total number of persons trained during the year was about 175 at all levels.

An important activity of the C.S.U. is the development of general programming packages for use on the IBM 1401 EDPM system installed at the Institute.

Annexure 5 shows a list of scientific computation and the processing of survey data in the Computer Science Unit and the Electronic Data Processing and Computation Unit.

7. VISITING SCIENTISTS

A number of distinguished foreign scientists participated in the research, training and other activities of the Institute during the year. Some of them stayed at the Institute for fairly long periods and assisted in the regular work of the Institute, while others came for short periods and gave lectures and participated in seminars. Most of them were available for consultations by research workers and teachers of the Institute. A number of these scientists also held consultations with Government departments.

I. The following foreign scientists worked at the Institute for fairly long periods during the year :

1. T. Burgess, Senior Research Officer, London School of Economics, worked in the Planning Unit of the Institute at Delhi during February 1965 to April 1966, on "Manpower and Educational Development in India."

2-4. Professors N. N. Cheboxarov, M. K. Kudryavtsev and A. A. Zoubov, Institute of Ethnography, USSR Academy of Sciences, Moscow. (1 March-14 April 1966). The purpose of their visit was to undertake a collaborative anthropological survey between the USSR Academy of Sciences and the Indian Statistical Institute. They visited Bangalore, Delhi, Giridih and Ranchi and made some preliminary studies.

5-6. Dr. J. A. Gallagher, Professor of Commonwealth History, Balliol College, University of Oxford, U.K. and Dr. Anil Seal, Fellow, Trinity College, University of Cambridge, U.K., visited the Institute in December 1965, in connection with the programme of research in the Historical Research Unit. They had discussions in Calcutta with the scholars of the Historical Research Unit, and they spent most of their time in Delhi working in the National Archives. Both Dr. Gallagher and Dr. Seal visited Ahmedabad and Bombay in connection with the microfilming of Sardar Vallabhbhai Patel's papers. They also visited the centre of the Institute at Giridih.

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7. Mr. Toehiro Haga, Chemical Engineer and specialist in Statistical Quality Control, Technical Research Department, Sanyo Pulp Co. Ltd., Tokyo, Japan (*11 December 1965-30 April 1966*). He joined the International Statistical Education Centre as a visiting teacher in SQC and stayed through the entire Nineteenth Term. Mr. Haga delivered a series of lectures on techniques of SQC to the trainees of the Nineteenth Term and taught SQC methods to the trainees specialising in the subject. Mr. Haga also accompanied the ISEC trainees specialising in SQC to different manufacturing concerns in and around Calcutta to get first-hand experience in the application of SQC methods to Indian industries. During his stay at the Centre, Mr. Haga visited Madras, Bangalore, Ernakulam, Bombay and Delhi to acquaint himself with the application of SQC techniques in the factories serviced by the SQC Units of the Indian Statistical Institute. He also gave a few lectures to the trainees of the Diploma Course in SQC in Calcutta and a number of talks to the members of the technical staff of the different SQC units. He visited the centre of the Institute at Giridih.

8. Mr. H. Kerner, Resident Consultant, Operational Research Division, Urwick Orr and Partners International Ltd., London, U.K., who had come to the Institute as an expert in operations research under the UNTAB programme, concluded his assignment during the year (*23 August 1964-4 July 1965*). After completing his teaching assignment in the Post-Graduate Diploma Course in Calcutta in June 1965, Mr. Kerner participated in several training courses, lectures and discussion-meetings organized by the SQC Units in different parts of the country. His visit helped in extending industrial contacts of the SQC Units through problems involving operations-research techniques.

9. Dr. G. G. Kotovaky, Institute of Peoples of Asia, USSR Academy of Sciences, Moscow. (*21 December 1965-23 February 1966*). He toured India in connection with his studies and had discussions with members of the Planning Commission, officials in the Central and State Governments, universities, research institutions and agro-economic research centres, etc.

10. Dr. P. R. Krishnaiah, a research mathematical statistician, Aerospace Research Laboratories, U.S. Air Force, Ohio, USA (*28 December 1965-2 July 1966*). Dr. Krishnaiah, who was on sabbatical leave, spent most of his time at the Institute in research and also wrote some papers in collaboration with staff members. He held a number of seminars on simultaneous tests of hypotheses.

11. Mr. P. R. G. Layard, Deputy Director, Unit for Economic and Statistical Studies on Higher Education, London School of Economics, worked in the Planning Unit of the Institute at Delhi from *November 1965 to January 1966*, in collaboration with the Perspective Planning Division of the Planning Commission, Government of India. The memorandum from the joint project, "Manpower and Educational Development in India, 1961-1986: December 1965," was submitted to the Education Commission, during the year.

12. Mr. R. W. Moss, Research Officer, London School of Economics, worked in the Planning Unit of the Institute at Delhi from *February to December 1965*, on "Manpower and Educational Development in India" in collaboration with the Perspective Planning Division of the Planning Commission, Government of India.

13. Dr. P. Polk, Professor of Biology, University of Brussels, Belgium (*18 May-16 October 1965*). During his stay, he studied the marine fauna at Waltair and submitted a report on the establishment of a research unit for increasing marine food production, before leaving India. *Lecture: Ecological Problems of the Sluice Dock and Ostend.*

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14. Professor R. L. M. Syngé, Nobel Laureate, F.R.S., Rowett Research Institute, Aberdeen, U.K. (19 April-8 May 1965). He examined the work of the research units of the Institute as a guest-scientist and suggested that the Institute take up the following projects consistent with the existing lines of research and to explain the phenomenon of plant interaction observed by the Institute workers: (a) The fate of aromatic and other plant residues in the soil and their fate on ion exchange capacity in soils; (b) chemical aspect of plant interaction with which the Botany Research Unit has been actively engaged for the last two years; and (c) plant constituents which are important for human and animal nutrition including toxic dietary components. *Lecture*: The digestive processes of the ruminant animal: its place in rural economy.

15. Dr. F. Vogel, Director, Institute for Anthropology and Human Genetics, University of Heidelberg, West Germany (2 March-26 April 1966). He carried out an extensive field survey in collaboration with the anthropologists of the Institute to study the relation between the ABO blood group system and the incidence and virulence of small-pox. *Lecture*: Chemical Mutagenesis.

Dr. Vogel delivered the convocation address entitled "Human genetics and the biological future of man" at the Fourth Annual Convocation of the Indian Statistical Institute held on 12 April 1966.

II. The following is a list of scientists and scholars who paid brief visits:—

1. Mr. William Bennet, Director, United States Information Service in India, visited the Documentation Research and Training Centre, Indian Statistical Institute, Bangalore, on 3 December 1965. *Lecture*: Librarian's Role in Service to Readers.

2. Dr. Bela Csikos-nagy, Chairman, National Price Board of Hungary; Professor, University of Hungary; Member, Presidium, Hungarian Economic Association. (29 October-14 November 1965). His visits to the centres of the Institute at Calcutta, Giridih, Bombay and Delhi were arranged under the Indo-Hungarian Cultural Exchange Programme. His programme included some lectures, seminars, and discussions on problems of planning in Delhi and Calcutta. *Two seminars at Delhi*: "Role of prices in socialist economy". *Two seminars at Calcutta*: (i) The Socialist Price System, (ii) Calculation of the social cost of production, and *one lecture*: Towards economic reform in Hungary.

3. Dr. P. C. Das, Peoples' Friendship University, Moscow (30 December 1965). *Lecture*: Problem of quality in automatic control systems.

4. Professor E. Erdos, Institute of Mathematics, Hungarian Academy of Sciences, Budapest, Hungary (2-6 December 1965). *Three lectures*: (i) Applications of probability theory to combinatorial problems and graph theory, (ii) Applications of probability theory to number theory; (iii) Applications of probability theory to analysis.

5. Academician V. A. Englehardt, Director, Institute of Molecular Biology, USSR Academy of Sciences, Moscow (14-17 January 1966). *Lecture*: Molecular recognition as basis of biological information transfer.

6. Professor Alexander Eakstein, Professor of Economics, University of Michigan, Ann Arbor, USA. (6 February 1966). *Lecture*: Economic development strategies in mainland China.

7. Professor B. Gyires, Mathematical Institute, University of Debrecan, Hungary (20-21 April 1966). *Lectures*: (i) Central limit theorems, and (ii) Topelitz matrices.

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8. Dr. R. K. Herlekar, University of Bombay (3 March 1966). *Lecture* : Optimum points of stratification.
9. Dr. Q. M. Hoossain, Director, Institute of Statistical Research and Training, University of Daaca, E. Pakistan (20-30 July 1965). *Lecture* : Organization and activities of the Institute of Statistical Research and Training.
10. Professor A. T. James, Department of Mathematics, University of Adelaide, Australia (28-30 July 1965). *Lecture* : Multivariate distributions.
11. Professor A. T. A. Learmonth, Department of Geography, Australian National University, Australia (12-16 December 1965). He visited the Regional Survey Unit at Delhi for discussions and also held a seminar on "The Pilot Regional Survey of Mysore State, 1956-58."
12. Professor R. W. William J. Mebok, Pontifical Gregorian University, Rome, Italy. (29 December 1965). *Lecture* : Confessions of a Replicated Interpenetrating Sub-Sample.
13. Dr. P. Kesava Menon, Director, Joint Cipher Bureau, Ministry of Defence, Government of India, Delhi (17 May-4 June 1965). *Two lectures* : (i) Eulerian circuits, (ii) Imbedding the incidence matrices of designs in groups.
14. Dr. L. C. Opherons, World Bank (22 September 1965). *Lecture at Mysore State Branch* : Internal rate of return of industrial project.
15. Mr. B. I. Palmer, Education Officer, The British Library Association, U.K., delivered lectures at the Documentation Research and Training Centre, Indian Statistical Institute, Bangalore, from 19 to 23 December 1965.
16. Professor E. J. G. Pitman, University of Tasmania, Hobart, Australia. (8-11 September 1965). *Lecture* : Satisfactory regularity conditions for the Cramer-Rao inequality.
17. Shri V. K. Rahatgi, The University, Sheffield, U.K. (13-15 April 1965). *Lectures* : (i) Convergence rates in law of large numbers, (ii) Some difference equation in probability and statistics.
18. Dr. Shoji Shiba, Associate Professor, Hokkaido University, Japan, visited the Documentation Research and Training Centre, Indian Statistical Institute, Bangalore, on 8 July 1965. *Lecture* : Operations research. A lecture on a similar topic was also given at the Mysore State Branch on 7 July 1965.
19. Professor R. W. Steel, Department of Geography, University of Liverpool (7-10 November 1965). He had discussions with the workers of Planning and Regional Survey Unit, Delhi, on regional development and the geographers' contribution.
20. Shri Jagjit Singh, General Manager, North-East Frontier Railway (11 April 1966). *Lecture* : Operations Research in North-East Frontier Railway.
21. Dr. D. V. Subbarao, Department of Zoology, Andhra University, Waltair. 4-16 October 1965. *Lecture* : Problems of primary organic production in the Bay of Bengal.
22. Dr. T. A. Tearymakov, Uzbekistan's Minister for Higher Secondary Specialised Education (17 January 1966). *Lecture* : Topological semi-fields and Markov chains.
23. Dr. G. Tintner, Professor of Economics, Iowa State University, USA. (26 August-3 September 1965). *Lecture* : Applications of information theory to econometric estimation.

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24. Mr. G. Wiederhold. (Specialist on Programming in the United States), Indo-American Programme Computer Centre, Indian Institute of Technology, Kanpur (22-27 May 1965). Lectures : (i) Computing systems, (ii) Methods of computing I and II and (iii) Automatic programming languages.

8. INTERNATIONAL STATISTICAL EDUCATION CENTRE (ISEC)

Twenty-two students from eleven countries in the Middle, South and the Far East and also from Africa attended the Nineteenth Term and Special Courses of the International Statistical Education Centre, Calcutta. The ISEC is operated jointly by the International Statistical Institute and the Indian Statistical Institute, under the auspices of the UNESCO and the Government of India. The Nineteenth Term functioned under a Board of Directors with Professor P. C. Mahalanobis as Chairman.

The Government of India awarded a total of 14 fellowships and scholarships for the foreign trainees in the Nineteenth Term, under the Technical Co-operation Scheme of the Colombo Plan (10), Special Commonwealth African Assistance Plan (2), UNESCO Emergency Programme for Africa (1), Ministry of Education General Cultural Scholarship Scheme (1).

The Nineteenth Term opened on 15 July 1965. The training imparted included lectures, laboratory work, project training, assisted reading and field work. The first three months at Calcutta were devoted to general statistical methods including auxiliary mathematics, computational techniques, demography and vital statistics, economics and statistical organization and procedures. As in the previous terms, training in governmental statistics was given at the Central Statistical Organisation, New Delhi. General lectures were given on sample survey techniques, with special reference to the National Sample Survey, Statistical Quality Control, Advanced Statistical Methods, Analysis of Variance, Elements of the Theory of the Design of Experiments and Economic Planning. The trainees also benefitted considerably by participating in a sample survey project. They also received practical training in crop-cutting experiments.

In the final examinations, 13 trainees of the regular course were recommended Certificates of Merit, while five were recommended Certificates of Attendance. The certificates were awarded at the Fourth Convocation of the Indian Statistical Institute held on 12 April 1966.

9. PROFESSIONAL EXAMINATIONS

Statistician's Diploma Examination : This examination was held from 19 to 29 May 1965 and from 17 to 30 November 1965 at Bombay, Calcutta, New Delhi, Giridih, Hyderabad (only in May), Lucknow and Madras. During the May session, 105 candidates registered, 90 appeared and 48 passed in one or more papers. In the November session, 104 candidates registered, 89 appeared and 40 candidates passed in one or more papers.

In 1965-66, the Statistician's Diploma was awarded to four candidates who passed completely in all the papers prescribed for the examination. The total number of candidates who have been awarded the Statistician's Diploma up to the end of March 1966 is 110.

Computer's Certificate Examination : The examination for this Certificate was held from 19 to 25 May 1964 and from 23 to 27 November 1965 at Calcutta, New Delhi, Giridih, Hyderabad (only in May), Madras and Trivandrum (only in May). In May, 34

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candidates registered and appeared, and 14 passed in one or more papers, while in November, 23 candidates registered and appeared and 13 passed in one or more papers.

In 1965-66, nine candidates qualified for the award of the Computer's Certificate. The total number of candidates who have qualified for this certificate up to the end of March 1965 is 155.

Statistical Field Survey Certificate (Junior and Senior) and Diploma Examination : These examinations were held from 25 to 30 November 1965 at Calcutta and Giridih. In the Junior Certificate Examination, one candidate registered, appeared and passed in Paper III, while in the Senior Certificate Examination, three candidates registered and appeared and two passed in one or more papers. The only candidate who registered and appeared for the Diploma examination passed in Papers I, II and III.

Punch Card Machine Operator's Certificate Examination : This examination was held for the second time from 19 to 26 May 1965 at Giridih. Only one candidate who registered, passed in all the five papers of the examination and became eligible for the award of the certificate.

Punch Card Data Processing Diploma Examination : This examination was held for the first time from 17 to 30 November 1965 at Calcutta, Giridih and Lucknow centres. The two candidates who registered and appeared passed in one or more papers.

10. FOURTH CONVOCATION

The Institute held its Fourth Convocation for awarding the B.Stat., M.Stat. and Ph.D. degrees on 12 April 1966. Certificates were also distributed at this function to the trainees of the International Statistical Education Centre and diplomas to the successful candidates in the Statistician's Diploma and Diploma in Statistical Quality Control. National Professor S. N. Bose, F.R.S., Vice-President of the Institute, presided and Dr. Friedrich Vogel, Director, Institute of Anthropology and Human Genetics, University of Heidelberg, West Germany, delivered the convocation address entitled "Human Genetics and the Biological Future of Man". Dr. C. R. Rao, Director, Research and Training School, presented the annual review of research and training.

Shri K. P. S. Menon, Chairman of the Institute, addressed the gathering. Professor P. C. Mahalanobis, F.R.S., welcomed the guests and made a brief speech on the Institute's research policy.

Three candidates were awarded the Ph.D., 26 the M.Stat. degree by examination, 8 the M.Stat. degree by thesis, and 21 the B.Stat. degree. The Statistician's Diploma was awarded to 4 candidates, and 12 received the Diploma in Statistical Quality Control.

11. PLANNING DIVISION

11.1. *Planning and Regional Survey Unit (PRSU), New Delhi :* The PRSU continued its research work on economic planning and regional survey under the general supervision and guidance of Shri Pitambar Pant, Honorary Joint Secretary, Indian Statistical Institute and Adviser, Perspective Planning Division, Planning Commission. The PRSU maintained close collaboration with the Perspective Planning Division in its research activities and a number of studies were carried out jointly. Some foreign experts on planning

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visited the Unit during the year. Those experts, who stayed for sometime, were engaged in joint studies, while others conducted seminars and informal discussions. Four seminars and lectures by foreign scientists were organized. A memorandum was submitted to the Education Commission from the joint project of the Planning Unit of the Indian Statistical Institute, New Delhi, and the Unit for Economic and Statistical Studies on Higher Education, London School of Economics, in collaboration with the Perspective Planning Division, Planning Commission: *Manpower and Educational Development in India (1961-1986)*: December 1965.

The Research and Administration Committee supervised the day-to-day research and administrative work of the Unit. About 385 books on statistics, economics, and econometrics were acquired for a small and specialized library. Thirteen papers were published and six papers sent for publication by the workers of the Unit (*Annexure 4*).

11.2. *Planning Division, Calcutta*: The main fields of research covered in Calcutta were national income and allied topics, consumer behaviour, macro-economic programming, econometrics and miscellaneous other studies. Twelve seminars and lectures were organised in the Planning Division during the year. Among the foreign experts who took part, particular mention may be made of Dr. Gerhard Tintner, Professor of Economics, Iowa State University, U.S.A.; Dr. Bela Csikos-nagy, Chairman, National Price Board of Hungary; and Dr. Oden Elteto, Mathematical Statistician, Hungarian Statistical Office. Courses of lectures on selected topics like Linear Programming, Linear Algebra, Theory of Positive Matrices and Econometrics were also given by staff members and others. As in previous years, the Planning Division shared with the Delhi Planning Unit the responsibility of teaching economics and econometrics in the Research and Training School and the International Statistical Education Centre (ISEC). The courses which were organized in collaboration with the NSS and other departments covered the B.Stat. and M.Stat. degree courses, Statistical Officer's Training Course, Statistical Course of the ISEC and the One Year Evening Course for Statisticians. Apart from organising lectures and practical classes for the above courses, the Planning Division arranged an intensive one-year training course in econometrics for an ISEC student. Besides 20 papers published and 16 papers submitted for publication (*Annexure 4*), 21 working papers and technical notes were also prepared by the workers.

A new series of mimeographed publications, *Studies in Quantitative Economics*, partly based on the existing mimeographed series of working papers, were initiated. The first issue, *Operational Research Models used for Planning in India* by P. C. Mahalanobis and M. Mukherjee, was released during the year.

A group of workers, engaged in research on family planning, directed their major effort during the year towards the collection of base-line data on socio-economic characteristics and fertility from sample populations of the Hooghly District and the continuation of the action programme. One paper was published and another sent for publication (*Annexure 4*) by a senior worker of the Family Planning Research Unit.

A working centre, *Kalyansri*, for some studies on cottage industries was started by the Institute in 1956. Three technical notes were prepared earlier on the Ambar Charka, on the cost and productivity of different crafts, and on the general economic aspects of different crafts. During the year, a survey on small-scale tailoring industry in the Baranagar Municipal area was completed for a comparative study with the Kalyansri tailoring

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department. The Centre is run more or less on a self-supporting basis, the workers being paid at piece-rates out of the sale proceeds of the articles manufactured in the Centre.

12. NATIONAL SAMPLE SURVEY PROJECT

The NSS division of the Institute functions as the technical wing of the Government of India's National Sample Survey Organization. The twentieth round of the regular socio-economic survey and the Annual Survey of Industries for 1964 and 1965 were in operation during the year. About ten different country-wide enquiries were conducted in the socio-economic surveys. The special integrated schedule covering all economic aspects of a household was also included in this year's programme.

The activities of the Division during the year covered the following types of work :

- (a) the statistical planning of surveys, including sample designs, concepts and definitions, methods of collecting primary information, preparation of schedules of enquiries, and training of field workers and the technical workers relating to field enquiries;
- (b) the programme of statistical process and the laying down of detailed specifications;
- (c) the conduct of the field work in West Bengal and Bombay City, together with experimental researches for the improvement of sample design and techniques; and
- (d) the processing of NSS data.

The processing and tabulation work covered data collected in the fifteenth to nineteenth rounds of the socio-economic surveys, the sample survey of manufacturing industries from 1960 to 1964 and family living surveys (middle class and working class). The tabulation and processing work was carried out in Calcutta (Baranagar), Delhi and Giridih. The number of schedules scrutinized was 6.5 lakhs, the number of cards punched was 29 lakhs and there were 248 lakh tabulator card passages.

The total equipment consisted of seventeen tabulator units with necessary auxiliary machines, of which eight units were in Calcutta, five in Delhi and four in Giridih.

Seven reports were printed and five draft reports submitted to the Government in the course of year (*Annexure 6*). The printing of the final reports was taken over by the Central Government from this year.

The lists of papers published by the workers and those sent for publication are shown in *Annexure 4*.

13. APPRAISAL DIVISION

Research incorporating statistical and psychometric theory was oriented toward the development of improved methods of educational evaluation and personnel selection. Empirical studies were conducted on psycholinguistic meaning systems in the Bengali language, effect of medium of instruction and examination on performance of science students, and "new mathematics" at the elementary education level. Theoretical studies were carried out on sampling estimates for psychometric errors of measurement, and on component scores for selection and classification. Pilot studies for the project on psychological gerontology have been undertaken.

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14. ELECTRONICS DIVISION

The ISIJU-1 digital computer, the work on which was started in 1961 under a joint project of the Indian Statistical Institute and the Jadavpur University, was formally commissioned by Shri M. C. Chagla, Union Minister of Education, on 2 April 1966.

Computation service given during the year consisted mostly of programming service for the IBM 1401 Electronic Data Processing Machine. Research on computer technology and allied topics was continued, with emphasis on research on computer logic and reliability studies for digital systems as a preliminary investigation for the design of the second computer. Some fundamental research on network analysis was completed, leading to a mathematical deduction of the fundamental Kirchhoff's Laws in its true natural form.

Practical training was imparted to post-M.Sc. and graduate trainees from the Institute of Radio, Physics and Electronics, Calcutta University, and the Department of Electronics and Tele-communications, Jadavpur University.

A list of papers published by the staff members and those sent for publication is given in *Annexure 4*.

15. DEVELOPMENT WORKSHOP

Production and development projects were continued as before. Preparations were made for reorganizing the workshop under a new set-up viz., Sankhyā Yantra Private Ltd., which had been constituted for the purpose of manufacturing calculating equipment.

At this stage, Government of India by its letter No. 14/19/65-Estt.III dated 30 November 1965 informed the Institute that they would discontinue the grant for the UNTAA Sector after 31 March 1966. In their meeting of 10 December 1965, the Council decided that this matter would be examined further with a view inter alia to see if the sector could be run as a self-financing unit.

The attempts and negotiations which were made to see if sufficient work would be obtained for the UNTAA workshop to make itself self-financing were reported to the Council on 26 March 1966. The Council, after prolonged discussion, decided that "the workers of the UNTAA sector may be retained for a period of six months from 1 April 1966, subject to the following conditions:

(a) Every effort would be made to run the sector on a commercial basis, so that it becomes self-financing within this period;

(b) An Expert Committee should examine the commercial aspect of the Project and submit a report to the Council for its consideration at the latest by the end of May 1966.

The Expert Committee met on 5 April 1966 and it came to the conclusion that—

(a) with the existing set-up and organisation, it would be neither practical nor expedient to plan the running of the Workshop on a commercial basis;

(b) according to technical opinion the Workshop would not be able to run profitably, only on the basis of securing job orders for different types of components and tools from various other industries. This would take a long time to become profitable;

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(c) the plan to run this unit by the limited liability company 'Sankhyā Yantra Private Limited' already registered, would not also be effective as the basic problems would still remain.

The Chairman and the other members were of the view that maximum utility from these machines and equipment could be derived if the entire lot of equipment were handed over to an existing organisation for running it as an adjunct or subsidiary to a main unit. Having regard to the past history and background, it would perhaps be better if an offer was made to Government establishments or public sector units in Calcutta for taking over the running of the Workshop in the existing premises on certain agreed terms. To this end, immediate enquiries could be made from the two existing Calcutta organisations, viz., the Garden Reach Workshops Limited and the National Instruments Factory who may have use for this equipment*.

16. DOCUMENTATION RESEARCH AND TRAINING CENTRE (DRTC)

All the eight candidates of the 1963-64 batch, who sat for the final examination, passed it (three with distinction). The eight trainees of the 1964-65 batch took the post-course apprenticeship in the Indian Statistical Institute, Calcutta, from 15 April to 10 June 1965. The formal training course was completed for the eight trainees of the 1965-66 batch.

Important activities during the year included the continuation of the work on the design of depth schedule; a methodology for increasing the productivity in the design work which was formulated and tested; and over 50 depth schedules, largely for subjects in Commodity Production Engineering, were worked out. The use of the methodology for the design of depth classification, developed at the DRTC, is now being extended to also cover subjects in social sciences. Certain principles for the enumeration of Basic Classes which had been formulated earlier are now being tested. The problem of homonyms in Class Index Heading derived by Chain Procedure was examined and the solution for resolving the homonyms was also worked out.

The Third Annual Seminar of the DRTC, held in Bangalore from 19 to 23 December 1965, was attended by nearly 100 delegates. Twenty papers submitted for the seminar were published in a bound volume. The Board of Studies, DRTC, met on 21 June and 28 December 1965. At the request of the Gandhi Smarak Nidhi, a schedule was constructed for the classification of works on and by Gandhiji, along with a time-scheme for the preparation of a bibliography, to be published during the Centenary Celebrations of Mahatma Gandhi in 1969. The Ranganathan Commemoration Volume Committee, in association with the Mysore Library Association, presented the Ranganathan Festschrift Volume 1 entitled *Library Science Today* to Dr. S. R. Ranganathan on 18 December 1965.

* Subsequent developments (upto end of October 1966) briefly are (1) Council decided to give notice to the staff concerned, (2) notices were issued accordingly, (3) negotiations were carried out with M/s. Garden Reach Workshops Ltd., a Government of India enterprise, for taking over the equipment along with as many workers as possible, (4) certain workers under notice obtained a rule from the Calcutta High Court against the notice, mainly on the ground of requirement of section 7(a) of the Indian Statistical Institute Act not having been fulfilled, which was made absolute; an appeal has been filed against the rule, (5) formal permission has been obtained from Government under section 7(a) of the Indian Statistical Institute Act to close down the Workshop.

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Consultant service was rendered by the DRTC to educational institutions and government departments, including the Union Ministry of Home Affairs and the Central Secretariat, Government of India, New Delhi.

Weekly meetings of the Library Research Circle were held regularly in the DRTC for discussions relating to library science.

The DRTC staff contributed eight papers to the Documentation Session of the Ninth Indian Standards Convention held in Bangalore on 18 December 1965. The staff members also contributed 47 papers to various journals. A list is given in *Annexure 4*.

17. LIBRARY

The Central Library at Banaragar (with branches at Giridih, Delhi, Bombay and Bangalore) has at present a collection of 1,10,720 books and bound journals, 28,000 reprints, monographs, specialised technical reports, and also a large collection of microfilms and photo-prints. During the year, the library acquired 4,095 volumes and received 2,318 periodicals. The library also acquired a positive microfilm set each of the Sapru Papers, Series III, and the *Tattva Bodhini Patrika*, Vols. 13-23. Scientific and technical publications in Russian and Japanese were received from various agencies under the existing book-exchange arrangements.

The workers' circulating library had a collection of 21,263 books at the end of the year.

The library issued documentation lists and compiled subject bibliographies and reading lists on different subjects. The following bibliographies were prepared during the period: (1) Books on library science available in the ISI Library for the Union Catalogue of Library Science Books, and (2) List of American Serials received in the ISI Library.

Thirty-five English translations were made from scientific documents in German, French, Spanish, Chinese, Japanese and Russian.

The Photographic Unit carried out documentary reproduction work and also provided photographs required by the scientific departments. The Museum and the Records Unit made systematic acquisitions, indexing and filing specimens, maps and other materials.

The Library borrowed and lent books to 22 Indian libraries.

18. STATISTICAL QUALITY CONTROL (SQC)

The SQC Division was established with the principal object of fostering the growth and development of SQC techniques in various industries in India to improve quality, increase productivity and reduce cost. It functions under the guidance of the Policy Advisory Committee for SQC constituted by the Government of India. In furtherance of its objectives, the Division operates primarily through the SQC units established in different parts of India.

The SQC Units functioned during the year in nine centres: Bangalore, Baroda, Bombay, Calcutta, Coimbatore, Delhi, Ernakulam, Madras, and Trivandrum and rendered effective SQC service to 75 factories. While service was extended to 14 additional plants during the year, servicing in 15 plants ceased after completion of the work. The intensity of the service was increased and special arrangements made to service some important organizations in the public sector, including defence establishments.

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As a part of the promotional campaign, the technical officers of the division gave 39 lectures and talks, organized 8 seminars and symposiums, and attended 27 conferences and seminars organized by various agencies in different parts of the country. They paid 44 promotional visits to plants, carried out six pilot studies in non-member industrial establishments and also prepared seven technical papers. They were also engaged in preparing a manual on the application of SQC in foundry, based on the experience of the work in the units. Short pamphlets on the application of SQC in textile industries and in light engineering plants were also prepared.

The development of SQC in the country has been achieved largely through the training of personnel at different levels and the Institute has been continuously engaged in this educational programme. Six basic training courses were conducted by the Bangalore, Bombay, Calcutta, Delhi and Madras Units. A special course of Operational Research was also organized at Bangalore. In all 119 candidates were given training in these courses. In addition, over 580 persons were given in-plant training, as compared to 370 last year. The details of the training courses are given in *Annexure 3*.

The one-year post-graduate diploma course was specially devised to train engineers, technologists, scientists and statisticians in the theory and practice of Statistical Quality Control to a level of professional competency. During the year, training is being imparted to 26 persons, including four sponsored by the industries. In the first year, 23 persons who successfully completed the training courses are now well employed.

To secure competent staff for SQC work, apprentices are given one year's intensive on-the-job training in member factories under the guidance of the senior staff. The SQC Diploma Course also provides apprentices who are given intensive training and, if suitable, recruited to the regular staff. Four apprentices were receiving training during the year.

Mr. Hans Kerner, Resident Consultant, Operations Research Division, Urwick Orr and Partners International Ltd., London, U.K., came to the Institute as an expert in Operations Research under the UNTAB scheme in August 1964. His assignment continued during the year. After completing his teaching assignment in the Post-Graduate Diploma Course in Calcutta in June 1965, Mr. Kerner participated in several training courses, lectures and discussion-meetings organized by the SQC units all over the country. Mr. Kerner left India in July 1965.

The SQC units have been working in close cooperation with other institutes like the National and Local Productivity Councils, Institutes of Management, professional organizations like the Institute of Engineers, Textile Associations and Small Scale Industries Services and Training Institutes etc., in the promotion of productivity and management techniques involving SQC. They also participated in the training courses and other programmes organized by the sister institutions. One paper entitled 'Standardization via Cost Reduction' was read at the Ninth Standards Convention in Bangalore. The staff also prepared draft Indian Standards for (i) interpretation of test results using precision data and (ii) control charts for variables.

The staff position during the year remained practically the same as in the previous year with 41 technical officers, two graduate assistants and three investigators. Two members of the technical staff went to the United States of America for higher studies.

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The total estimated expenditure for the year including expenditure on the post-graduate diploma course was Rs. 12.39 lakhs. While the estimated income was Rs. 4.85 lakhs, the actual income is likely to exceed Rs. 5 lakhs.

19. PUBLICATIONS

The following were published :

Sankhyā : The Indian Journal of Statistics : Volume 27, Series A, Parts 2, 3, 4 : Volume 28, Series A, Part 1 ; Volume 27, Series B, 4 parts.

Indian Statistical Series : Twenty-two books were published in the series up to the end of March 1965. A book *Surveys and Plans for Rural Industries* by Nihar Chandra Chakravarti was printed during the year.

Samvadadhvam : The House Journal of the Indian Statistical Institute, Volume 6, No. 4.

20. VISITORS

Over 300 visitors from India and abroad (from 19 countries and international organisations) came to the Institute during the year.

21. CONSTRUCTION OF BUILDINGS

From 1962 to 1966, floor space to the extent to 86,000 square feet of *pucca* buildings and 17,000 square feet of *pucca* shed including UNTAA workshop were constructed.

Out of the total floor space so far constructed, about 65,000 square feet of *pucca* buildings and 17,000 square feet of sheds were made habitable and are under use.

22. BRANCHES

22.1. *Mysore State Branch* : There were 33 members of different categories at the end of the year. The office bearers of the Branch for 1965-66 were elected at the twelfth annual general body meeting held on 11 October 1965 and also at the meeting of the Executive Committee held on 16 November 1965.

The admission test for the Indian Institute of Management, Calcutta, designed by the Psychometric Unit (R.T.S.), Indian Statistical Institute, was held in the Bangalore Centre on 6 March 1966. Under the auspices of the Branch and the Mysore State Productivity Council, a three-month evening course on statistics applied to industry was organized.

The following foreign visitors gave lectures : Dr. S. Shiba, Associate Professor, Hokkaido University, Japan; Mr. L. C. Ophorons, World Bank; and Mr. T. Haga, Consultant on Statistical Quality Control, Technical Research Department, Sanyo Pulp Co. Ltd., Tokyo, Japan.

22.2. *Bombay Branch* : Two meetings of the Council were held on 9 August 1965 and 27 December 1965. One meeting of the general body, held on 9 August 1965, elected the office-bearers for the year 1965-66.

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The Branch continued to render general assistance in the conduct of NSS field work for the nineteenth round (completed in July 1965) and the twentieth round (started in July 1965) in Bombay City entrusted to the Indian Statistical Institute.

Five candidates were declared successful in the final examination for the fifth batch of the One-Year Evening Course in Statistics held in August 1965. Fifteen students were selected, out of 31 who had applied, after an admission test held on 22 August 1965, for the sixth batch of the One-year Evening Course in Statistics.

The Statistician's Diploma Examinations of the Indian Statistical Institute were held in the Bombay Centre in May and November 1965.

Six teachers gave lectures for the One-Year Evening Course in Statistics.

By the end of March 1966, the library had 894 books and 447 periodicals. During the year, the library acquired 224 volumes and 87 periodicals.

22.3. *Kerala Branch*: The One-Year Evening Course in Statistics, started in Trivandrum in March 1963, was conducted by the Kerala Branch during the year, on behalf of the Research and Training School, Indian Statistical Institute. Two students were admitted to the course, out of the seven who had applied. Four part-time teachers gave lectures for the evening course.

23. MISCELLANEOUS

By a notification dated 15 February 1966, the Government of India constituted a Review Committee under the Chairmanship of Professor Humayun Kabir, M.P., under sub-section (i) of Section 9 of the Indian Statistical Act 1959 (57 of 1959). The Committee consists of eight members. The notification is reproduced in full in *Annexure 7*.

CORRECTION

P. 25, Section 23. *Miscellaneous*, line 3, for "Indian Statistical Act 1959" read "Indian Statistical Institute Act 1959."

Annexure I : List of Office-bearers and Members of the Council, Governing Body and Members of the Committees of the Council and Governing Body.

President : Shri Y. B. Chavan, Minister of Defence, Government of India.

Vice-Presidents : 1. Professor S. N. Bose, F.R.S., D.Sc., F.N.I., N.P.; 2. Professor D. N. Wadia, M.A., D.Sc., F.G.S., F.R.G.S., F.N.I., F.R.S.; 3. Professor D. R. Gadgil, M.A., M.Litt.; 4. Dr. S. R. Ranganathan, M.A., D.Litt., F.L.A., N.P.; 5. Shri Asoka Mehta, Deputy Chairman, Planning Commission, Government of India; 6. Shri Vishnu Sahay, Governor of Assam, and NEFA; 7. Shri P. C. Sen, Chief Minister, West Bengal.

*Honorary Vice-Presidents** : 1. Dr. C. D. Deshmukh, D.Sc. (Resigned from Presidency on 25 March 1964); 2. Sir D. N. Mitra (resigned from Chairmanship on 25 March 1964).

THE COUNCIL : 1965-66

Chairman : Shri K. P. S. Menon.

Vice-Chairmen : 1. Shri B. B. Ghosh, M.Sc., Chairman, Port Commissioners, Calcutta; 2. Dr. J. N. Mukherjee, D.Sc. (Lond.) F.C.S., F.N.I., F.A.S.; 3. Shri S. C. Roy, M.A., B.L.; 4. Shri Subimal Dutta, I.C.S. (Retd.).

*Additional Vice-Chairmen** : 1. Shri S. K. Wankhede (Bombay Branch), 2. Shri H. S. Narayana Rao (Mysore State Branch), 3. Professor Samuel Mathai (Kerala Branch).

Treasurer : Dr. S. C. Law, M.A., B.L., Ph.D., F.Z.S., M.B.O.U., F.N.I.

Secretary : Professor P. C. Mahalanobis, F.R.S., D.Sc., F.N.I.

Joint Secretaries : 1. Shri S. Basu, M.Sc., F.N.I.; 2. Shri N. C. Chakravarti, M.A.; 3. Shri S. K. Chowdhury, B.A.; 4. Shri Pitambar Pant, M.Sc.

Members of the Council : 1. Shri S. K. Acharyya, Bar-at-Law; 2. Shri R. Banerjee, I.A.S.; 3. Dr. U. P. Basu, D.Sc., F.N.I.; 4. Shri Chandi Das Chatterjee, M.Sc., B.L.; 5. Shri K. T. Chandy, L.L.M. (Lond.), Bar-at-Law; 6. Dr. N. Das, Ph.D. (Lond.), I.C.S. (Retd.); 7. Dr. Bhabatosh Dutta, M.A., Ph.D.; 8. Professor H. C. Ghosh, M.A., P.R.S.; 9. Shri D. B. Lahiri, M.Sc., F.N.I.; 10. Dr. P. S. Loknathan, D.Sc.; 11. Sm. Nirmalkumari Mahalanobis; 12. Dr. N. T. Mathew, M.A., M.Sc.; 13. Dr. B. S. Minhas, M.A., Ph.D.; 14. Shri Bhaskar Mitter; 15. Dr. I. G. Patel, B.A. (Cantab.), Ph.D. (Cantab.); 16. Dr. C. R. Rao, M.A., M.Sc., Ph.D., Sc.D. (Cantab.), F.N.I.; 17. Shri Satish Chandra Sen, M.A. LL.B.; 18. Dr. B. R. Seshachar, D.Sc., F.N.I.; 19. Shri Jagjit Singh, M.A., F.R.S.S.; 20. Shri Srinagabhushana, B.Sc., C.T.T., F.T.I., F.T.A.

Government Nominees on the Council : 1. Cabinet Secretary (Shri Dharma Vira or his representative), 2. Joint Secretary, F. & A., Ministry of Finance (Shri F. H. Vallibhoj). 3. Director, Central Statistical Organisation and ex-officio Joint Secretary, Department of Statistics, (Dr. K. R. Nair).

* Honorary Vice-Presidents and Additional Vice-Chairmen under Clause 2 of the Bye-laws relating to the election of the Institute.

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GOVERNING BODY OF THE RESEARCH AND TRAINING SCHOOL: 1965-66

1. Shri K. P. S. Menon, Chairman (*ex-officio*); 2. Professor P. C. Mahalanobis, Hon. Secretary (*ex-officio*); 3. Dr. C. R. Rao, Director, RTS (*ex-officio*); 4. Shri Dinesh Bahl, Managing Director, Capital Private Ltd. (*Associated Chambers of Commerce of India*); 5. Dr. S. N. Sen, M.A., Ph.D., Head of the Department of Economics, Calcutta University (*Indian Economic Association*); 6. Shri B. K. Dutta, Managing Director, United Bank of India Ltd. (*Federation of Indian Chambers of Commerce and Industry*); 7. Joint Director (Dr. K. S. Rao), Central Statistical Organisation (*Government of India*); 8. Joint Secretary (Shri F. H. Vallibhoy), Ministry of Finance, (*Financial Adviser to the Cabinet*), Department of Expenditure (*Government of India*); 9. Professor S. S. Shrikhande, F.N.I., Professor of Mathematics, Bombay University (*National Institute of Sciences of India*); 10. Dr. N. S. R. Sastry, M.A., M.Sc., Ph.D., Director of Statistics, Department of Research and Statistics, Reserve Bank of India (*Reserve Bank of India*); 11. Shri D. C. Pavate, M.A. (Cantab.), Vice-Chancellor, Karnatak University, Dharwar (*Inter-University Board*); and 12. Professor S. N. Bose, F.R.S.; 13. Dr. U. P. Basu, D.Sc., F.N.I., Director, Bengal Immunity Research Institute; 14. Shri Jagjit Singh, M.A., F.R.S.S., Director, Railway Board; 15. Dr. B. P. Adhikari, M.Sc., (Cal.), Dr. ea. Sc. (Paris); 16. Shri S. Basu, M.Sc., F.N.I.; 17. Shri P. Pant, M.Sc., (Council of the Indian Statistical Institute).

FINANCE COMMITTEE OF THE COUNCIL

1. Chairman of the Institute (*ex-officio*) or his nominee, 2. Secretary of the Institute (*ex-officio*) or his nominee, 3. Director of the Research and Training School (*ex-officio*) or his nominee, 4. Shri Pitambar Pant, 5. Shri K. T. Chandy, 6. Shri S. Dutt, 7. Shri N. C. Ghosh, 8. Shri S. C. Roy, 9. Shri S. K. Chowdhuri, (*Member-Secretary*) or a person nominated by the Secretary or the Chairman (or the Vice-Chairman authorised by the Chairman to make such nomination), 10 & 11. two representatives nominated by the Government of India, (Joint Secretary, Ministry of Finance, Shri F. H. Vallibhoy and Cabinet Secretary, Shri Dharma Vira or his representative).

FINANCE COMMITTEE OF THE GOVERNING BODY

1. Chairman of the Institute (*ex-officio*) or a Vice-Chairman, authorised by him; 2. Secretary of the Institute (*ex-officio*) or in his absence, a Joint Secretary; 3. Director, RTS, or a Joint Director, if any, in charge of the RTS; 4 & 5. two representatives of the Government of India (Dr. K. S. Rao and Shri F. H. Vallibhoy); 6. Representative of the Reserve Bank of India on the Governing Body (at present Dr. N. S. R. Sastry); 7 & 8. two representatives to be elected by the Governing Body from amongst themselves, Dr. U. P. Basu and Shri Dinesh Bahl.

JOURNAL COMMITTEE OF THE INSTITUTE

1. National Professor S. N. Bose, F.R.S., Chairman, 2. Shri D. B. Lahiri, 3. Dr. Sujit Kumar Mitra, 4. Dr. Jogabrata Roy, 5 & 6. Editors of *Sankhyā*, (*ex-officio*), 7. one representative of the Governing Body of the Research and Training School (Dr. V. S. Huzurbazar), 8. one member to be nominated by the Secretary of the Institute in consultation with the Director of the RTS, 9. Dr. J. Sethuraman, *Editorial Secretary*, 10. Shri A. Mahalanobis, *Secretary*.

INDIAN STATISTICAL INSTITUTE

EXAMINATIONS COMMITTEE OF THE INSTITUTE

1. Dr. B. P. Adhikari, 2. Sm. Chameli Bose, 3. Shri N. C. Chakravarti, 4. Dr. A. George, 5. Dr. V. S. Huzurbazar, 6. Shri D. B. Jadhvi, 7. Dr. B. S. Minhas, 8. Dr. S. K. Mitra, 9. Dr. G. R. Seth, 10. Shri J. M. Sengupta, 11. Professor P. N. Phutane, 12. Shri Sadaiv Sengupta, (*Member-Secretary*) and 13 & 14. two representatives of the Governing Body of the Research and Training School (Dr. K. S. Rao and Dr. S. N. Sen).

BOMBAY BRANCH : 1965-66

Honorary President : Shri S. K. Wankhedo

Honorary Vice-Presidents : Professor C. N. Vakil; Shri R. G. Saraiya, Dr. N. S. R. Sastry; Dr. C. Nanjundaya.

Honorary Secretary : Shri K. A. Antony

Honorary Joint-Secretary : Shri P. K. Bhowmick

Honorary Treasurer : Professor P. N. Phutane

Members of the Council : Dr. R. L. N. Iyengar; Shri S. V. Borkar, Professor V. B. Kamath; Professor N. S. Ramaswamy, 5. Dr. M. N. Vartak.

MYSORE STATE BRANCH : 1965-66

President : Shri H. S. Narayana Rao

Vice-President : Shri M. Narayana Iyenger

Secretary : Professor Srinagabhushana

Joint Secretary : Shri C. Ananthapadmanabha Setty

Treasurer : Shri M. V. Venkataraman

Executive Committee Members : Shri V. Narayana; Shri Bhavanishankar Rao, Shri S. K. Iyengar; Shri R. Natarajan; Shri P. S. Narayana; Shri H. C. Ramanna.

KERALA BRANCH : 1965-66

Chairman : Professor Samuel Mathai, Vice-Chancellor, University of Kerala, Trivandrum.

Secretary & Treasurer : Dr. (Miss) A. George, Professor of Statistics, University of Kerala, Trivandrum.

Members : Dr. Thangavelu, Principal, Medical College, Trivandrum; Dr. C. K. N. Nair, Principal, Agricultural College, Trivandrum; Shri B. K. Raja Rao, Representative of the Indian Statistical Institute.

Annexure 2. Important Business Transacted in Meetings of the Council and Governing Body, Research and Training School.

MEETINGS OF THE COUNCIL.

5 May 1965 : (1) Election of Professor P. N. Phutane as a member of the Examinations Committee in place of Shri M. A. Telang (resigned); (2) fixation of rate of interest on the Provident Fund deposits of subscribers; (3) provision of research facilities to Dr. S. R. Ranganathan, appointed a National Professor, for his work at the DRTC, Bangalore;

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(4) administrative arrangements of the Research and Training School; (5) appointment of a Committee consisting of the Chairman, Shri K. P. S. Menon, Professor P. C. Mahalanobis, Shri K. Ram and Shri S. Basu (*Member-Convenor*) for formulating instructions for the utilization of the development grant which may be received from the Government; (6) decision to approach the Government for with-held grant; (6) reorganisation of the teaching programme of the Institute; (8) fixation of the ceiling of grant for 1965-66; (9) placing of workers of the old scale of Rs. 65-95 on a new scale of Rs. 70-95; (10) medical benefits for the staff for 1964-65 and 1965-66.

28 May 1965 : (1) Report about the valuation of partly processed work of the NSS sector; (2) Institute's claim for reimbursement awaiting decision of the Government; (3) reorganisation of the teaching programme of the Research and Training School; (4) acceptance by the Research and Training School of a project of International Post-Graduate Course on Statistical Methods and Applications sponsored by the UNESCO; (5) Shri N. N. Majumdar, Financial and Administrative Adviser, authorized to exercise powers of Administrative Officer.

4 August 1965 : (1) Nominations for the election of office-bearers and members of the Council; (2) arrangements for training courses of the Research and Training School; (3) award of Ph.D. and B.Stat. degrees, (4) recommendations of the Examinations Committee on the results of professional examinations; (5) current programme of work and financial arrangements for the Fourth Five Year Plan; (6) administrative arrangements for the Research and Training School; (7) medical benefits for the staff for 1964-65; (8) purchase of land in Hyderabad.

26 August 1965 : (1) Nominations for the election of Vice-Presidents; (2) nominations for the election of members of the Council; (3) merging of dearness allowance; (4) medical benefits for the staff for 1964-65; (5) arrangement for training courses; (6) powers of Joint Secretary to be vested in the Director, Research and Training School; (7) informal discussions with the Statutory Committee for 1965-66—report of Professor P. C. Mahalanobis; (8) arrangement for the Data Processing Unit.

29 October 1965 : (1) Draft Annual Report for 1964-65; (2) Auditors' Report and Audited Statement of Accounts for 1964-65 and Balance Sheet as at 31 March 1965; (3) recommendations regarding the election of auditors for 1965-66; (4) inclusion of Shri Susanta Kumar Ghosh, B.Tech. (Hons.), A.M.I.E. (India), M.Soc., C.E. (France) in the panel of consulting architects for the Works Advisory Committee of the Institute; (5) award of Statistical Quality Control Diploma; (6) revised estimates of receipts and expenditure for the year 1965-66 and tentative estimates for 1966-67; (7) administrative arrangements—consideration of the appointment and Shri M. S. Bhatnagar, Deputy Auditor-General (Retd.) as Financial Adviser of the Institute.

10 December 1965 : (1) Acceptance of terms offered by Messrs. Lovelock & Lewes, for the period of 1965-66; (2) award of M.Stat. degree; (3) consideration of the recommendation of the Economy Committee—December 1965; (4) administrative arrangements; (5) appointment of Shri M. S. Bhatnagar as Financial Adviser; (6) Vice-Chairman, Shri S. Dutt, agreed to give some time to look after administrative and budgetary affairs of the Institute; (7) consideration of the Government's communication regarding the discontinuance of grants for the UNTAA sector.

INDIAN STATISTICAL INSTITUTE

26 March 1966 : (1) Representation from the ISIWO; (2) award of M.Stat. degree and approval of recommendation by the Examinations Committee; (3) Auditors' Report, Balance-Sheet and Audited Statement of Accounts for 1964-65; (4) re-revised budget estimates for 1965-66; (5) revised budget proposals for current expenditure (including capital expenditure) and revised budget for 1966-67; (6) retention of the UNTAA sector in 1966-67; (7) plan expenditure including capital expenditure for 1966-67; (8) budget estimates for Electronic Data Processing and Computing Unit; (9) nomination of the representatives of the Council and the Governing Body of the Research and Training School (Shri Pitambar Pant and Shri Jagjit Singh); (10) formation of Finance Committee of the Council, Journal Committee and Examinations Committee of the Institute for term 1965-66; (11) administrative arrangements; (12) rate of interest payable for ISI General Provident Fund for 1965-66; (13) medical assistance to employees, 1964-65; (14) proposal of the Home Ministry, Government of India, for training of officers of the Indian Statistical Service (ISS) in the Institute.

MEETINGS OF THE GOVERNING BODY, RESEARCH AND TRAINING SCHOOL

5 May 1965 : Item Nos. (3), (4), (5), (6), (7), (8), (9) and (10) of the Council meeting of the same date.

28 May 1965 : Item Nos. (3) & (4) of the Council meeting of the same date.

4 August 1965 : Item Nos. (2), (3), (5), (6) & (7), and (8) of the Council meeting of the same date.

26 August 1965 : Item Nos. (2), (3), (4), (5), (6) and (7) of the Council meeting of the same date.

29 October 1965 : Item Nos. (1), (2), (5) and (6) of the Council meeting of the same date : election of Shri Dinesh Bahl and Dr. B. P. Adhikari on the Finance Committee of the Governing Body.

26 March 1966 : (1) *Condolence* : Professor B. N. Prasad, a member of the Governing Body who had served the Institute in that capacity for a full term; (2) nomination of representatives on Finance Committee (Shri D. Bahl and Dr. U. P. Basu); on Journal Committee (Dr. V. S. Huzurbazar); on Examinations Committee (Dr. S. K. Rao and Dr. S. N. Sen); (3) recommendation for the award of the M.Stat. degree and for the acceptance of results of diploma and certificate examinations submitted by the Examinations Committee; item nos. (3), (4), (5), (6), (7), (12) and (13) of the Council meeting of the same date.

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Annexure 3: Admission to Courses

3.1. RESEARCH AND TRAINING SCHOOL

sl. no.	courses	number		
		applied	appeared in selection tests	admitted
<i>Full-time Courses</i>				
1.	Pre-research Courses leading to registration for the Ph.D. degree	122	95	14
2.	Specialization Courses leading to AISI			
3.	M.Stat. 1st year	300	183	28
4.	M.Stat. 2nd year (by promotion)	—	—	29
5.	B.Stat. 1st year	382	*27	8
6.	B.Stat. 2nd year (by promotion)	—	—	20
7.	B.Stat. 3rd year (by promotion)	—	—	18
8.	B.Stat. 4th year (by promotion)	—	—	24
9.	Statistical Officer's Course (jointly with the Central Statistical Organisation)	—	—	16
10.	Three-month Course on Electronic Data Processing Systems	34	—	34
11.	International Statistical Education Centre (selected by the International Statistical Institute)	—	—	22
12.	Diploma Course in Statistical Quality Control	140	92	27
13.	Six-week Summer Course for Statisticians (May-June 1966)	—	—	30
14.	Full-time Courses : Sub-total of admissions	—	—	270

* Indicates those who were called for interview; no test was held.

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sl. no.	courses	number		
		applied	appeared in selection tests	admitted
<i>Part-time and Evening Courses</i>				
1.	One-year Evening Course in Statistics Part I, Calcutta September 1965-March 1966	108	53	31
2.	One-year Evening Course in Statistics Part II, Calcutta March-September 1966	—	—	21
3.	One-year Computer Training Course Part I, Calcutta September 1965-March 1966	110	73	28
4.	One-year Computer Training Course Part II, Calcutta March-September 1966	—	—	16
5.	Nine-month Course on Data Processing Systems, Calcutta September 1965-May 1966	120	54	9
6.	One-year Evening Course in Statistics, Delhi (in collaboration with the Central Statistical Organisation) September 1965-August 1966	—	—	34
7.	One-year Evening Course in Statistics			
	7.1 Bombay : September 1965-August 1966	—	—	15
	7.2 Madras : September 1965-August 1966	—	—	8
	7.3 Trivandrum : September 1965-August 1966	—	—	3
	7.4 Hyderabad : September 1965-August 1966	—	—	16
15.	Part-time and Evening Courses : Sub-total of admissions			180
16.	All Courses : Total admissions			450

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3.2. STATISTICAL QUALITY CONTROL UNITS

unit	general	no. of participants	in-plant and others	no. of participants
(1)	(2)	(3)	(4)	(5)
1. Bangalore	1. Training Course in Operations Research. 7-19 June 1966.	24	1. In-plant training course in SQO at Messrs Mysore Iron & Steel Ltd. 30 June-11 August 1966.	22
			2. In-plant training course in SQO at Messrs. Hyderabad Allwyn Metal Works Ltd. 8 September-23 October 1966.	28
			3. In-plant training course in SQO at Messrs. Azam Jahi Mills Ltd. 23 February 1966.	26
			4. Orientation-cum-training programme in SQO at Messrs. Hylam Ltd. 29 November-3 December 1966.	24
			5. A course of lectures in SQO at Messrs. Sree Siddeswara Textiles Mills Ltd. November 1965 to February 1966.	125
			6. A course of lectures on SQO approach at Messrs. Hyderabad Allwyn Metal Works Ltd. in March 1966 (for inspectors).	20
			7. A course of lectures on SQO approach at Messrs. Hyderabad Allwyn Metal Works Ltd. in March 1966 (for operatives).	20
2. Baroda	A spread out course of 4 hours lecture per week to departmental heads of factories.	20	1. In-factory training course on Statistical Methods for Control & Design at Messrs. Alembic Chemicals. September 1965 to January 1966.	29
			2. A series of lectures on 'Statistical Methods in Industry at the EME School of the Indian Armed Forces. February-March 1966.	10
3. Bombay	A four-week training course in SQO during January-February, 1966.	19	1. In-factory training course in SQO at the Ammunition Factory, Kirkee. 5 April-29 May 1966.	
			2. A two-day in-factory training course on basic principles of SQO (in Marathi) for industrial employees belonging to the SQO & M.I. Section of the Ammunition Factory, Kirkee.	35
			3. A ten-day in-factory course on 'Advanced Statistical Methods in Industry' at the Ammunition Factory, Kirkee, in March 1966.	20
			4. In-factory training course in SQO at Messrs. Premier Automobiles Ltd. 19 April-26 May 1966.	14

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unit	general	no. of partici- pante	in-plant and others	no. of partici- pante
(1)	(2)	(3)	(4)	(5)
4. Calcutta	1. Introductory Course in SQO held in March 1966.	30	1. In-plant course in SQO at the Gun and Shell Factory, Coimbatore.	16
	2. Appreciation course in SQO for middle management in collaboration with the Calcutta Productivity Council during 9-13 August, 1966.	15	2 & 3. Two in-plant courses in SQO at the Metal and Steel Factory, Jabapore.	36
5. Coimbatore	—	—	1. An appreciation lecture on use of SQO in Textile Mills given to the Managing Directors of the Cooperative Spinning Mills in Madras during December 1965.	13
	—	—	2. Job training to SQO staff of five member factories.	6
6. Delhi	1. An introductory course on SQO during November-December 1966.	10	—	—
7. Kerala	—	—	1. Training in elementary statistical concepts and methods given to Statistical Inspectors at Messrs. Travancore Rayons Ltd.	2
	—	—	2. Two lectures on practical applications of statistics to 'Hospital Administration' given at the Medical College, Trivandrum.	—
8. Madras	1. A six-week basic course in SQO at Neyveli (in collaboration with the Tiruchirappalli Productivity Council) during 28 June-10 July 1966.	21	1. 30 appraisal lectures for the supervisors and the operating personnel in 9 member factories.	—
			2. In-plant training course in SQO at Messrs. Neyveli Lignite Corporation.	} 40
			3. In-plant training course in SQO at Messrs. E.I.D. Parry Ltd.	
9. Training and Promotional Unit.	SQO Diploma Course started on 1 September 1965 (one-year course).	28	—	—

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Annexure 4. List of Scientific Papers

4.1. PAPERS PUBLISHED

A. Statistics

- P1. DAS GUPTA, S. (1965): Optimum classification rules for classification into two normal populations, *Ann. Math. Stat.*, 36, 1174-1184.
- P2. KRISHNAN, T. (1965): Fiducial method and truncation, *Journal of the Indian Statistical Association*, 3, 17-19.
- P3. ——— (1965): Truncation in quantal assay, *Ann. Inst. Stat. Math.*, 17, 211-231.
- P4. ——— (1965): Item analysis by a simultaneous quantal and quantitative responses, *British Journal of Mathematical and Statistical Psychology*, 18, 187-193.
- P5. LAHRI, D.B. (1965): Some arithmetical properties of the Fourier co-efficients of the modular invariant $J(T)$, *Current Science*, 34, 208.
- P6. MAITRA, A. (1965): On stable transformation, *Sankhyā*, 28, sr. A, 25-34.
- P7. MURTHY, M. N. (1965): Self-weighting design at tabulation stage, *Sankhyā*, 27, sr. B, 201-210.
- P8. PARTHASARATHY, T. (1965): A note on a minimax theorem of T.T. Tis, *Sankhyā*, 27, sr. A, 407-408.
- P9. PATHAK, P. K. (1966): An estimator in pps sampling for multiple characteristics, *Sankhyā*, 28, sr. A, 35-40.
- P10. ——— (with Shukla, N. D. (1966): Non-negativity of a variance estimator, *Sankhyā*, 28, sr. A, 41-46.
- P11. RAMANUJACHARYULU, C. R. (1965): Trees and tree-equivalent graphs, *Canadian Journal of Mathematics* 17, 731-733.
- P12. ——— (1965): Classification of canonical form of quadrics indefinite projective geometry, *Journal of the Indian Statistical Association*, 3, 91-96.
- P13. RAMACHANDRAN, B. (1965): An extension of a theory of Mann, with application, *Sankhyā*, 27, sr. A, 303-310.
- P14. RAO, C. R. (1965): The theory of least squares when the parameters are stochastic and its application to the analysis of growth curves, *Biometrika*, 52, 447-458.
- P15. ——— (1965): On discrete distributions arising out of methods of ascertainment, *Sankhyā*, 27, sr. A, 311-324.
- P16. ——— (1966): Generalised inverse for matrices and its applications in mathematical statistics, *Festschrift for J. Neyman—Research Papers in Statistics*, 263-279.
- P17. ——— (with Kagan, A. M. and Linnik, Yu. V.) (1965): On a characterization of the normal law based on a property of the sample average, *Sankhyā*, 27, sr. A, 405-406.
- P18. RAO, T. J. (1965): Some recent applications of programming in planning and economic development, *Opsearch*, 2, 249-256.
- P19. ——— (1966): On certain unbiased ratio estimators, *Ann. Inst. Stat. Math.*, 18, 117-121.

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- P20. RAO, T. J. (1966) : On the variance of the ratio estimator for Midrsuno Sen sampling scheme, *Metrika*, 19, 89-91.
- P21. SETHURAMAN, J. (1965) : A characterisation of the three limiting types of extreme, *Sankhyā*, 27, sr. A, 357-364.
- P22. ——— (with Rubin H. (1965) : Bayes risk efficiency, *Sankhyā*, 27, sr. A, 347-356.
- P23. ——— (with Rubin H.) (1965) : Probabilities of moderate deviations, *Sankhyā*, 27, sr. A, 325-346.
- P24. VIJAYAN, K. (1966) : On Horvitz-Thompson and Dea Raj estimators, *Sankhyā*, sr. A, 87-92.

B. Anthropometry

- P25. CHAKRAVARTI, M. R. (1965) : On the need for a statistical design in anthropological surveys. *Proc. Second Summer School in Anthropology, published by the University of Delhi*, 1-4.
- P26. ——— (with Verma, B. K.) (1966) : Relation between small-pox and ABO blood groups in a rural population of West Bengal (India), *Human Genetik*, 2, 78-80.
- (P26) VERMA, B. K. (with Chakravarti, M. R.) (1966) : Relation between small-pox and ABO blood groups in a rural population of West Bengal (India), *Human Genetik*, 2, 78-80.

C. Biometry

- P27. DAS, B. C. (1965) : Yeast dosage level and the postembryonic survival and growth of the carp *Labeo rohita* (Ham.), *Journal of Experimental Zoology*, 159, 405-412.
- P28. ——— (with Das, Rhea S.) (1966) : Mortalitatea si morbiditatea specifice virstei in raport cu realizarile in domeniul sanatatii si cererea de spitalizare. *Gerontologie Probleme*. Roumanian Ministry of Health, 32-86.
- P(28) DAS, RHEA S. (with Das, B.C.) (1966) : Mortalitatea si morbiditatea specifice virstei in raport cu realizarile in domeniul sanatatii si cererea de spitalizare. *Gerontologie Probleme*. Roumanian Ministry of Health, 32-86.

D. Botany and Crop Science

- P29. DAVIS, T. A. (1965) : Coconut withering disease of Ceylon, a report, *Bull. Coconut Res. Inst. of Ceylon*, 22, 1-29.
- P30. ——— (1965) : Addition to the theories on the morphology of horns in coconut fruits, *Ceylon Coconut Quart.*, 16, 99-101.
- P31. ——— (1965) : A sensitive detector for sugarcane borers, *Proc. Sugarcane Res. Workers' Conf.*, 5, 628-631.
- P32. ——— (1966) : Possible relationship between a virus disease of *Strachytarpheta indica* Vahl. and the Coconut Root (Wilt.), *Science and Culture*, 32, 146-147.
- P33. ——— (with Ghosal, K. K.) (1966) : Variation in the floral organs of *Roasinensis* Linn., *Jour. Indian Bot. Soc.*, 45, 30-43.

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- P34. DAVIS, T. A. (with Kundu, A.) (1965) : Floral structure and stamens in *Celiba pentandra*, *Jour. Indian Bot. Soc.*, 62, 394-411.
- P35. ——— (with Mariamma, K. O.) (1965) : The three kinds of stamens in *Bombax ceiba L.*, *Bull. Jardin. Bot. de l'Etat.*, 35, 185-211.
- (P33) GHOSHAL, K. K. (with Davis, T. A.) (1966) : Variation in the floral organs of *Rosasiensis Linn.*, *Jour. Indian Bot. Soc.*, 45, 30-43.
- (P34) KUNDU, A. (with Davis, T. A.) (1965) : Floral structure and stamens in *Celiba pentandra*, *Jour. Indian Bot. Soc.*, 62, 394-411.
- (P35) MARIAMMA, K. O. (with Davis, T. A.) (1965) : The three kinds of stamens in *Bombax ceiba L.*, *Bull. Jardin. Bot. de l'Etat.*, 35, 185-211.
- P36. ROY, S. K. (with Grümmer, G.) (1966) : Intervarietal mixtures of rice and incidence of Brown-spot disease (*Helminthosporium Oryzae Breda de Hann*), *Nature*, 209, 1285-

E. Demography

- P37. BISWAS, S. (1965) : A statistical note on some aspects of hospitalization during maternity, *Indian Journal of Public Health*, 9, 179-185.
- P38. DAS GUPTA, A. (with Sen Gupta, S. N.) (1965) : Population projections for Thailand and a study of the elements and criteria, *Papers contributed by Indian authors to the World Population Conference, Belgrade*, 30 August-10 September, 85-88.
- P39. GUPTA, P. B. (1965) : The problems of fertility control in India, *Papers contributed by Indian authors to the World Population Conference, Belgrade*, 30 August-10 September, 279-282.
- P40. LAHIRI, D. B. (1965) : Population data and the Indian National Sample Surveys, *Paper contributed by Indian authors to the World Population Conference, Belgrade*, 30 August-10 September, 47-50.
- P41. MAHALANOBIS, P. C. (1965) : Some concepts of sample surveys in demographic investigations, *Papers contributed by Indian authors to the World Population Conference, Belgrade*, 30 August-10 September, 51-55.
- P42. MAJUMDAR, M. (1965) : Estimation of vital rates in the Indian National Sample Survey, *Papers contributed by Indian authors to the World Population Conference, Belgrade*, 30 August-10 September, 57-60.
- P43. RAMAN, M. V. (1965) : Observations on certain situations relevant to family planning, *Journal of Family Welfare*, 11, 14-20.
- P44. ——— (1965) : Attitude towards family and fertility control in India—an assessment, *Paper contributed by Indian authors to the World Population Conference, Belgrade*, 30 August-10 September, 307-310 and *Development Digest*, Washington, 1966, 3, 11-16.
- P45. ——— (1965) : Contra indications of fertility reduction in India, *Indian Journal of Public Health*, 9, 89-92.
- P46. ——— (1965) : Some aspects of fertility in Kerala, *Population Growth in Kerala—its implications*, 67-76.

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- P47. SENGUPTA, A. (1965): Some thoughts relating to the Family Planning Movement and its problems. *Medical Digest*, November, 439-444.
- (P38) SEN GUPTA, S. N. (1965) (with Das Gupta, A.): Population projections for Thailand and a study of the elements and criteria, *Papers contributed by Indian authors to the World Population Conference, Belgrade*, 30 August-10 September, 85-88.

F. Documentation and Library Science

- P48. BHATTACHARYYA, G. (1965): Abbreviations of titles of periodicals in Bengali, *ISI Convention*, (9), S-8/B.5, 1-8.
- P49. ——— (with Roy, P. B.) (1965): Construction of Bengali subject headings by chain procedure, *ISI Convention* (9), S-8/B: 5, 1-8.
- P50. GOPINATH, M. A. (1965): Use of normative principles for comparison of schemes of classification, *Library Science with a Slant to Documentation*, 2, 174-201.
- P51. ——— (1965): Rider's International Classification: An evaluation, *Herald of Library Science*, 4, 122-39.
- P52. ——— (with Neelameghan, A., Ranganathan, S. R. and Seetharama, S.) (1965): Connecting symbol for alphabetical device for multi-nomials. *Herald of Library Science*, 4, 320-22.
- P53. NEELAMEGHAN, A. (1965): March of classificatory terminology, *Herald of Library Science*, 4, 238-42.
- P54. ——— (1965): Teaching in the Hyderabad Medical School, 1846-1855. *Indian Journal of History of Medicine*, 10, 13-20.
- P55. ——— (1965): Classified arrangement in a glossary of technical terms. *ISI Convention* (9), S-8/E:1.
- P56. ——— (1965): Structure of an entry in a glossary of technical terms. *ISI Convention* (9), S-8/E:2.
- P57. ——— (1965): Promotion of cooperation in classification. *Library Science with a Slant to Documentation*, 2, 216-17.
- P58. ——— (1965): Indexing physical and chemical properties of antibiotic substances 'Library Science Today' edited by P. N. Kaula, Paper G6, 248-54.
- P59. ——— (with Gopinath, M. A.) (1965): Homonym in subject heading. *DRTC Annual Seminar* (3), 464-86.
- P60. ——— (1965): Production engineering of boiler: Depth classification. *DRTC Annual Seminar* (3), 224-60.
- P61. ——— (1965): Productive methods in the design of a scheme for depth classification: A case study. *DRTC Annual Seminar* (3), 84-105.
- P62. ——— (1965): Zero increases hospitability, *DRTC Annual Seminar* (3), 105-24.
- P63. ——— (1965): Economy in the idea plans in the design of a scheme for depth classification. *FID Congress* (Washington).
- P64. ——— (1965): Concepts forming the basis of Colon Classification: Development and use in the design of classification 1925-65. *IASLIC Conference* (6) (Trivandrum), 1-23.

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- P65. NEELAMEGHAN, A. (1966) : Locus section (A Technical Note) : *Herald of Library Science*, 5, 80-81.
- P66. ——— (1966) : Structure of the main entry in an advance documentation list. *Library Science with a Slant to Documentation*, 3, 61-67.
- P67. RANGAMATHAN, S. R. (1965) : DRTC and its role. *DRTC Annual Seminar* (3), 1-25.
- P68. ——— (1965) : Chain procedure : Its development, its uses, its light on the basic class, and its problems. *DRTC Annual Seminar* (3), 445-63.
- P69. ——— (1965) : Library housing and documentation standards. *Herald of Library Science*, 4, 306-9.
- P70. ——— (1965) : Library housing neglect of Indian standards. : What may be the reason ? *ISI Convention* (9), 8-8/H : 1.
- P71. ——— (1965) : Memoir on the development of libraries and other aspects of education in India. *Education Commission*.
- P72. ——— (1965) : Standard for scientific terminology, *ISI Convention* (9), 8-8/D : 1.
- P73. ——— (1965) : Technical report writing, *ISI Convention* (9), 8-8/F : 1.
- P74. ——— (1965) : Training of staff for the rural library system. *Memorandum to the Education Ministry*.
- P75. ——— (1965) : Public library development in Madras. *Sousenir, Local Library Authority (Madras City)*, Article 2.
- P76. ——— (1965) : General and special classification. *Edited by Atherton (Pauline). Classification Research. Proc. Second International Study Conference*, 81-93.
- P77. ——— (1965) : Academic library system : Fourth Plan Period. *Library Science with a Slant to Documentation*, 2, 97-99.
- P78. ——— (1965) : Array change or level change ? (Reported by M. A. Gopinath). *Library Science with a Slant to Documentation*, 2, 97-99.
- P79. ——— (1965) : Conflict in classification for document retrieval. *Library Science with a Slant to Documentation*, 2, 202-15.
- P80. ——— (1965) : Evolution of reference and documentation service. (Reported by M. A. Gopinath). *Library Science with a Slant to Documentation*, 2, 275-92.
- P81. ——— (with Neelameghan, A.) (1965) : Depth classification for a personal bibliography. *DRTC Annual Seminar* (3), 156-36.
- P82. ——— (with Neelameghan, A. and Gopinath, M. A.) (1965) : Medical radiology : Depth classification. *Library Science with a Slant to Documentation*, 2, 100-160.
- P83. ——— (1966) : Emergence of Library science. *Library Science with a Slant to Documentation*, 3, 1-25.
- P84. ——— (1966) : Education for documentalists. *Library Science with a Slant to Documentation*, 3, 42-50.
- P85. REJ, DEBABRATA (1966) : Structure of thought and language : from the point of view of a translator. *ISTA Bulletin*, 2(4), July, 8-17.
- P86. SUBBARAO, C. V. (1966) : Association and seminars—the need for standards (Seminar Technique-2). *IASLIO Bulletin*, 11, 46-53.

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- P87. SUBBARAO, C. V. (1966): Seminar planning: Details at the depth (Seminar Technique-3). *IASLIC Bulletin*, 11, 228-242.
- P88. ——— (1965): Microdocument, depth classification and flat filing equipment. *ISI Convention* (9), S-8/G: 2 1-13.
- P89. ——— (1965): Subject headings: Chain indexing: Telugu. *ISI Convention* (9), S-8/BL 4, 1-8.

G. Embryology

- P90. BRAHMACHARY, R. L. (1966): Further investigations on the effect of chromomyoin on the morphogenesis of *Ciona*, *Acta Embryologica et Morphologica Experimentalis*, 9, 25.

H. Flood Research

- P91. BOSE, N. K. (1965): Necessity of a River Board for the Ajay: A Note, II, *Indian Journal of Power and River Valley Development*, 13-15.

I. Geology

- P92. BAKSHI, S. K. (1965): Glauconitic mudstone from 'Raghavapuram Shale', West Godavari District, Andhra Pradesh, *Current Science*, 34, 351.
- P93. ——— (1965): On structure and paleocurrent in Chintalpudi Sandstone and Gollapilli sandstone of the Raghavapuram area, West Godavari District, Andhra Pradesh, *Quart. Jour. Geol. Min. Met. Soc. India*, 37, 95-97.
- P94. ——— (1965): Stratigraphy of Barail Series in southern part of Shillong plateau, Assam, India, *Bull. Amer. Assoc. Petrol. Geol.*, Tulsa, U.S.A., 49, 2282-2288.
- P95. ——— (1965): Depositional history and tectonics of Gondwana and Post-Gondwana rocks of a part of West Godavari District, Andhra Pradesh. *Quart. Journ. Geol. Min. Met. Soc. India*, 37, 145-146.
- P96. ROYCHOWDHURY, T. K. (1965): A new metopoeaurid amphibian from the Maleri formation, India, *Phil. Trans. Roy. Soc., Lond.*, B 250, 1-52.
- P97. SENGUPTA, S. (1966): Paleocurrents and depositional environments of the Gondwana rocks around Bheemaram—a preliminary study. *Bull. Geol. Soc. India*, 3, 5-8.

J. Haematology

- P98 CHAKRABORTY, A. (with Chaudhuri, S.) (1965): Comparative study of serum proteins—total albumin and globulin by colorimetric biuret and agar gel electrophoretic methods. *Sankhya*, 27, sr. B, 175-178.
- (P98) CHAUDHURI, S. (with Chakravorty, A.) (1965): Comparative study of serum proteins—total albumin and globulin by colorimetric biuret and agar gel electrophoretic methods. *Sankhya*, 27, sr. B, 175-178.
- P99. ——— (with Das, S.) (1965): Study of serum copper in children, *Indian Pediatrics*, 2, 133.

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- P100. CHAUDHURI, S. (with Ghosh, J.) (1965): Sociological haematological, blood-group and genetic study of Hindu Bengalee families with target cell anaemia in Calcutta, West Bengal. *The Journal of the Association of Physicians in India*, 13, 859-868.
- P101. ——— (with Ghosh, J.) (1965): Pyridoxime or Bit B₆ in healthy individuals and in anaemic patients. *Israel J. Med. Sci.*, 1, 731.
- P102. ——— (with Ghosh, J.) (1965): Thalassemia haemoglobin E disease in two families, one individual with association of chronic myeloid leukaemia. *Journal of the Afro-Asian Haematology Association*, 777.
- (P99) DAS S. (with Chaudhuri, S.) (1965): Study of serum copper in children, *Indian Pediatrics*, 2, 133.
- (P100) GHOSH, J. (with Chaudhuri, S.) (1965): Sociological, haematological, blood-group and genetic study of Hindu Bengalee families with target cell anaemia in Calcutta, West Bengal, *The Journal of the Association of Physicians of India*, 13, 859-868.
- (P101) ——— (with Chaudhuri, S.) (1965): Pyridoxine or Vit B₆ in healthy individuals and in anaemic patients. *Israel J. Med. Sci.* 1, 731.
- (P102) ——— (with Chaudhuri, S.) (1965): Thalassemia Haemoglobin E disease in two families, one individual with association of chronic myeloid leukaemia, *Journal of the Afro-Asian Haematology Association*, 777.

K. Planning, Economic Statistics and Econometrics

- P103. BHATTACHARYYA, D. (1965): Trend of wages in India (1873-1900), *Arthaviijnana* 7, 3, 202-212.
- P104. BHATTACHARYYA, N. and DEY, B. (1965): Distribution of public health and education services, *Economic Weekly*, XVIII, 23, 929-932.
- P105. ——— and IYENGAR, N. S. (1965): Some observations on fractile graphical analysis, *Econometrica*, 33, 3, 644-645.
- P106. ——— and IYENGAR, N. S. (1965): On the effect of differentials in consumer price index on Lorenz and other measures of inequality, *Sankhyā*, sr. B, 27, 47-56.
- P107. ——— and MUKHERJEE, R. N. (1964): On fitting the Pareto Law to income distributions, *Arthaniti*, VII, II, 177-182.
- P108. BISWAS, K. and DEY, B. (1965): Inter-industrial (mining and large-scale manufacturing) flows 1953 and 1954, *Papers on National Income and Allied Topics*, 3, 223-248.
- P109. BOSE, D. K. (1966): Planning of investments under budgetary and demand constraints, *Arthaniti*, VIII, 1, 24-48.
- P110. ——— (1965): Dynamic programming for decentralized planning, *Indian Economic Journal*, XIII, 3, 339-350.
- P111. CHATTERJEE, G. S. and MAITRA, T. (1965): A study of income from trade in India, *Papers on National Income and Allied Topics*, 3, 184-191.
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- S140. SRINIVASAN, T. N.: Geometric rate of growth of demand, (*Studies in plant size location and time phasing edited by Alan Manne, Stanford University*).
- (S139) TALUQDAR, J. N. (with Sengupta, J. M.): The possibilities of an indirect estimation of paddy yield from auxiliary plant characters, (*Sankhya*).
- (S132) ——— (with Roy, A., and Sengupta, J. M.): Some studies relating to the variation in the rates of consumption and purchase for a few selected food items, (*Sankhya*).
- (S133) ——— (with Sen, T. and Sengupta, J. M.): Studies on the consumption of specific drugs through retail sale in Calcutta, (*Sankhyā*).

J. Psychometry

- S141. CHATTERJEE, S. (with Mukherjee, M.): Modern objective tests—What it can do for us? (*Mind*).
- S142. ——— (with Mukherjee, M.): A review of merit rating methods, (*Indian Psychological Review*).
- S143. ——— (with Mukherjee, M.): The development of a non-language test of verbal intelligence (*Indian Journal of Applied Psychology*).
- (S141) MUKHERJEE, M. (with Chatterjee, S.): Modern objective tests—What it can do for us? (*Mind*).
- (S142) ——— (with Chatterjee, S.): A review of merit rating methods, (*Indian Psychological Review*).
- (S143) ——— (with Chatterjee, S.): The development of a non-language test of verbal intelligence, (*Indian Journal of Applied Psychology*).

K. Sociology

- S144. BANDYOPADHAY, S. (with Chattopadhyay, K.): Caste ranking in some West Bengal villages—an exploratory formulation, (*The Indian Journal of Social Research*).
- S145. ——— (with Chattopadhyay, K.): Technological innovation and people's reactions, (*Human Organization*).
- (S144) CHATTOPADHYAY, K. (with Bandyopadhyay, S.): Caste ranking in some West Bengal villages—an exploratory formulation, (*The Indian Journal of Social Research*).
- (S145) ——— (with Bandyopadhyay, S.): Technological innovation and people's reactions, (*Human Organization*).

L. Theoretical Physics

- S146. BANDYOPADHAY, P.: Internal quantum numbers and a shell model of mesons and baryons, (*Progress of Theoretical Physics, Japan*).
- S147. RAMAACHANDRAN, G.: Possible test for the $|A \rightarrow I|$ weak nuclear force, (*Nuovo Cimento*).
- S148. ———: Pion scattering on nuclei, (*Nuclear Physics*).

THIRTY-FOURTH ANNUAL REPORT: 1965-66

Annexure 5 : Scientific Computation and Processing of Survey Data in the Computer Science and Electronic Data Processing and Computation Unit

sl. no.	project	requilitioned by
1.	Analysis of psychometric data	Mrs. N. Patel, Association of Teachers in Anglo Indian Schools.
2.	Production planning, sales report etc.	Jenson & Nicholson.
3.	Coffee survey tabulation	Clarion Advertising Services (P) Ltd.
4.	Bandicoot data	Johns Hopkins University, U.S.A.
5.	Tabulation and analysis for rural health research project.	„
6.	Selection of samples	N.S.S., Indian Statistical Institute
7.	Tabulation on fuel and light, data NSS, 18th round, sch. 1.0.	Planning Commission, Government of India.
8.	Fractile tables by states from consumer expenditure data.	Dr. K. R. Nair, Central Statistical Organisation.
9.	Tabulation on re-survey data on growth of family size, Calcutta City.	Family Planning Research Unit, Indian Statistical Institute.
10.	Inflow computation into Maithon and Panohet Reservoirs.	Damodar Valley Corporation.
<i>Scientific computation :</i>		
11.	Analysis of child growth study	Computer Science Unit, Indian Statistical Institute.
12.	Computation of efficiencies of estimations under different sampling schemes.	„
13.	Power functions of Wilk's analysis of dispersion test.	„
14.	Calculation of lower bound of probability moments.	„
15.	Programme package for item analysis	„
16*	Preparation of programme package for multiple regression analysis.	„
17.	Development of Fortran II computer	„
18.	Simulation of queusing problems	„

INDIAN STATISTICAL INSTITUTE

sl. no.	project	requisitioned by
19.	Tables of the non-centrality parameter of F-test as a functions of power level of significance and the two degrees of freedom.	Computer Science Unit, Indian Statistical Institute.
20.	Evaluation of all characteristic roots and vectors of a symmetric matrix by Jacobi's method.	..
21.	Effect of error in the model on the power of analysis of variance F-test.	..
22.	Distribution of a linear function of two independent beta variates.	..
23.	Least square estimates under certain restrictions on the parameter space.	..
24.	Library routines for mathematical functions.	

THIRTY-FOURTH ANNUAL REPORT: 1965-66

Annexure 6 : List of National Sample Survey Reports

6.1. PRINTED REPORTS

sr. no.	report no.	title
1.	96	Tables with Notes on the Annual Survey of Industries 1960 (Sample Sector, summary results).
2.	97	Tables with Notes on Capital Formation (Fifteenth round : July 1959-June 1960).
3.	98	Tables with Notes on Consumer Expenditure (Preliminary): (Fifteenth round : July 1959-June 1960).
4.	99	Tables with Notes on Household Non-registered Trade : (Fifteenth round : July 1959-June 1960).
5.	100	Tables with Notes on Rural Employment and Unemployment : (Fourteenth round : July 1958-June 1959).
6.	101	Tables with Notes on Consumer Expenditure (Preliminary): (Sixteenth round : July 1960-August 1961).
7.	102	Tables with Notes on Consumer Expenditure : (Fourteenth round : July 1958-June 1959).

6.2. DRAFT REPORTS SUBMITTED TO THE GOVERNMENT OF INDIA

(The date of submission is given in brackets)

1.	132/1	Preliminary Estimates of Birth and Death Rates and of the Rates of Growth of Population in Rural Areas of India (Seventeenth round : September 1961-July 1962) (1 April 1965).
2.	133	Tables with Notes on Capital Formation (Seventeenth round : September 1961-July 1962) (13 July 1965).
3.	134	Tables with Notes on Internal Migration (Fourteenth and Fifteenth rounds : July 1958-June 1960) (4 June 1965).
4.	135	Preliminary Estimates of Birth and Death Rates and of the Rates of Growth of Population (Eighteenth round : February 1963-January 1964) (7 June 1965).
5.	136	Tables with Notes on Consumer Expenditure, Some Important Items (Eighteenth round : February 1963-January 1964) (23 March 1966).

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Annexure 7 : Notification published in the Gazette of India* on the formation of a Review Committee

GOVERNMENT OF INDIA
CABINET SECRETARIAT
DEPARTMENT OF STATISTICS

New Delhi, 15 February 1966

NOTIFICATION

S.O.544—In pursuance of sub-section (i) of section 9 of the Indian Statistical Institute Act, 1959 (57 of 1959), the Central Government hereby constitutes a Committee consisting of the following persons, namely :

Chairman :

1. Professor Humayun Kabir, Member of Parliament, New Delhi.

Members :

2. Shri K. T. Chandy, Director, Indian Institute of Management, Calcutta; 3. Shri P. B. Chowdhury, Chief Engineer, Building Department, Martin Burn Ltd., Calcutta; 4. Shri S. Dutt, Vigilance Commissioner, Government of West Bengal, Calcutta; 5. Dr. I. G. Patel, Chief Economic Adviser, Department of Economic Affairs, Ministry of Finance, New Delhi; 6. Dr. S. R. Sengupta, Director, Indian Institute of Technology, Kharagpur; 7. Professor S. S. Shrikhande, Professor of Mathematics, University of Bombay, Bombay; 8. Shri M. R. Yardi, Adviser, Planning Commission, New Delhi.

for the purpose of—

(i) reviewing the work done by the Institute and the progress made by it, (ii) inspecting its buildings, equipment and other assets, (iii) evaluating the work done by the Institute; and (iv) advising Government on the following matters :—(a) to what extent and in what manner the regional activities of the Institute should be strengthened and expanded; (b) in what manner the administrative set up of and financial and budgetary control in the Institute should be improved; (c) whether any changes are necessary in the manner and degree of association of the Institute with the work of National Sample Survey; (d) whether in the light of the experience gained so far, any amendments to the Indian Statistical Institute Act, 1959, are necessary to facilitate the working of the Act; which in the opinion of the Central Government are of importance in connection with the work of the Institute.

2. The Committee may settle its own procedure. It may appoint sub-committees from amongst its members and may take the advice of consultants and experts from within the country or outside.

3. The Committee shall submit its report within six months from the date of issue of this notification.

4. The headquarters of the Committee shall be at New Delhi.

5. Shri S. P. Jain, Deputy Secretary, Cabinet Secretariat, shall act as Secretary to the Committee.

M. BALAKRISHNA MENON
Deputy Secretary

No. F 10/9/64-Estt. III

* Part II—Section 2(i), No. 9, 26 February 1966, pp. 559-560.

**Annexure 8 : Statement of Accounts, Auditors' Report and
Audited Statement of Accounts, 1965-66.**

AUDITORS' REPORT

We have examined the Balance Sheet of the Indian Statistical Institute as at 31st March, 1966, and the relative Income and Expenditure Account for the year ended on that date with the books and records maintained by the Institute and subject to the following have found them to be in accordance therewith.

1. Values of assets acquired prior to 31st March, 1952, were calculated from inventories made at that date.
2. We were unable to verify the value of partly processed National Sample Survey Work amounting to Rs. 71,40,143.00 and no certificate was available to us from the N.S.S. Department as to the value of the works as at 31st March, 1966.
3. Confirmation from the Government admitting the claims shown under items No. 6, 7 and 9 of the Balance Sheet amounting to Rs. 25,75,657.90 has not been produced to us and further no claim has been made to the Government for Rs. 6,10,034.79 included in the above items.
4. Certain Books and Journals amounting to Rs. 1,37,762.84 have been capitalised this year, though this was charged to Income and Expenditure Account during the year.
5. Title deeds in respect of Lands at Delhi, Madras and Bangalore amounting to Rs. 5,74,531.42 could not be verified by us.

Calcutta,
6th September, 1966.

LOVLOCK & LEWIS
Chartered Accountants

INDIAN STATISTICAL INSTITUTE

BALANCE SHEET

1964-65 Rs. P.	FUNDS AND LIABILITIES	1965-66 Rs. P.	Rs. P.
1,02,03,881.59	1. GENERAL FUND : As per Schedule No. III enclosed		1,16,82,750.49
	2. OTHER FUNDS : As per contra		
	.1 Visiting Professors and Fellows Fund 118.13 .2 Leave Salary Fund 1,43,998.11 .3 Gratuity Fund 24,71,350.23 .4 Development Fund No. I 1,19,621.94 .5 Development Fund No. II 12,82,305.37 .6 Supervision Fee Fund 2,16,304.87 .7 Electronic Data Processing and Computation Unit 8,74,942.19		61,08,665.84
	3. TEMPORARY LOAN FROM FUNDS TO CAPITAL EXPENDITURE ACCOUNT :		
7,18,000.00	As per last account		7,18,000.00
	4. TEMPORARY ADVANCE FROM FUNDS TO CURRENT EXPENDITURE ACCOUNT :		
	As per last account	9,87,000.00	
	Less : repaid during the year : (i) To Provident Fund .. 4,50,000.00 (ii) To Gratuity Fund .. 5,000.00	5,32,000.00	
9,87,000.00	Add : during the year : (i) From Provident Fund	5,00,000.00	10,82,000.00
16,03,891.05	5. OVERDRAFT FROM STATE BANK OF INDIA, SHAMBAZAR, SECURED AGAINST CERTAIN G.P. NOTES OF I.S.I. GENERAL PROVIDENT FUND AND G.P. NOTES OF DIRECTOR'S (TRUST) FUND AND DEVELOPMENT FUND NO. II ..		12,88,022.84
55,00,000.00	6. CASH CREDIT ADVANCE FROM STATE BANK OF INDIA, SHAMBAZAR BRANCH AGAINST GUARANTEE FROM GOVERNMENT OF INDIA ..		13,50,000.00
15,00,000.00	7. CASH ADVANCE FROM GOVERNMENT OF INDIA FOR N.S.S. WORK : As per last account		15,00,000.00
33,80,750.20	8. OUTSTANDING LIABILITIES : As per Schedule No. IV enclosed		34,09,675.79
2,84,30,428.09	Carried over	2,84,70,014.76	

THIRTY-FOURTH ANNUAL REPORT: 1965-66

AS AT 31 MARCH 1966.

1964-65		PROPERTY AND ASSETS		1965-66	
Rs.	P.			Rs.	P.
		1. FIXED ASSETS:			
98,03,972.36		.1	As per Schedule No. I enclosed		1,03,77,768.06
13,021.52		.2	As per Schedule No. IA (for 202 B.T. Road) enclosed		8,87,726.28
		2. CAPITALISED RENTAL OF TELEPHONES UNDER OYT SCHEME:			
			As per last account	22,461.00	
22,401.50			Less: depreciation @ 5%	1,120.10	21,281.50
		3. ASSETS ACQUIRED FOR UNTAA WORKSHOP:			
5,81,212.55			As per Schedule No. II enclosed		5,34,764.21
		4. JOINT PROJECT FOR THE CONSTRUCTION OF ELECTRONIC COMPUTERS (in progress):			
			As per last account	3,67,833.92	
3,67,833.92			Add: during the year	1,19,888.90	4,87,722.82
		5. RECOVERABLE CAPITAL OUTLAY:			
			As per last account	34,392.95	
			Less: amount received during the year	18,160.57	
34,392.95			Add: during the year	16,232.38	20,949.64
				4,717.26	
		6. AMOUNT CLAIMED FROM GOVERNMENT INDIA:			
		.1 On account of Capital Expenditure:			
		a)	For expenditure for the year 1959-60	25,999.00	
			Less: reimbursement received during the year	25,999.00	nil
		b)	For expenditure for the year 1960-61	55,814.00	
			Less: reimbursement received during the year	55,814.00	nil
		c)	For expenditure for the years 1961-62 and 1962-63 (less refund of Rs. 985.00 received in 1964-65)	2,00,357.01	
		d)	For expenditure for the year 1963-64	1,40,699.46	
		e)	For expenditure for the year 1964-65	80,072.16	
		f)	For expenditure for the year 1965-66	15,40,030.90	
			Less: amount received during the year	15,40,000.00	36.90
		g)	For repairs, renovations etc. for 202 B.T. Road		
7,00,644.70			As per last account	2,17,703.07	6,18,868.60
		.2 On account of NSS Project Sector:			
7,00,686.00			As per last account		7,00,686.00
		*.3 For NSS Schedule printing:			
			As per last account	46,930.00	
46,930.60			Add: during the year	921.12	47,851.72
<u>1,23,34,096.20</u>		Carried over:		<u>1,36,97,616.81</u>

INDIAN STATISTICAL INSTITUTE

BALANCE SHEET

1964-65 Ra. P.	FUNDS AND LIABILITIES	Ra. P.	1965-66 Ra. P.
2,86,20,438.00	Brought Forward:		2,85,70,014.78
	9. FORD FOUNDATION GRANT :		
	As per last account	36,419.81	
	Add : transfer from Rockefeller Foundation Grant Account due to wrong adjustment.. ..	821.05	
36,419.81	Less : unspent balance refunded to Ford Foundation ..	37,240.86 37,240.86	nil
	10. ROCKEFELLER FOUNDATION GRANT :		
	As per last account	18,524.44	
	Less : i) expenditure during the year .. 2,783.50 ii) transfer to Ford Foundation Grant due to wrong adjustment 821.05 iii) amount refunded to Rockefeller Foundation 1,360.89	4,865.44	11,669.00
16,824.44			
	11. DEPOSITS AND OTHER LIABILITIES :		
	.1 Hospitality and House Committee expense ..	66,815.02	
	.2 Staff income tax and annuity deposits. ..	19,687.25	
	.3 Library and other deposits	30,777.27	
	.4 Staff insurance and S.W. Housing Scheme etc.	8645.06	
	.5 Director of Health Services for purchase of census reports 8,128.00	8,128.00	
3,77,630.00	.6 Others	85,350.60	2,19,811.80
	12. EXCESS OF INCOME OVER EXPENDITURE IN THE N.S.S. SECTOR FOR THE YEAR 1965-66		4,31,664.65
—			
	13. TATA INSTITUTE OF SOCIAL SCIENCES FOR "SOCIOLOGY OF EDUCATION" PROJECT :		
	Amount received during the year	20,000.00	
—	Less : expenditure during the year	12,248.00	7,752.00
	14. AMOUNT DUE TO EDFC UNIT :		
	As per last account	1,13,718.37	
	Less : repaid during the year	1,13,718.37	nil
1,13,718.37	Add : during the year	4,26,687.05	4,26,687.05
2,91,64,720.71	Carried Over:		2,76,67,369.28

THIRTY-FOURTH ANNUAL REPORT: 1965-66

AS AT 31 MARCH 1966—Contd.

1964-65 Rs. P.	PROPERTY AND ASSETS	1965-66 Rs. P.	Rs. P.
1,58,84,096.20	Brought Forward :		1,56,97,616.81
	7. AMOUNT CLAIMED FROM GOVERNMENT OF INDIA IN DIFFERENT NON-PROJECT AND NBS PROJECT SECTORS :		
	1. Non-Project Sectors :		
	a) for excess expenditure upto 1959-60		
	As per last account	2,26,797.00	
	b) for excess expenditure in 1960-61		
	As per last account	1,84,617.00	
	c) for excess expenditure in 1962-63 including UNTAA Sector:		
	As per last account	3,81,144.00	
	d) for excess expenditure in 1963-64 including UNTAA Sector	1,89,458.76	
	Less : amount received during the year	45,835.00	1,43,623.76
	*e) Excess expenditure over income for the year 1964-65	3,31,081.77	
		12,86,093.53	
13,11,928.53	f) Less : excess income over expenditure for the year 1965-66	2,91,386.18	9,74,707.37
	2. NBS Project Sector : for excess expenditure upto 1958-59		5,44,011.00
5,44,011.00	As per last account		
	*3 Excess of expenditure over income in the NBS Sector for the year 1964-65	1,13,984.74	
1,13,984.74	Less : amount received on account of Income Distribution Committee Work (1964-65)	76,330.00	37,654.74
	8. EXCESS OF EXPENDITURE OVER INCOME IN THE NBS SECTOR FOR THE YEAR 1963-64 : (to be adjusted against release of funds by the Government dependent on the findings of NBS Settlement Committee)		
	As per last account	13,53,566.00	
13,53,566.00	Less : amount received on account of Income Distribution Committee Work	24,380.00	13,29,206.00
	9. AMOUNT SPENT IN EXCESS OF INCOME CLAIMED FROM GOVERNMENT OF INDIA :		
	1. Research and Planning Committee of the Planning Commission for Sociological Studies :		
23,033.64	As per last account	23,033.64	
4,650.00	2 For 25th Anniversary of the Institute As per last account	4,650.00	
<u>1,56,86,270.11</u>	Carried over:	<u>27,683.84</u>	<u>1,65,83,195.92</u>

INDIAN STATISTICAL INSTITUTE

BALANCE SHEET

	FUNDS AND LIABILITIES		
1964-65 Rs. P.		Ra. P.	1965-66 Rs. P.
2,91,64,720.71	Brought Forward :		2,76,67,369.26

CONTINGENT LIABILITY :

The Institute has guaranteed that in the event of the recognition of the Indian Statistical Institute General Provident Fund by the Commissioner of Income Tax, West Bengal, is not given tax rebate which is being allowed to the Institute staff participating in the Provident Fund on their contributions to the Fund, will be borne by it.

2,91,64,720.71

Carried over :

2,76,67,369.26

THIRTY-FOURTH ANNUAL REPORT: 1965-66

AS AT 31 MARCH 1966—(Contd.)

1966-65 Rs. P.	PROPERTY AND ASSETS	Rs. P.	1965-66 Rs. P.
1,56,85,270.11	Brought Forward :	..	27,868.84
	9.3 For ISEC Colombo Plan Fellowship :		
	As per last account ..	1,30,537.12	
	Add : during the year ..	71,809.28	
		<u>2,02,346.40</u>	
1,30,537.12	Less : amount received during the year ..	1,40,343.14	81,803.28
	.4 Director of Health Services for Demographic Studies :		
	As per last account ..	39,088.88	
39,088.88	*Add : expenditure during the year ..	93,013.12	1,32,101.98
		<u>1,32,101.98</u>	
	.5 Director of Health Services for Family Planning Survey :		
	As per last account ..	80,374.50	
	Less : amount received during the year ..	80,374.50	
		nil	
	Add : expenditure during the year ..	80,374.88	
80,374.50	Less : amount received during the year ..	40,050.50	40,324.38
		<u>40,324.38</u>	2,61,913.26
	10. STOCK OF BUILDING MATERIALS INCLUDING WORK IN PROGRESS AT COST (Work in progress Rs. 39,174.69)		
5,37,217.87			5,58,406.57
	11. VALUE OF PARTLY PROCESSED NSS WORK :		
	As per last account ..	71,40,143.00	
71,40,143.00	Less : on account payment received from Government of India ..	30,00,000.00	41,40,143.00
		<u>41,40,143.00</u>	
	12. LOANS AND ADVANCES :		
	.1 Departmental Imprest ..	55,055.88	
	.2 Festival advance to workers ..	3,483.42	
	.3 Suspense and other advance ..	4,38,479.05	
	.4 Educational and other loans ..	35,221.81	
	.5 Security deposit ..	23,150.50	
	.6 Advance to Sankhya Yantra (P) Ltd. ..	6,210.00	
	.7 Sundry debtors ..	80,075.37	
	.8 Advance and part payment for land ..	61,332.41	
7,26,322.63	.9 Rent prepaid ..	4,400.00	8,87,418.24
		<u>8,87,418.24</u>	
<u>2,43,18,953.89</u>	Carried over :	..	<u>2,32,59,075.99</u>

INDIAN STATISTICAL INSTITUTE

BALANCE SHEET

1964-65 Rs. P.	FUNDS AND LIABILITIES	1965-66 Rs. P.	Es. P.
2,91,84,720.71	Brought forward :		2,76,67,369.26

2,91,84,720.71

2,76,67,369.26

Calcutta,
6th September 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

THIRTY-FOURTH ANNUAL REPORT: 1965-66

AS AT 31 MARCH 1966—(Contd.)

1964-65 Rs. P.	PROPERTY AND ASSETS	1965-66 Rs. P.	Rs. P.
2,43,19,968.60	Brought forward:		2,32,59,076.99
	13. ASSETS OF OTHER FUNDS: As per contra		
	.1 Visiting Professors & Fellows Fund	113.13	
	.2 Leave Salary Fund	1,43,998.11	
	.3 Gratuity Fund	24,71,380.23	
	.4 Development Fund No. I	1,19,621.94	
	.5 Development Fund No. II	12,82,305.37	
	.6 Supervision Fee Fund	2,16,304.87	
47,48,155.25	.7 Electronic Data Processing and Computation Unit ..	8,74,942.19	51,08,565.94
	14. CASH AND BANK BALANCES:		
	.1 At Bank (Rs. 4,143.27 with Nath Bank Ltd. in liquidation)	2,93,404.42	
	.2 At Bank		
	a) For Rockefeller Foundation	11,669.00	
	b) For Ford Foundation	nil	
97,611.57	.3 In hand	14,864.01	3,18,737.43

2,91,64,730.71

2,76,57,369.26

*Note: The items marked asterisk are yet to be claimed from the Government of India.

In terms of our report of even date

LOVELL & LEWIS
Chartered Accountants

INDIAN STATISTICAL INSTITUTE

INCOME AND EXPENDITURE ACCOUNT

1964-65 Rs. P.	EXPENDITURE	1965-66 Rs. P.	Rs. P.
	1. To Salary, D.A. and remuneration to teachers etc. . .	81,09,828.83	
	.1 " House rent allowance	7,46,509.41	
	.2 " City compensatory allowance	4,29,673.95	
	.3 " Employer's contribution for workers' Provident Fund for 1965-66	5,16,766.91	
	Less: Employer's contribution charged in excess in previous year	11.91	
91,89,191.82		5,16,766.30	96,00,466.48
4,32,651.04	2. " Travelling expenses		4,53,468.46
4,83,469.56	3. " Overtime allowances		2,44,759.43
42,277.59	4. " Payment for leave vacancies		50,029.90
2,15,600.99	5. " Visiting Professors, Foreign Scientists, Fellows and Experts		1,25,361.80
2,77,553.84	6. " Scholarships, stipends and other assistance to trainees		4,11,586.50
1,820.00	7. " Prizes to workers for initiative		5,927.93
3,01,334.22	8. " Contribution to Gratuity Fund		3,10,841.37
	9. " Machine tabulation expenses :		
	.1 Hire and maintenance of tabulating equipment, punches & verifying machines etc. including service charges and freight, customs and other charges for new machines	14,82,271.18	
	.2 Cost of cards and cabinets, stores and stationaries etc.	1,50,424.48	
12,27,926.84	.3 Payment to Army Statistical Organisation direct by Government of India	60,000.00	17,02,896.66
1,02,801.46	10. " Printing and publication		85,122.14
60,539.87	11.1 " Society type activities	31,215.11	
	.2 " Examination expenses	29,764.97	60,970.08
1,69,710.02	12.1 " Books and journals (including cost of binding etc.)	1,45,013.51	
	.2 " Microfilm, photo and audiography expenses	12,932.30	1,57,946.81
8,691.84	13. " Expenses of Translation Unit in Japan		8,325.02
1,09,701.28	14. " Repairs, replacement and maintenance of office equipment, furniture and accessories		93,241.26
	15.1 " Stationaries and consumable stores	1,85,334.01	
2,41,185.26	.2 " Other miscellaneous expenses, viz., advertisement, insurance premia, law charges, oodle, cartage, conveyance and other petty expenses like hot weather contingencies etc.	1,23,615.26	3,17,849.27
1,30,64,445.43	Carried over:		1,38,06,810.09

THIRTY-FOURTH ANNUAL REPORT: 1965-66

FOR THE YEAR ENDED 31 MARCH 1966

1964-65	INCOME	1965-66	
Rs. P.		Rs. P.	Rs. P.
	1. By Block grants from Government of India for non-project sectors:		
	.1 " Research and Training School including Computing Machines and Electronics Laboratory ..	34,50,000.00	
	.2 " Planning Division	11,50,000.00	
	.3 " Statistical Quality Control	7,10,000.00	
	.4 " International Statistical Education Centre ..	1,82,000.00	
53,49,941.00	.5 " Utilisation and maintenance of Soviet equipment (UNTAAs)	6,50,000.00	63,52,000.00
	2. " Block grants from Government of India for NBS Project Sector:		
	.1 " Direct to the Institute	90,23,000.00	
81,22,788.00	.2 " Through Army Statistical Organisation	50,000.00	90,88,000.00
	3. " Amount received from Government of India, Planning Commission for Income Distribution Committee work done by NBS		49,470.00
	4. " SQC receipts from non-Governmental source: Membership fees, training fees and service charges etc.		5,54,030.49
4,38,479.72			
7,979.96	5. " Membership subscription		4,853.87
22,118.51	6. " Fees for training course and sale proceeds of syllabus etc.		22,868.86
16,481.18	7. " Examination fees and other receipts		15,022.70
5,950.99	8. " Receipts from produce at Giridih experimental farm etc.		7,472.07
	9. " Receipts for work done by:		
	.1 " Development Workshop (Part of OMEL of RTS)	19,088.41	
	.2 " RTS—Psychometric Unit etc.	8,301.74	
1,15,796.42	.3 " UNTAA Workshop	1,28,401.82	1,53,801.97
	10. " Grant for minor projects:		
	.1 " Amount received from Director of Health Services, Government of India for Family Planning Survey	40,050.50	
1,07,500.00	.2 " Amount received from Tata Institute of Social Sciences for "Sociology of Education" research project	20,000.00	60,050.50
	11. " Miscellaneous receipts:		
	.1 " Library	275.76	
43,208.58	.2 " Appraisal	328.50	606.25
5,08,528.48	12. " Excess of expenditure over income		—
<u>1,47,58,783.84</u>	Carried over:		<u>1,53,07,976.31</u>

INDIAN STATISTICAL INSTITUTE

INCOME AND EXPENDITURE ACCOUNT

1964-65 Rs. P.	EXPENDITURE	1965-66 Rs. P.	Rs. P.
1,30,64,446.43	Brought forward		1,38,08,510.00
	16. To Other non-salary contingencies :		
	.1 " Postal and M.O. charges, air and rly. freight, electricity and telephone charges	2,98,839.24	
	.2 " Audit fees and expenses 19,000.00 Loss : written back (previous year's provision) 2660.00	18,340.00	
8,18,908.28	.3 " Bank charges and interest	5,57,718.71	8,72,897.85
	17.1 " Rent, rates and taxes (including those of field, camps and out-station offices)	2,31,251.17	
4,33,965.08	.2 " Repairs and/or maintenance of buildings, land etc. and petty construction	2,37,368.25	4,68,619.42
1,18,403.53	18. " Transport		1,00,078.19
2,02,563.08	19. " Workers' welfare and amenities (including over- timeiffin and meal charges for April to June, 1965—Rs. 8075.42 and charges for medical reimbursement and mess for previous years— Rs. 92,877.94)		3,88,420.00
—	20. " Director's discretionary expenditure		—
	21.1 " Laboratory and Workshop stores, tools and minor accessories etc.	68,240.20	
1,03,477.46	.2 " Material and other charges for experimental farm- ing on rice research scheme and other surveys	23,744.00	81,984.29
	22. " Excess of income over expenditure :		
	Allocated as per Schedule V		5,87,465.31
1,47,38,762.84	TOTAL :		1,63,07,975.3

Note : Depreciation amounting to Rs. 6,44,833.85

Calcutta,
6th September 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

THIRTY-FOURTH ANNUAL REPORT: 1965-66

FOR THE YEAR ENDED 31 MARCH 1966.—*Contd.*

1964-65 Rs. P.	INCOME	Rs. P.	1965-66 Rs. P.
1,47,38,768.84	Brought forward		1,43,07,975.31

1,47,38,768.84

TOTAL:

1,43,07,975.31

for the year has been adjusted with the General Fund

In terms of our report of even date

LOWELOCK & LEWIS
Chartered Accountants

INDIAN STATISTICAL INSTITUTE

SCHEDULE

STATEMENT SHOWING THE VALUE

particulars	net value of assets as per last account	adjustment due to regrouping	sale	net value
(1)	(2)	(3)	(4)	(5)
A. LAND AND LAND DEVELOPMENT :				
1. Calcutta :				
.1 1.2920 and 0.1483 acres of land to the contiguous West of Institute building (free hold) ..	65,545.90	—	—	65,545.90
.2 Cost of development of above land ..	32,838.85	—	—	32,838.85
.3 Cost of land at 205 Barraokpore Trunk Road (including cost of development) (free hold) ..	4,33,886.27	—	—	4,33,886.27
.4 Cost of land at 186, 180, 185, 188/1, G. L. Tagore Road (free hold) ..	96,683.71	—	—	96,683.71
.5 Cost of development of above land ..	6,818.51	—	—	6,818.51
.6 102 Barraokpore Trunk Road (free hold) ..	3,30,684.00	—	—	3,30,684.00
2. Giridih :				
.1 34.68 acres of land acquired at Giridih (free hold) ..	9,514.51	—	—	9,514.51
.2 Cost of development and fencing etc. ..	29,889.55	—	—	29,889.55
.3 Farming development ..	10,682.00	—	—	10,682.00
.4 Irrigation and water supply ..	25,610.00	—	—	25,610.00
.5 Acquisition of land in village 'Makaspur' Giridih (free hold) ..	81,144.01	—	—	81,144.01
.6 Land purchased from Sm. Prakriti Devi Gangopadhyaya (free hold) ..	—	—	—	—
3. Delhi :				
.1 Land acquired in Delhi (lease hold) ..	4,00,000.00	—	—	4,00,000.00
4. Baroda :				
.1 Land in Baroda (free hold) ..	27,611.82	—	—	27,611.82
5. Bangalore :				
.1 Acquisition of land in Bangalore (free hold)	1,52,918.92	—	—	1,52,918.92
6. Madras :				
.1 Acquisition of land in Madras (free hold) ..	21,612.50	—	—	21,612.50
7. Hyderabad :				
.1 Land purchased at village 'Habshiguda'—7 acres (free hold) ..	—	—	—	—
Sub-total : (A1-7) ..	17,04,699.85	—	—	17,04,699.85

THIRTY-FOURTH ANNUAL REPORT: 1965-66

NO. I

OF ASSETS AS OF 31 MARCH 1966.

depreciation for the year		written down value	acquired during the year			total	net value of assets as on 31-3-66
rate	amount		out of capital grant: at cost	out of Rockefeller foundation grant	out of current expenditure grant		
(8.0)	(8.1)	(7)	(8.0)	(8.1)	(8.2)	(8.3)	(9)
—	—	85,546.90	—	—	—	—	85,546.90
—	—	32,838.65	—	—	—	—	32,838.65
—	—	4,32,686.27	—	—	—	—	4,32,686.27
—	—	96,063.71	—	—	—	—	96,063.71
—	—	6,618.51	—	—	—	—	6,618.51
—	—	3,30,564.00	—	—	—	—	3,30,564.00
—	—	9,514.51	—	—	—	—	9,514.51
—	—	29,689.55	—	—	—	—	29,689.55
—	—	10,882.00	—	—	—	—	10,882.00
—	—	25,610.00	—	—	—	—	25,610.00
—	—	61,144.01	68,943.89	—	—	68,943.89	1,30,087.90
—	—	—	14,000.00	—	—	14,000.00	14,000.00
—	—	4,00,000.00	—	—	—	—	4,00,000.00
—	—	27,611.32	—	—	—	—	27,611.32
—	—	1,52,918.92	—	—	—	—	1,52,918.92
—	—	21,612.50	—	—	—	—	21,612.50
—	—	—	1,14,385.00	—	—	1,14,385.00	1,14,385.00
—	—	17,04,699.85	1,97,338.89	—	—	1,97,338.89	19,02,038.74

(Continued)

INDIAN STATISTICAL INSTITUTE

SCHEDULE

STATEMENT SHOWING THE VALUE

particulars	not value of assets as per last account	adjustment due to regrouping	sale	net value
(1)	(2)	(3)	(4)	(5)
B. BUILDINGS :				
1. <i>Calcutta :</i>				
.1 Institute's Main Building at 203 B.T. Road	9,20,684.31	—	—	9,20,684.31
.2 Construction of buildings at 203 B.T. Road ..	10,00,577.34	—	—	10,00,577.34
.3 Construction of buildings at 205 B.T. Road ..	15,08,869.50	—	—	15,08,869.50
Sub-total : (B1.1-1.3)	34,30,131.15	—	—	34,30,131.15
C. SHEDS & STRUCTURES :				
1. <i>Calcutta :</i>				
.1 Construction of sheds and structures for Stores, Workshop, Servants' Quarters, Carpentry etc.	1,76,647.49	-60,786.25	—	1,15,861.24
.2 Construction of sheds and structures at 205 B.T. Road	28,804.63	+60,786.25	—	89,600.88
.3 Construction of sheds and structures at 165, 166, 165 & 166/1 G. L. Tagore Road (P.W.D. Road)	60,410.34	—	—	60,410.34
2. <i>Delhi :</i>				
.1 Partitions, structures etc. in Delhi ..	2,231.47	—	—	2,231.47
.2 Erection of a Nissen hut	1,749.75	—	—	1,749.75
Sub-total : (C1.1-2.2)	2,69,843.66	—	—	2,69,843.66
D. MACHINERY & EQUIPMENT :				
1. Calculating, punching and other tabulating equipment	5,27,521.56	—	—	5,27,521.56
2. Office machinery and equipment	3,02,844.30	—	—	3,02,844.30
3. Workshop equipment	61,667.80	—	—	61,667.80
4. Photo and optical equipment	11,998.29	—	—	11,998.29
5. Laboratory equipment	7,29,215.61	—	—	7,29,215.61
6. Printing press, monotype accessories etc. ..	9,460.30	—	—	9,460.30
7. Construction equipment	26,405.72	—	—	26,405.72
Sub-total : (D1-7)	16,98,903.48	—	—	16,98,903.48
E. PASSENGER LIFT	16,769.30	—	—	16,769.30

THIRTY-FOURTH ANNUAL REPORT: 1965-66

NO. I—(Contd.)

OF ASSETS AS OF 31 MARCH 1966.

depreciation for the year		written down value	acquired during the year				net value of assets as on 31-3-66
rate	amount		out of capital grant: at cost	out of Rockefeller foundation grant	out of current expenditure grant	total	
(6.0)	(8.1)	(7)	(8.0)	(8.1)	(8.2)	(8.3)	(9)
2.5%	23,017.11	8,97,667.20	9,081.37	—	—	9,081.37	9,06,746.57
2.5%	25,014.43	9,75,562.91	1,46,433.93	—	—	1,46,433.93	11,21,996.84
2.5%	37,721.74	14,71,147.76	3,13,168.43	—	—	3,13,168.43	17,84,316.19
—	86,753.28	33,44,377.87	4,68,683.73	—	—	4,68,683.73	38,13,061.60
7.5%	8,688.84	1,07,162.40	—	—	—	—	1,07,162.40
7.5%	5,730.07	82,880.81	16,799.29	—	—	16,799.29	99,680.10
7.5%	4,530.78	55,879.56	7,886.68	—	—	7,886.68	63,766.24
7.5%	167.36	2,064.11	—	—	—	—	2,064.11
7.5%	131.23	1,618.52	—	—	—	—	1,618.52
—	20,238.28	2,49,605.40	24,685.97	—	—	24,685.97	2,74,291.37
15%	79,128.23	4,46,393.33	85,649.40	—	—	85,649.40	5,34,042.73
15%	45,396.84	2,67,247.66	12,473.84	—	—	12,473.84	2,89,721.50
15%	18,760.17	77,917.63	2,834.30	—	—	2,834.30	80,751.93
15%	1,799.74	10,198.56	440.00	—	—	440.00	10,638.56
15%	1,09,382.31	6,19,833.20	14,746.45	2,783.60	—	17,529.95	6,37,363.15
15%	1,417.54	8,032.76	—	—	—	—	8,032.76
15%	3,960.85	22,444.87	2,509.50	—	—	2,509.50	24,954.37
—	2,54,836.48	14,44,068.00	1,18,663.49	2,783.60	—	1,21,446.99	15,65,504.99
10%	1,876.94	15,083.45	—	—	—	—	15,083.45

(Continued)

INDIAN STATISTICAL INSTITUTE

SCHEDULE

STATEMENT SHOWING THE VALUE

particulars	net value of assets as per last account	adjustment due to regrouping	sale	net value
(1)	(2)	(3)	(4)	(5)
F. ELECTRICAL EQUIPMENT AND INSTALLATION :				
1. High tension electricity	60,267.24	—	—	60,267.24
2. Electrical equipment & fittings	3,18,546.33	—	—	3,18,546.33
Sub-total : (F1-2)	3,78,813.57	—	—	3,78,813.57
G. FURNITURE & FITTINGS				
	6,89,572.38	—	—	6,89,572.38
H. BOOKS & JOURNALS				
	13,62,957.89	—	—	13,62,957.89
I. MOTOR CARS & VEHICLES				
	1,43,991.71	—	-359.97*	1,43,631.74
J. ELECTRONIC COMPUTER (HEC-2M) AND OTHER TABULATING EQUIPMENT				
	1,10,971.85	—	—	1,10,971.85
K. LIBRARY EQUIPMENT (INCLUDING EQUIP- MENT PROCURED THROUGH FORD FOUN- DATION GRANT AND ROCKEFELLER FOUNDATION GRANT)				
	36,409.51	—	—	36,409.51
L. CONSTRUCTION OF OVERBRIDGE				
	11,917.92	—	—	11,917.92
GRAND TOTAL :	98,63,972.38	—	-359.97	98,63,612.39

*sale proceeds of Morris Car .. Ra. 3,300.00
less : written down value .. Ra. 359.97

Capital profit transferred to
General Fund .. Ra. 2,940.03

S. P. Mukherjee
Senior Accounts Officer

THIRTY-FOURTH ANNUAL REPORT: 1965-66

NO. I—(Contd.)

OF ASSETS AS ON 31 MARCH 1966.

depreciation for the year	written down value	acquired during the year			total	net value of assets as on 31-3-66	
		out of capital grant : at cost	out of Rockefeller foundation grant	out of current expenditure grant			
rate	amount	(7)	(8.0)	(8.1)	(8.2)	(8.3)	(9)
(8.0)	(8.1)	(7)	(8.0)	(8.1)	(8.2)	(8.3)	(9)
10%	5,056.72	54,840.53	—	—	—	—	54,840.53
10%	31,854.53	2,86,691.70	40,040.53	—	—	40,040.53	3,26,732.23
—	37,881.35	3,40,932.22	40,040.53	—	—	40,040.53	3,80,972.76
10%	66,967.24	6,20,815.12	68,783.30	—	—	68,783.30	6,89,598.42
5%	68,147.89	12,94,810.00	45,997.98	—	1,37,762.84	1,83,760.70	14,78,570.70
20%	28,725.95	1,14,905.79	—	—	—	—	1,14,905.79
15%	17,995.77	1,01,076.08	—	—	—	—	1,01,076.08
15%	5,451.42	30,948.09	—	—	—	—	30,948.09
7.5%	898.84	11,024.08	—	—	—	—	11,024.08
—	5,90,556.44	82,73,045.95	9,64,173.77	2,783.50	1,37,762.84	11,04,730.11	1,03,77,766.06

INDIAN STATISTICAL INSTITUTE

SCHEDULE
(FOR 202 BARRACKS)

particulars	cost of construction to 31-3-84 accounted	cost of construction during the year ended 31 March 1985 per Last Balance Sheet	total cost of construction to 31 March 1985
(1)	(2)	(3)	(4)
1. LAND AND LAND DEVELOPMENT :			
.1 8.74 acres of land - compensation etc.	—	—	—
.2 Roads, boundary wall and fencing etc.	.. 1,34,811.00	—	1,34,811.00
sub-total : (1.1-1.2)	.. 1,34,811.00	—	1,34,811.00
2. BUILDING			
	52,671.00	—	52,671.00
3. SHEDS AND STRUCTURES			
	4,74,999.48	16,021.52	4,91,021.00
TOTAL : (1-3)	6,62,481.48*	16,021.52	6,78,503.00

*Note : The expenditure upto 31 March 1984, debited to a different head in those years to 31.3.1984 has now been

S. P. Mukherjee
Senior Accounts Officer

THIRTY-FOURTH ANNUAL REPORT: 1965-66

NO. I-A

TRUNK ROAD)

arrear depreciation for the period to 31-3-65	net balance as on 31-3-65 (col. 4-5)	1965-66			net value of assets as on 31-3-66	
		depreciation for the year		written down value as on 31-3-66		
		rate	amount			
(5)	(6)		(7)	(8)	(9)	(10)
—	—	—	—	—	4,36,100.87	4,36,100.87
—	1,34,811.00	—	—	1,34,811.00	—	1,34,811.00
—	1,34,811.00	—	—	1,34,811.00	4,36,100.87	5,70,911.87
5,254.00	47,417.00	2.5%	1,185.00	46,232.00	—	46,232.00
2,12,742.00	2,78,279.00	7.5%	20,871.00	2,57,408.00	13,174.39	2,70,582.39
2,17,996.00	4,60,507.00	—	22,056.00	4,38,451.00	4,49,276.26	8,87,726.26

capitalised as the necessary details for such adjustment are now available.

F. Roy
Joint Secretary

INDIAN STATISTICAL INSTITUTE

SCHEDULE NO. II

STATEMENT OF ASSETS ACQUIRED FOR UNTAA WORKSHOP AS ON 31.3.1966

particulars	balance as on 31-3-65	depreciation for the year		written down value	addition during the year	net value of assets as on 31.3.1966
		rate	amount			
(1)	(2)	(3.0)	(3.1)	(4)	(5)	(6)
1. Construction of sheds and structures at 5 Bahadur Nath Tagore Road, Baranagar	3,04,715.73	7.5%	29,603.88	3,66,112.05	6,698.97	8,71,811.02
2. Installation of high tension electricity	88,817.82	10%	8,881.78	79,755.86	—	79,755.86
3. Machine equipment (lathe etc.)	52,301.35	15%	7,845.20	44,456.15	—	44,456.15
4. Workshop equipment	45,577.85	15%	6,836.67	38,741.18	—	38,741.18
Total:	5,81,212.55	—	53,147.31	5,28,065.24	6,698.97	5,34,764.21

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

SCHEDULE NO. III

GENERAL FUND AS ON 31 MARCH 1966

Particulars	Rs.	P.	Rs.	P.
1. Opening balance	1,02,02,831.69
2. Add:				
..1 Assets acquired during 1965-66 out of capital grant	15,40,036.90	
..2 Capitalisation of books & journals purchased through current account	1,37,762.84	
..3 Profit in sale of Morris Car	2,940.03	
..4 Capitalisation of laboratory equipment purchased through Rockefeller Foundation Grant	2,789.50	
..5 Capitalisation of expenditure incurred for building & sheds and for road development etc. at 202 B. T. Road for the period 1964-65 to 1964-65	4,38,451.00	
Less: Capitalisation of expenditure incurred for 202 B.T. Road for 1964-65 as per last account			16,021.82	4,22,429.48
				1,23,08,584.54
3. Less:				
..1 Depreciation for 1965-66:				
a) Fixed assets as per schedule I	5,90,586.44
b) OYT telephones	1,120.10
c) UNTAA Workshop	53,147.31
4. closing Balance	1,16,85,760.40

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

THIRTY-FOURTH ANNUAL REPORT: 1965-66

SCHEDULE NO. IV

STATEMENT OF OUTSTANDING LIABILITIES PAYABLE AS OF 31 MARCH 1966

sl. no.	particulars	amount Rs. P.
(1)	(2)	(3)
1.	For goods and services ..	10,30,189.00
2.	For Employer's share of contribution to ISI General Provident Fund ..	5,16,788.31
3.	For Leave Salary Fund ..	1,40,000.00
4.	For Gratuity Fund ..	17,33,718.52
	Total ..	34,09,676.79

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

SCHEDULE NO. V.

SECTOR-WISE BREAK UP OF INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 MARCH 1966.

sectors	total expenditure	grant from Government	miscellaneous incomes		surplus (+) deficit (-)	
			direct	alloated		
(1)	(2)	(3)	(4.1)	(4.2)	(4.3)	(5)
1. Non-Project Sectors :						
1. RTS & CMEL	37,42,916.00	36,60,000.00	77,417.25	209.93	37,37,627.18	- 5,287.82
2. Planning Division	10,94,749.00	11,60,000.00	—	63.34	11,50,063.34	+ 55,314.34
3. SQC ..	11,46,249.00	7,10,000.00	5,54,030.49	51.94	12,64,082.43	+1,17,833.43
4. ISEC ..	1,78,096.00	1,82,000.00	—	17.05	1,82,017.05	+ 3,922.05
Sub-total : .. (1)	61,62,008.00	57,02,000.00	6,31,447.74	342.28	63,33,790.00	+1,71,782.00
2. UNTAA ..	6,66,827.00	6,50,000.00	1,26,401.82	29.24	7,76,431.16	+1,19,604.16
Total : Non-Project	68,18,835.00	63,52,000.00	7,57,849.56	371.60	71,10,221.16	+2,91,385.16
3. NSS ..	87,16,039.00	90,88,000.00	49,470.00	283.65	91,87,703.65	+4,31,664.65
4. Miscellaneous :						
1. Demography	98,013.12	—	—	—	—	- 98,013.12
2. Family Planning	80,374.88	—	40,060.50	—	40,060.50	- 40,314.38
3. Sociology of Education	12,248.00	—	20,000.00	—	20,000.00	+ 7,752.00
Total : (1-4)	1,67,20,510.00	1,54,40,000.00	8,67,370.06	606.25	1,68,07,976.31	+5,87,466.31

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

INDIAN STATISTICAL INSTITUTE

CAPITAL EXPENDITURE

RECEIPTS AND PAYMENTS ACCOUNT FOR

1964-65	RECEIPTS	1966-66	
Rs. P.		Rs. P.	Rs. P.
	1. Opening balance :		
	.1 Cash in hand	812.52	
	.2 Stock of building materials :		
5,54,900.77	As per last account	5,37,217.87	5,38,030.19
	2. Grants received from Government of India :		
	.1 For current year's capital expenditure	15,40,000.00	
20,40,818.00	.2 For arrear for 1959-60 and 1960-61	81,813.00	16,21,813.00
10,398.58	.3 Recovery of capital outlay		18,160.57
	.4 Sale of Morris Car	3,300.00	
—	Less : Profit in sale transferred to General Fund	2,040.03	359.97
985.00	.5 Refund on account of electrical installation at UNTAA Workshop		—

24,17,102.35

21,78,363.73

We have examined the Receipts and Payments Account in respect of the Capital Expenditure Account of the Indian to be in accordance therewith.

Calcutta,
6th September 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

THIRTY-FOURTH ANNUAL REPORT: 1963-66

ACCOUNT

THE YEAR ENDED 31 MARCH 1966.

1964-65		PAYMENTS		1965-66	
Rs.	P.			Rs.	P.
		Capital Expenditure during the year:			
		1. Land and land development:			
		1.a) 202 Barrackpore Trunk Road—excess compensation and law charges			
				4,36,100.87	
		b) Land acquired at Giridih—compensation etc. (free hold)			
				68,943.89	
2,77,338.14		c) Land purchased at Giridih from Shri. Prakriti Devi Gangopadhaya (free hold)			
				14,950.00	
		d) Land acquired at Hyderabad (free hold)			
				1,14,535.00	5,83,439.76
		2. Buildings:			
		1 Institute's main building at 203 B.T. Road			
				9,081.37	
		2 Construction of buildings at 203 B.T. Road			
6,49,044.72				1,45,433.93	
		3 Construction of buildings at 205 B.T. Road			
				3,13,166.43	4,68,683.73
		3. Sheds and Structures:			
		1 Sheds and structures at 205 B.T. Road			
				16,799.29	
68,076.47		2 Sheds and structures at P.W.D. Road			
				7,886.68	24,686.97
		4. Construction of overbridge between 202 and 203 B.T. Road			
11,917.92					
		5. Sheds and structures at 202 B.T. Road:			
18,021.53		Electrical installation and fittings etc.			
					13,174.89
		6. Machinery and equipment:			
		1 Calculating machines			
				85,549.40	
		2 Office machinery and equipment			
				12,473.84	
		3 Workshop equipments			
				2,324.30	
		4 Laboratory equipment			
				14,746.45	
		5 Photo and optical equipments			
				440.00	
1,19,856.21		6 Construction equipment			
				2,509.50	1,18,663.40
67,485.76		7. Electrical equipment			
					40,040.53
1,22,000.96		8. Furniture and fittings			
					66,763.30
40,858.02		9. Books and Journals			
					45,997.86
19,442.37		10. Motor Car			
					—
6,846.00		11. O.Y.T. telephone			
					—
2,29,301.82		12. Joint Project for the construction of electronic computers and accessories			
					1,16,888.90
89,971.45		13. UNTAA Workshop including electrical installation etc.			
					6,899.97
		Sub-total:			
					15,40,026.90
nil		14. Recoverable capital expenditure			
					4,717.26
2,40,000.00		15. Loan paid to Current Expenditure Account			
					75,000.00
29,000.00		16. Repayment of loan taken from Development Fund II			
					—
		17. Closing balance:			
		1 Stock of building materials			
5,88,080.19				5,58,405.57	
		2 Cash in hand			
				2,204.00	5,58,609.57
<hr/>				<hr/>	<hr/>
20,17,102.86					21,78,363.73

Statistical Institute for the year ended 31 March 1966 with the books and records maintained by the Institute and have found

LOVELOCK & LEWIS
Chartered Accountants

INDIAN STATISTICAL INSTITUTE
 VISITING PROFESSORS AND FELLOWS FUND
 BALANCE SHEET AS AT 31 MARCH 1966

1964-65 Rs. P.	Funds & Liabilities	1965-66 Rs. P.	1964-65 Rs. P.	Property & Assets	1965-66 Rs. P.
118.13	Fund : As per last account	.. 118.13	118.13	Cash in hand 118.13
118.13		118.13	118.13		118.13

In terms of our report of even date

Calcutta,
8th September, 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

LOVELOCK & LAWES
Chartered Accountants

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 MARCH 1966

1964-65 Rs. P.	Expenditure	1965-66 Rs. P.	1964-65 Rs. P.	Income	1965-66 Rs. P.
nil		nil	nil		nil
nil		nil	nil		nil

In terms of our report of even date

Calcutta,
8th September, 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

LOVELOCK & LAWES
Chartered Accountants

THIRTY-FOURTH ANNUAL REPORT: 1965-66

LEAVE SALARY FUND

BALANCE SHEET AS AT 31 MARCH 1966

	1964-65	1965-66		1964-65	Property & Assets	1965-66	
Funds & Liabilities	Rs.	P.	Rs.	Rs.	P.	Rs.	P.
Fund :							
6,83,920.76			2,70,749.23				
<i>As per last account</i>							
<i>Add : Contribution received for a worker or on deputation ..</i>			1,263.61				
			2,72,011.74	6,80,742.98		2,70,000.00	
<i>Less : Leave salary paid during the year</i>				3,80,742.98			
3,88,176.53			1,38,018.63	2,70,000.00		1,30,000.00	1,40,000.00
			1,43,998.11	749.23			3,998.11
			1,43,998.11	2,70,749.23		1,43,998.11	
2,70,749.23							

Current Assets :

Balance receivable from the Institute on account of employer's contribution for the year 1963-64

Less : Received during the year

Cash in hand

In terms of our report of even date

Calcutta,
6th September, 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

LOVELOCK & LEWIS
Chartered Accountants

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 MARCH 1966

	1964-65		1965-66	1964-65	Income	1965-66
Expenditure	Rs.	P.	Rs.	Rs.	P.	Rs.
			nil	nil		nil
			nil	nil		nil

In terms of our report of even date

Calcutta,
6th September, 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

LOVELOCK & LEWIS
Chartered Accountants

INDIAN STATISTICAL INSTITUTE

GRATUITY
BALANCE SHEET

1964-65 Rs. P.	Funds & Liabilities	Rs. P.	1965-66 Rs. P.
	Fund :		
18,71,471.91	As per last account	21,07,512.91	
3,01,334.22	Add : Employer's contribution for the year	3,10,041.37	
<u>21,72,806.13</u>		<u>24,78,154.28</u>	
5,393.22	Less : Gratuity paid during the year	6,774.05	<u>24,71,380.23</u>

21,07,512.91

24,71,380.23

Calcutta
8th. September, 1966

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

INCOME AND EXPENDITURE ACCOUNT

1964-65 Rs. P.	Expenditure	1965-66 Rs. P.
nil		nil
<u>nil</u>		<u>nil</u>

Calcutta,
8th. September, 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

THIRTY FOURTH ANNUAL REPORT: 1965-66

FUND

AS AT 31 MARCH, 1966.

1964-65. Rs. P.	Property & Assets	Rs. P.	1964-66 Rs. P.	Rs. P.
	Current Assets :			
	Temporary advances made to :			
	(a) Capital Expenditure Account :			
	As per last account		4,87,000.00	
	(b) Current Expenditure Account :			
	As per last account	2,95,000.00		
7,53,000.00	Less : realised during the year	5,000.00	2,90,000.00	7,47,000.00
	Amount receivable from the Institute on account of employee's contribution :			
	As per last account for—			
	i) year 1959-60	1,48,164.00		
	ii) year 1960-61	1,72,339.95		
	iii) year 1961-62	2,60,870.44		
	iv) year 1962-63	2,61,078.89		
	v) year 1963-64	2,75,889.85		
14,13,077.18	vi) year 1964-65	3,01,334.23	14,18,077.18	
	Add : for the year 1965-66		3,10,841.37	17,93,718.82
2,435.75	Cash in hand			661.71
<u>21,87,519.91</u>				<u>24,71,880.82</u>

In terms of our report of even date

LOVELOCK & LEWIS
Chartered Accountants

FOR THE YEAR ENDED 31 MARCH 1966.

1964-65 Rs. P.	Income	1965-66 Rs. P.
nil		nil
<u>nil</u>		<u>nil</u>

In terms of our report of even date

LOVELOCK & LEWIS
Chartered Accountants

INDIAN STATISTICAL INSTITUTE
DEVELOPMENT FUND I

BALANCE SHEET AS AT 31 MARCH 1966

1964-65 Rs. P.	Funds & Liabilities	1965-66 Rs. P.	1964-65 Rs. P.	Property & Assets	1965-66 Rs. P.	Rs. P.
	Fund:			Current Assets:		
1,19,521.94	As per last account ...	1,19,521.94		Temporary advances made as per last account to		
			81,000.00	i) Capital expenditure account ..	81,000.00	
			27,000.00	ii) Current expenditure account ..	27,000.00	1,08,000.00
			11,521.94	Cash in hand ..		11,521.94
<hr/>		<hr/>	<hr/>			<hr/>
1,19,521.94		1,19,521.94	1,19,521.94			1,19,521.94

In terms of our report of even date.

Calcutta,
6th September 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

LOVELOCK & LEWIS
Chartered Accountants

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 MARCH 1966

1964-65 Rs. P.	Expenditure	1965-66 Rs. P.	1964-65 Rs. P.	Income	1965-66 Rs. P.
nil		nil	nil		nil
<hr/>		<hr/>	<hr/>		<hr/>
nil		nil	nil		nil

In terms of our report of even date

Calcutta,
6th September 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

LOVELOCK & LEWIS
Chartered Accountants

THIRTY-FOURTH ANNUAL REPORT: 1965-66

DEVELOPMENT FUND NO. II

BALANCE SHEET AS AT 31 MARCH 1966

1964-65 Ra. P.	Funds & Liabilities	1965-66 Ra. P.	1964-65 Ra. P.	Property & Assets	1965-66 Ra. P.	1964-65 Ra. P.
12,76,068.83	1. Fund: As per last account	12,79,868.96		1. Fixed assets:		
	2. Add: excess of income over expenditure for the year	4,819.42	2,94,799.41	1. Land and land development: As per last account ..	2,94,799.41	
		4,819.42		Add: during the year ..	—	2,94,799.41
				2. Buildings: As per last account ..	1,41,071.18	
				Less: depreciation during the year @ 2.5% ..	5,628.77	
			1,41,071.18	Add: during the year ..	1,37,544.41	1,38,862.10
					1,307.89	
				3. Sheds & structures: As per last account ..	1,87,261.72	
				Less: depreciation during the year @ 7.5% ..	14,044.54	
			1,87,261.72	Add: during the year ..	1,73,217.08	2,03,263.66
					30,066.67	
				4. Electrical equipment and installation: Internal telephone system As per last account ..	5,859.54	
			5,859.54	Less: depreciation @ 10% ..	586.95	5,272.59
				5. Motor cars & vehicles: As per last account ..	11,132.79	
			11,132.79	Less: depreciation @ 20% ..	2,226.59	8,906.23
				2. Capitalised rental of tele- phone under OYT Scheme: As per last account ..	8,431.26	
			8,431.26	Less: depreciation @ 5% ..	421.66	8,009.60
				3. Investment: G.P. Notes at cost (face value Rs. 50,000/-): As per last account ..	45,633.75	45,633.75
				(pledged with the State Bank of India, Shambhagan, for securing an overdraft of the Institute).		
			2,47,461.43			
				4. Current assets: 1. Stock of building materials		2,36,121.45
				2. Temporary advances to:		
				a) Capital Expenditure account: As per last account ..	1,80,000.00	
				b) Current Expenditure account: As per last account ..	1,56,000.00	3,36,000.00
			3,324.88			
				3. Cash in hand		3,525.50
12,76,868.96		12,82,306.87	12,79,868.96			12,82,306.87

In terms of our report of even date

Calcutta,
6th September 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

LOVELACE & LAWRENCE
Chartered Accountants

INDIAN STATISTICAL INSTITUTE

DEVELOPMENT FUND NO. II

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 MARCH 1966

1964-65 Ra. P.	Expenditure	1965-66 Ra. P.	1964-65 Ra. P.	Income	1965-66 Ra. P.
	To Depreciation :				
3,480.26	a) on Buildings ...	3,626.77	22,891.06	By rent ...	21,748.90
13,216.27	b) on Sheds & Structures	14,044.64		" Interest on U.P. Notes (less bank charges Ra. 4.00) ...	1,496.00
2,783.20	c) on Motor Car ...	2,226.56			
443.75	d) on OYT telephone ...	421.66			
661.08	e) on Internal Telephone	<u>585.95</u>			
					20,805.48
4,813.42	To Net excess of income over expenditure ...				<u>2,439.42</u>

25,387.96

23,244.90

25,387.96

23,244.90

In terms of our report of even date

Celcutta,
6th September 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

LOVELACE & LAWES
Chartered Accountants

THIRTY-FOURTH ANNUAL REPORT: 1965-66

SUPERVISION FEE FUND

BALANCE SHEET AS AT 31 MARCH 1966.

1964-65	Funds & Liabilities	1965-66	1964-65	Property & Assets		1965-66	
Rs. P.		Rs. P.	Rs. P.		Rs. P.	Rs. P.	Rs. P.
	Fund :			Assets :			
2,16,304.87	As per last account	2,16,304.87		Land :			
			1,12,218.11	As per last account		1,12,218.11	
				Loans and advances :			
				Temporary advance made as per last account to :			
				(a) Current Expenditure Account ...		60,000.00	
				(b) ISI small scale industries experimental units ...	22,628.22		
			82,628.22	Add : Advance made during the year (net)	2,071.33	24,699.56	84,899.05
			21,459.54	Cash in hand ...			19,387.21
<u>2,16,304.87</u>		<u>2,16,304.87</u>	<u>2,16,304.87</u>				<u>2,16,304.87</u>

In terms of our report of even date.

Calcutta,
6th September 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

LOVELOCK & LEWIS
Chartered Accountants

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 MARCH 1966.

1964-65	Expenditure	1965-66	1964-65	Income	1965-66
Rs. P.		Rs. P.	Rs. P.		Rs. P.
	nil	nil	nil		nil
<u>nil</u>		<u>nil</u>	<u>nil</u>		<u>nil</u>

In terms of our report of even date.

Calcutta,
6th September 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

LOVELOCK & LEWIS
Chartered Accountants

INDIAN STATISTICAL INSTITUTE
ELECTRONIC DATA PROCESSING AND COMPUTATION UNIT
BALANCE SHEET AS AT 31 MARCH 1966

1964-65 Rs. P.	Funds & Liabilities	1965-66		1964-65	Property & Assets	1965-66	
Rs. P.	Rs. P.	Rs. P.	Rs. P.	Rs. P.	Rs. P.	Rs. P.	Rs. P.
6,94,087.22	1. Sundry creditors		8,26,936.62		1. Magnetic tape :		
	2. Excess of income over expenditure	96,406.67		72,350.00	As per last account	72,350.00	
	Less : excess of expenditure over income :				Less : depreciation @ 20%	...	16,078.00
	As per last account	48,400.10	48,006.57	3,90,900.00	2. Importation charges :		56,274.00
					As per last account	3,90,900.00	
					Less : amount charged to Income & Expenditure Account	1,30,000.00	2,60,900.00
					3. Furniture & fittings : Addition during the year		3,232.10
				68,718.75	4. Sundry debtors ...		1,27,869.04
					5. Amount due from the Institute :		
					As per last account	1,13,718.37	
				1,13,718.37	Less : amount recovered during the year	...	1,13,718.37
					Add : during the year	nil	4,26,667.05
					6. Excess of expenditure over income ...		
<u>6,94,087.22</u>		<u>8,74,942.19</u>	<u>8,74,942.19</u>	<u>48,400.10</u>		<u>6,94,087.22</u>	<u>8,74,942.19</u>

In terms of our report of even date.

Calcutta,
6th September 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

LOVLOCK & LEWIS
Chartered Accountants

THIRTY-FOURTH ANNUAL REPORT : 1965-66
 ELECTRONIC DATA PROCESSING AND COMPUTATION UNIT
 INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 MARCH 1966

1964-65 Rs. P.	Expenditure	1965-66 Rs. P.	1964-65 Rs. P.	Income	1965-66 Rs. P.
644.00	1. To Salary and other remuneration	10,142.07	3,42,567.75	1. By service charges ...	8,70,873.39
	2. .. Machine tabulation expenses :				
3,02,100.73	.1 .. Hire and maintenance	5,88,325.35			
65,141.47	.2 .. Importation charges written off	1,30,000.00			
	.3 .. Rent, electricity, postage, printing, stores, stationery and other charges	30,023.30			
16,133.65	3. .. Depreciation charges :				
8,038.00	.. Magnetic tape	16,078.00			
	4. .. Excess of income over expenditure	96,406.67	48,400.10	2. .. Excess of expenditure over income ...	

3,90,967.85

8,70,873.39

3,90,967.85

8,70,873.39

In terms of our report of even date.

Calcutta
6th September 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

LOWLOCK & LAWRA
Chartered Accountants

THIRTY-FOURTH ANNUAL REPORT: 1965-66

INDIAN STATISTICAL INSTITUTE

BALANCE SHEET

1964-65		Funds & Liabilities		1965-66	
Rs.	P.		Rs.	P.	Rs.
		Members' own subscription :			
		As per last account			29,90,355.24
		Add : during the year			5,17,735.68
					<u>35,08,090.86</u>
29,90,355.24		Less :			
		i) refunded during the year ..	35,077.64		
		ii) refund of excess realisation ..	11.91		
					<u>35,089.55</u>
					34,73,001.31
		Employer's contribution :			
		As per last account			29,90,355.24
		Add : during the year			
		i) from the Institute	5,15,789.21		
		ii) for workers on deputation ..	1,967.41		
					<u>5,17,756.62</u>
		Less :			
		i) refunded during the year ..	26,780.44		
		ii) amount excess contributed in previous year	11.91		
29,90,355.24		iii) amount forfeited	8,317.20		
					<u>35,089.55</u>
					34,73,001.31
		Members' voluntary subscription :			
		As per last account			1,80,833.34
		Add : during the year			26,700.15
					<u>1,89,533.49</u>
1,80,833.34		Less :			
		refunded during the year			<u>25,006.79</u>
					1,83,526.70
		Interest payable :			
		a) on members' own subscription :			
		As per last account			5,80,386.98
		Add : during the year			1,83,669.98
					<u>7,84,056.96</u>
5,80,386.98		Less :			
		paid during the year			<u>4,890.13</u>
					7,59,066.83
		b) on Employer's contribution :			
		As per last account			5,14,801.18
		Add : during the year			1,86,269.85
					<u>6,83,091.13</u>
5,14,801.18		Less :			
		i) paid during the year	3,993.80		
		ii) amount forfeited	262.80		
					<u>4,267.60</u>
					6,78,833.53
		c) on members' voluntary subscription :			
		As per last account			26,355.17
		Add : during the year			9,168.45
					<u>35,523.62</u>
26,355.17		Less :			
		paid during the year			<u>4,006.09</u>
					31,517.53
		Surplus including forfeiture :			
		As per last account			2,27,643.97
		Add : i) excess of income over expenditure for the year			44,010.80
		ii) forfeiture for the year			8,581.00
2,27,643.97					<u>2,80,235.77</u>
					88,59,279.88
<u>74,90,731.12</u>					

We have examined the above Balance Sheet as at 31st March 1966, and the annexed Income and Expenditure Account for the year ended on that date of the Indian Statistical Institute General Provident Fund with the books and records of the Fund and have found to be in accordance therewith. In our opinion the following are not in accordance with the Rules of the Fund, namely :—

- The investments are held in the name of the Indian Statistical Institute.
- The following securities are pledged with the State Bank of India for securing an overdraft of the Institute with the Bank :

	particulars	face value	cost
	3% Conversion Loan of 1946/86	Rs. 0,85,000	Rs. 7,20,829.60
	3% 1st Development Loan of 1970/76	Rs. 18,06,000	Rs. 11,45,154.00
	4½% Loan of 1955	Rs. 25,000	Rs. 25,000.00

Calcutta,
6th September, 1966.

B. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

THIRTY-FOURTH ANNUAL REPORT: 1965-66

GENERAL PROVIDENT FUND

AS AT 31 MARCH 1966

1964-65 Rs. P.	Property and Assets	Rs. P.	1965-66 Rs. P.	Rs. P.
	Investment: At cost**			
	a) G.P. Notes at cost:			
	As per last account:			
	3% conversion loan of 1946/58 for Rs. 18,85,000 (face value)	13,00,789.60		
	3% 1st. Development Loan of 1070/75 for Rs. 13,05,000 (face value)	11,45,154.69		
	4½% loan of 1986 for Rs. 13,00,000 (face value)	13,00,000.00	37,45,924.29	
	b) National Savings Certificate at cost:			
	As per last account		1,00,000.00	
38,45,934.29	c) Fixed deposit with State Bank of India, Shambazar		10,00,000.00	48,45,924.29
	Loan to members outstanding:			
	As per last account		8,51,987.15	
	Add: loan paid during the year		15,06,892.92	
			23,58,880.07	
8,51,987.15	Less: loan realised during the year		12,97,547.17	10,91,332.90
	Current Assets:			
	Interest accrued:			
	a) On G.P. Notes:			
	As per last account	27,000.00		
	Add: during the year	41,438.75	68,438.75	
	b) On National Savings Certificate:			
	As per last account	37,850.00		
	Add: during the year	4,791.73	42,641.73	
	c) On Fixed deposit with State Bank of India, Shambazar		17,500.00	
			1,28,680.48	
	Amount receivable from Public Debt Office on account of Income Tax wrongly deducted from Interest on G.P. Notes:			
	As per last account		8,774.70	
	Amount due from the Institute:			
	As per last account	5,02,223.70		
	Less: amount realised during the year	5,02,223.70		
			nil	
	Add: Employer's contribution for 1965-66	6,15,708.21	6,15,708.21	
	Temporary advance to Institute's Current Expendi- ture Account:			
	As per last account	4,50,000.00		
	Add: during the year	25,19,699.51		
		29,69,699.51		
	Less: repaid during the year	24,99,699.51	5,00,000.00	
	Cash & Bank balances:			
	At Bank		17,66,027.96*	
27,92,819.68	In hand		871.44	29,22,027.79
74,90,731.12				88,59,279.98

* Rs. 10,00,000/- has since been invested in fixed deposit with the State Bank of India, Shambazar.

** Of the above investments securities to the book value of Rs. 18,90,784.29 have been pledged with the State Bank of India for securing an overdraft to the Institute with the Bank. This overdraft has since been liquidated.

(e) The Bank Account is maintained in the name of the Institute.

(d) Members' subscriptions during the year have not been invested in the manner required by Rule 12 but have been advanced to the Institute's Current Expenditure Account from time to time.

(e) Employer's contribution for the year have not been received and credited to the Fund on 31st March 1966.

LOVELOCK & LAYERS
Chartered Accountants

INDIAN STATISTICAL INSTITUTE

INDIAN STATISTICAL INSTITUTE
INCOME AND EXPENDITURE ACCOUNT

1964-65 Ra. P.	Expenditure			1965-66 Ra. P.
	To Interest:			
1,54,409.84	i) On members' own subscription			1,83,665.98
1,40,160.23	ii) On Employer's contribution			1,89,289.95
7,938.81	iii) On members' voluntary subscription			9,168.45
1,889.95	iv) On G.P. Notes purchased			—
54,675.34	Excess of income over expenditure			3,81,125.38
				<u>44,010.80</u>

3,59,074.17

4,05,136.18

Calcutta,
6th September 1966.

S. P. Mukherjee
Senior Accounts Officer

P. Roy
Joint Secretary

THIRTY-FOURTH ANNUAL REPORT: 1965-66

GENERAL PROVIDENT FUND

FOR THE YEAR ENDED 31 MARCH 1966.

1964-65 Rs. P.	Income	Rs. P.	1965-66 Rs. P.
	By Interest:		
1,53,283.00	i) On G.P. Notes (excluding bank charge for Rs. 317.00)	1,53,283.00	
37,850.00	ii) On National Savings Certificates	4,791.73	
—	iii) On Fixed deposit with the bank	58,349.31	
23,240.81	iv) On Employer's contribution for the previous year	25,111.19	
31,441.60	v) Overriding interest for utilizing G.P. Notes by the Institute	31,441.60	
57,500.00	vi) On loan given to the Institute and bank balance utilized by the Institute	62,600.00	
55,758.86	vii) On loan given to the members	<u>68,869.45</u>	4,06,138.18

2,59,074.17

4,06,138.18

In terms of our report of even date.

LOVLOCK & LAWREN
Chartered Accountants

GOVERNING BODY OF THE RESEARCH AND TRAINING SCHOOL : 1965-66

1. Shri K. P. S. Menon, Chairman (*ex-officio*); 2. Professor P. C. Mahalanobis, Hon. Secretary (*ex-officio*); 3. Dr. C. R. Rao, Director, RTS (*ex-officio*); 4. Shri Dinesh Bahl, Managing Director, Capital Private Ltd. (*Associated Chambers of Commerce of India*); 5. Dr. S. N. Sen, M.A., Ph.D., Head of the Department of Economics, Calcutta University (*Indian Economic Association*); 6. Shri B. K. Dutta, Managing Director, United Bank of India Ltd. (*Federation of Indian Chambers of Commerce and Industry*); 7. Joint Director (Dr. K. S. Rao), Central Statistical Organisation (*Government of India*); 8. Joint Secretary (Shri F. H. Vallibhoj), Ministry of Finance, (*Financial Adviser to the Cabinet*), Department of Expenditure (*Government of India*); 9. Professor S. S. Shrikhande, F.N.I., Professor of Mathematics, Bombay University (*National Institute of Sciences of India*); 10. Dr. N. S. R. Sastry, M.A., M.Sc., Ph.D., Director of Statistics, Department of Research and Statistics, Reserve Bank of India (*Reserve Bank of India*); 11. Shri D. C. Pavate, M.A. (Cantab.), Vice-Chancellor, Karnatak University, Dharwar (*Inter-University Board*); and 12. Professor S. N. Bose, F.R.S.; 13. Dr. U. P. Basu, D.Sc., F.N.I., Director, Bengal Immunity Research Institute; 14. Shri Jagjit Singh, M.A., F.R.S.S., Director, Railway Board; 15. Dr. B. P. Adhikari, M.Sc., (Cal.), Dr. es. Sc. (Paris); 16. Shri S. Basu, M.Sc., F.N.I.; 17. Shri P. Pant, M.Sc., (Council of the Indian Statistical Institute).

FINANCE COMMITTEE OF THE COUNCIL

1. Chairman of the Institute (*ex-officio*) or his nominee, 2. Secretary of the Institute (*ex-officio*) or his nominee, 3. Director of the Research and Training School (*ex-officio*) or his nominee, 4. Shri Pitambar Pant, 5. Shri K. T. Chandy, 6. Shri S. Dutt, 7. Shri N. C. Ghosh, 8. Shri S. C. Roy, 9. Shri S. K. Chowdhuri, (*Member-Secretary*) or a person nominated by the Secretary or the Chairman (or the Vice-Chairman authorised by the Chairman to make such nomination), 10 & 11. two representatives nominated by the Government of India, (Joint Secretary, Ministry of Finance, Shri F. H. Vallibhoj and Cabinet Secretary, Shri Dharma Vira or his representative).

FINANCE COMMITTEE OF THE GOVERNING BODY

1. Chairman of the Institute (*ex-officio*) or a Vice-Chairman, authorised by him; 2. Secretary of the Institute (*ex-officio*) or in his absence, a Joint Secretary; 3. Director, RTS, or a Joint Director, if any, in charge of the RTS; 4 & 5. two representatives of the Government of India (Dr. K. S. Rao and Shri F. H. Vallibhoj); 6. Representative of the Reserve Bank of India on the Governing Body (at present Dr. N. S. R. Sastry); 7 & 8. two representatives to be elected by the Governing Body from amongst themselves, Dr. U. P. Basu and Shri Dinesh Bahl.

JOURNAL COMMITTEE OF THE INSTITUTE

1. National Professor S. N. Bose, F.R.S., Chairman, 2. Shri D. B. Lahiri, 3. Dr. Sujit Kumar Mitra, 4. Dr. Jogabrata Roy, 5 & 6. Editors of *Sankhyā*, (*ex-officio*), 7. one representative of the Governing Body of the Research and Training School (Dr. V. S. Huzarbazar), 8. one member to be nominated by the Secretary of the Institute in consultation with the Director of the RTS, 9. Dr. J. Sethuraman, *Editorial Secretary*, 10. Shri A. Mahalanobis, *Secretary*.

EXAMINATIONS COMMITTEE OF THE INSTITUTE

1. Dr. B. P. Adhikari, 2. Sm. Chameli Bose, 3. Shri N. C. Chakravarti, 4. Dr. A. George, 5. Dr. V. S. Huzurbasar, 6. Shri D. B. Lahiri, 7. Dr. B. S. Minhas, 8. Dr. S. K. Mitra, 9. Dr. G. R. Seth, 10. Shri J. M. Sengupta, 11. Professor P. N. Phutane, 12. Shri Sadaiv Sengupta, (*Member-Secretary*) and 13 & 14. two representatives of the Governing Body of the Research and Training School (Dr. K. S. Rao and Dr. S. N. Sen).

BOMBAY BRANCH : 1965-66

Honorary President : Shri S. K. Wankhede
Honorary Vice-Presidents : Professor C. N. Vakil; Shri B. G. Saraisa, Dr. N. S. R. Sastry; Dr. C. Nanjundaya.
Honorary Secretary : Shri K. A. Antony
Honorary Joint-Secretary : Shri P. K. Bhowmik
Honorary Treasurer : Professor P. N. Phutane
Members of the Council : Dr. R. L. N. Iyengar; Shri S. V. Borkar, Professor V. B. Kamath; Professor N. S. Ramaswamy, 5. Dr. M. N. Vartak.

MYSORE STATE BRANCH : 1965-66

President : Shri H. S. Narayana Rao
Vice-President : Shri M. Narayana Iyenger
Secretary : Professor Srinagabhushana
Joint Secretary : Shri C. Ananthapadmanabha Setty
Treasurer : Shri M. V. Venkataraman
Executive Committee Members : Shri V. Narayana; Shri Bhavanishankar Rao, Shri S. K. Iyengar; Shri R. Natarajan; Shri P. S. Narayana; Shri H. C. Neumanns.

KERALA BRANCH : 1965-66

Chairman : Professor Samuel Mathai, Vice-Chancellor, University of Kerala, Trivandrum.
Secretary & Treasurer : Dr. (Miss) A. George, Professor of Statistics, University of Kerala, Trivandrum.
Members : Dr. Thangavelu, Principal, Medical College, Trivandrum; Dr. C. K. N. Nair, Principal, Agricultural College, Trivandrum; Shri B. K. Raja Rao, Representative of the Indian Statistical Institute.