

## ANNUAL REPORT

The Council of the National Institute of Sciences of India have the pleasure to submit the following report on the general concerns of the Institute for the year 1945, as required by the provisions of Rule 48(f).

### *Membership.*

The number of Fellows on the roll of the Institute at the beginning of the year was 211 Ordinary Fellows and 22 Honorary Fellows. Thirteen Ordinary Fellows and three Honorary Fellows were elected during the year in accordance with the procedure laid down in the Regulations. One Ordinary Fellow resigned, and four Ordinary Fellows died during the year. The total number of Fellows on the roll at the end of the year was 219 Ordinary and 25 Honorary Fellows. Of the 219 Ordinary Fellows 10 were non-resident.

### *Meetings.*

The Tenth Annual General Meeting was held at the Science College, University of Nagpur, on the 2nd January, 1945.

Sir J. C. Ghosh, the retiring President, being away in the United Kingdom and United States of America, his annual address was not available in time for the meeting. Prof. S. N. Bose, Chairman of the meeting, initiated a discussion on the work of the National Institute in which some of the Fellows took part.

During the year under report, the following four Ordinary General Meetings were held:—

1. *7th March, 1945.*—At Calcutta. At this meeting the Members of the Scientific Delegation present gave an account of their activities and experiences in the United Kingdom and the United States of America.

2. *27th April, 1945.*—At Calcutta. At this meeting one paper was read and a Symposium on 'Factors influencing the spawning of Indian Carps' was held. Papers read at this meeting were published in the *Proceedings*, Vol. XI, No. 3.

3. *23rd July, 1945.*—At Calcutta. At this meeting six papers were read and a Symposium on 'Centralisation of Scientific Research under one Government Department' was held. An account of the discussion was published in the *Proceedings*, Vol. XI, No. 4.

4. *19th and 20th November, 1945.*—At Delli. At this meeting five papers were read and a Symposium on 'Mineral Research in India for developing mineral industries' was held.

Two public lectures by Prof. M. N. Saha and Prof. H. J. Bhabha were also delivered at the Delhi meeting.

### *The Council.*

The Officers and Members of Council for the year 1945 were elected at the Tenth Annual General Meeting, held on the 2nd January, 1945. The Council, together with the representatives of the co-operating Academies, the Indian Science Congress Association and the Government of India, was constituted as follows:—

<i>President</i>	..	..	Mr. D. N. Wadia.
<i>Vice-Presidents</i>	..	..	Prof. S. P. Agharkar. Sir S. S. Bhatnagar.
<i>Additional Vice-Presidents</i>	..	..	Sir U. N. Brahmachari (Royal Asiatic Society of Bengal). Dr. H. R. Mehra (National Academy of Sciences, India). Prof. P. C. Mitter (Indian Science Congress Association). Prof. B. K. Singh (Indian Academy of Sciences).

<i>Treasurer</i>	..	..	Rai Bahadur K. N. Bagchi.
<i>Foreign Secretary</i>	..	..	Prof. D. S. Kothari.
<i>Secretaries</i>	..	..	Rai Bahadur S. L. Hora. Dr. W. D. West.
<i>Editor of Publications</i>	..	..	Dr. J. N. Mukherjee.
<i>Members of Council</i>	..	..	Prof. P. R. Awati. Dr. K. Bagchee. Dr. S. K. Banerji. Prof. H. J. Bhabha. Khan Bahadur M. Afzal Husain. Prof. M. O. P. Iyengar. Prof. P. C. Mahalanobis. Dr. K. G. Naik. Dr. B. N. Prasad. Dr. H. S. Pruthi. Prof. M. Qureshi. Mr. B. Rama Rao. Dr. L. A. Ramdas. Prof. P. Ray. Rai Bahadur J. M. Sen. Dr. A. C. Ukil. Dr. K. Venkataraman.
<i>Past Presidents (Ex-officio)</i>	..	..	Sir Lewis L. Fermor (1-1-35 to 31-3-36). Prof. M. N. Saha (1-1-1937 to 31-12-1938). Sir R. N. Chopra (1-1-39 to 31-12-40). Dr. B. Prashad (1-1-1941 to 31-12-1942). Sir J. C. Ghosh (1-1-43 to 31-12-44).
<i>Additional Members of Council.</i>	..	..	Dr. G. Bose (Royal Asiatic Society of Bengal). Prof. K. B. Madhava (Indian Science Congress Association). Dr. P. L. Srivastava (National Academy of Sciences, India). Dr. T. Vijayaraghavan (Indian Academy of Sciences).
<i>Representative of the Government of India</i>	..	..	Dr. C. G. Pandit.

In the absence of Dr. W. D. West, out of India, Prof. P. C. Mahalanobis acted as Secretary for him.

The Council held twelve ordinary meetings during the year. Abstracts of the proceedings of the Council relating to questions which are likely to be of interest to the Fellows are given in Appendix II.

#### *Recognition by Government.*

Fellows are aware that the Council at its meeting held on the 29th December, 1943, passed the following resolution:—

‘Resolved that the National Institute of Sciences of India do hereby request the Government of India to give formal recognition to some society representing all branches of science in India, as occupying a position relative to academic science on the one hand, and government organisations on the other, corresponding to that of the Royal Society of London or the National Academy of Sciences of Washington, both of which, from their foundation, were recognised by the heads of their respective States.’

It gives the Council great pleasure to record with gratitude that the Government of India have decided to recognise the National Institute of Sciences of India as the premier scientific organisation in this country, and that the question of granting a Royal Charter to the National Institute has also been taken up by the Government of India (*vide* Appendix III.)

#### *Transfer of Office to Delhi.*

Great progress has been made in connection with the question of shifting the headquarters of the Institute to Delhi. A plot of land in the Delhi University area and also a few rooms for temporary shifting of the Institute have kindly been offered

to the National Institute by the Vice-Chancellor of the Delhi University. Arrangement is now in progress to shift the office of the Institute to Delhi.

The Council has approached the Government of India for funds to meet the requirements of the Institute, such as, accommodation, secretariat, travelling expenses of Members of Council, publications, establishment of Fellowships, grants to individuals for research, etc.

#### *Representation to Government.*

The Council addressed the Government of India in connection with the following two measures:—

- (1) Proposal for a separate Anthropological Survey with close collaboration between the proposed Department and the Departments of Anthropology in the Universities.

It is a pleasure to record that the Government have accepted the advice of the Council and have separated Anthropology from the Zoological Survey of India.

- (2) Necessity for a biological study of the Chilka Lake fishes with a view to the conservation of its fisheries.

The Government of India have intimated that the Orissa Government propose to undertake such a study at an early date.

#### *Publications.*

Four numbers of the *Proceedings* were published during the year.

It is regretted that no part of the *Transactions* or *Indian Science Abstracts* could be published during the year under report.

#### *Exchanges.*

One additional institution (*Journal of Scientific and Industrial Research*) was placed on the distribution list for the publications of the Institute bringing the total number on the list to one hundred and one.

#### *Presents and Donations.*

The following grants-in-aid were received for the Institute during the year.

- (1) Rs.6,000 from the Government of India.
- (2) Rs.500 from the Calcutta University.
- (3) Rs.300 from the Osmania University.
- (4) Rs.200 from the Dacca University.

#### *Rockefeller Foundation Grant.*

During the year under report the Institute received the balance of the amount of Rockefeller Foundation Grant for the year ended 30th April, 1945, and distributed the amount as follows:—

			Rs.	A.	P.
Benares Mathematical Society	..	..	250	0	0
The Horticultural Society of India	..	..	250	0	0
Indian Botanical Society	..	..	250	0	0
Indian Psychological Association	..	..	83	0	0
Indian Anthropological Institute	..	..	100	0	0
Geological, Mining and Metallurgical Society of India			364	15	0
Indian Chemical Society	..	..	250	0	0
Science and Culture	..	..	250	0	0
Indian Institute for Medical Research	..	..	250	0	0
Indian Geographical Society	..	..	167	0	0
Indian Academy of Sciences	..	..	500	0	0
Indian Science Congress Association	..	..	1,567	4	3
Indian Pharmaceutical Association	..	..	467	12	9

The Institute has also received a grant of Rs.15,000 from the Rockefeller Foundation towards publication of Scientific Journals in India for the year 1945-46. The amount will be distributed early in 1946.

*Endowments.*

During the year under report the Institute received a sum of Rs.3,000 from Rai Bahadur S. L. Hora and Mrs. Hora for the purpose of founding a gold medal in memory of their daughter Kumari Chandra Kala Hora to be awarded triennially for conspicuously important work on the development of fisheries in India. The following Regulations were framed regarding the award of the medal:—

- (1) The medal shall be awarded every third year at the Annual General Meeting of the National Institute of Sciences of India dating from the 1st January, 1945.
- (2) The medal would be bestowed on the person who, in the opinion of the Council of the National Institute, has made conspicuously important contributions to the development of fisheries in India during the five years preceding the year of award.  
 'Development' shall include all aspects of biological, technological and sociological studies, including the improvement of fishing nets and crafts and the betterment of the social and economic conditions of the fishermen. In fact, its scope shall include any discovery or invention or new practical method which will tend to increase fishery production in India on a paying basis.
- (3) The Council of the National Institute shall, at a meeting held in September, appoint an Advisory Board consisting of not less than five and not more than nine members.
- (4) The Advisory Board shall be termed 'The Chandra Kala Hora Memorial Advisory Board' and shall include two members of the Sectional Committee of Zoology, the President of the Zoology Section of the Indian Science Congress for the year of award, the Biological Secretary, if a zoologist, of the Royal Asiatic Society of Bengal, Fisheries Development Adviser to the Government of India and the donors during their lifetime. The Board shall appoint a Chairman from amongst its members.
- (5) The Secretaries of the National Institute shall send a circular to all Fellows and to the members of the Board during September of the year preceding the year of award intimating to them the terms and conditions of the award and requesting them to send detailed statements of the work or attainments of such candidates as they may wish to propose.
- (6) The Secretaries of the National Institute shall prepare a list of the candidates proposed and of their respective work and attainments and circulate the same to the members of the Board with a request to select any one name for the considerations of the Board giving specified reasons for the selection.
- (7) The Secretaries of the National Institute shall call a meeting of the Advisory Board in the latter half of November of the year preceding the year of award. The Board shall make such arrangements as may be necessary for the selection of a name to be submitted to the Council of the National Institute at its December meeting, subject to the proviso that at least two-thirds of the members voting shall have voted for the candidate selected.
- (8) The Council of the National Institute may for specified reasons request the Board to reconsider its decision, but shall not be competent to substitute another name for the one already recommended by the Board.
- (9) Notwithstanding anything mentioned in these Regulations it shall be within the competence of the Board to abstain from the selection of

any name to be submitted for the year and to report accordingly to the Council of the National Institute, in which case, provided the Council of the National Institute concurs, the award for the year shall lapse. In such case, an Advisory Board shall be constituted in the following year, and so on, from year to year, in the manner prescribed above, till a recommendation is made for an award. The period of three years mentioned in Regulation No. 1 shall always be counted from the year of the award.

- (10) The person to whom the award is made shall deliver a public lecture on the subject of his work at one of the Ordinary General Meetings of the Institute convenient to him; he shall also submit three typed copies of the lecture which shall be published in the *Proceedings* of the Institute, and over which the Institute shall have a copyright.

### *Research Fellowships.*

During the year under report the Institute received a grant of Rs.3,36,000 for the award of a number of Imperial Chemical Industries (India) Research Fellowships in Chemistry, Physics and Biology. The Council appointed an Imperial Chemical Industries (India) Research Fellowships Committee comprising the following members, one-third of the members in each of the Sections of Physics, Chemistry and Biology to retire and the vacancies to be filled by election by the Council every year :—

(a) *Office-bearers, ex-officio :*

<i>President</i>	..	..	Mr. D. N. Wadia.
<i>Two Secretaries</i>	..	..	Rai Bahadur S. L. Hora. Prof. P. C. Mahalanobis.
<i>Treasurer</i>	..	..	Rai Bahadur K. N. Bagchi.

(b) *Physics:* Prof. M. N. Saha, Prof. K. S. Krishnan, Prof. H. J. Bhabha.

(c) *Chemistry:* Prof. J. N. Mukherjee, Prof. M. Qureshi, Dr. K. Venkataraman.

(d) *Biology:* Prof. K. N. Bahl, Dr. P. Parija, Mr. K. Ramiah.

The Council also framed the following Regulations for the award of the Fellowships:—

- (1) An Imperial Chemical Industries (India) Research Fellow shall be a person irrespective of sex, race or religion, resident or domiciled in India (British India or the States) and under 35 years of age; and shall carry out research in Chemistry, Physics or Biology in any University or Institute in India as the Council of the National Institute of Sciences of India shall prescribe on the advice of a Research Fellowship Committee.
- (2) The stipend attached to a Fellowship shall be Rs.400 per month. In addition there shall be a sum of Rs.50 per month, provided for contingencies and such other sums as may be required for apparatus, etc.
- (3) An Imperial Chemical Industries (India) Research Fellow shall be appointed, in the first instance, for two years with a possibility of extension up to a total of three years, provided that the Council of the National Institute is satisfied regarding the work done by the Fellow on the report of the Research Fellowship Committee appointed for the purpose.
- (4) An Imperial Chemical Industries (India) Research Fellow shall normally be required to devote his or her whole time to research, but the Council of the National Institute may permit him or her a limited amount of approved teaching or demonstration. This should not be of more than six hours' duration per week and it should be a condition that he or she is paid for this work by the University or Institution at their normal rates.
- (5) An Imperial Chemical Industries (India) Research Fellow shall annually, or oftener if required, present to the Council of the National Institute

- a report on his or her work. The copyright of all such reports shall be the property of the National Institute of Sciences of India.
- (6) All patents, patent rights, designs and inventions derived from research or work financed or aided by the Council shall belong to the National Institute of Sciences of India or its nominees, and shall be held at the direction of the Council by way of addition to the income of the Imperial Chemical Industries (India) Research Fund in such manner as the Council shall from time to time decide, but so that it may in its discretion allow or direct any benefit thereof to be retained by or given to the inventor.
- (7) The Council of the National Institute of Sciences of India may determine the tenure of a Fellowship by not less than one month's notice in writing under conditions defined in the deed.

According to the terms of the grant, four research fellowships were to be awarded during the first year and selection of three has already been made. They are:—

1. Dr. P. C. Datta (Chemistry).
2. Mr. P. C. Bhattacharya (Physics).
3. Mr. Rama Nagina Singh (Biology).

#### Finance.

An audited statement of account for the period from 1st December, 1944, to 30th November, 1945, is submitted (*vide* Appendix V). The total ordinary receipts for this period are Rs.49,216-11-6 (including the two sums of Rs.2,500 and Rs.15,000 which were received during the financial year from the Rockefeller Foundation for the year 1944-45 and 1945-46, Rs.3,000 for investment against Chandra Kala Hora Memorial Medal and advance of Rs.13,200 from the Imperial Chemical Industries (India), Ltd.) and the Ordinary Payments are Rs.19,414-6-3 leaving a balance of Rs.29,802-5-3. A sum of Rs.96 was realised on account of admission fees and Rs.250 against part payment of compounding fee.

At the beginning of the year the cash position of the Institute was as follows:—

	Rs.	A.	P.
In Savings Bank account .. .. .	2,416	6	6
„ Government paper .. .. .	48,400	0	0
„ Current account .. .. .	10,721	14	3
„ hand .. .. .	11	2	9
TOTAL ..	61,549	7	6

At the end of the year, the cash position was as follows:—

	Rs.	A.	P.
In Savings Bank account .. .. .	2,440	6	6
„ Government paper .. .. .	51,400	0	0
„ Current account .. .. .	40,786	15	0
„ hand .. .. .	13	1	3
TOTAL ..	94,640	6	9

The cash balance includes a sum of Rs.6,532-6-6 reserved for the publication of *Indian Science Abstracts*, a sum of Rs.15,000 from the Rockefeller Foundation Grant and balance of advance received from the Imperial Chemical Industries (India), Ltd., for administration, travelling, etc., for Research Fellowships.

## ANNUAL REPORT

### APPENDICES.

- I. List of Fellows.
- II. Abstract Proceedings of the Council, 1945.
- III. Copy of letter of recognition from the Government of India.
- IV. Committees, 1946.
- V. Annual Statement of Accounts, December 1944–November 1945.
- VI. Indian Science Abstracts Reserve Fund.
- VII. Rockefeller Foundation Grant Fund.
- VIII. Chandra Kala Hora Memorial Medal Fund.
- IX. Imperial Chemical Industries (India) Research Fellowships Fund.
- X. Budget Estimates, December 1945–November 1946.

## APPENDIX I.

### LIST OF FELLOWS.

#### ORDINARY FELLOWS.

1. ABRAHAM, W. E. V., Lt.-COL., A.R.C.S. (I.), F.G.S., M.Inst.P.T., Senior Geologist, Burma Oil Co., Ltd., Burma, Khodaung, Magwe, Burma. (1936).
2. AGHARKAR, S. P., M.A., Ph.D., F.L.S., Ghose Professor of Botany, Calcutta University, 35 Ballygunge Circular Road, Calcutta.
3. AHMAD, BASHIR, M.Sc., Ph.D., Assistant Director, Scientific and Industrial Research, Imperial Secretariat, North Block, New Delhi. (1944).
4. AHMAD, NAZIR, O.B.E., M.Sc., Ph.D., J.P., Director, Indian Central Cotton Committee's Technological Laboratory, Matunga, Bombay.
5. AIYAR, R. GOPALA, M.A., L.T., M.Sc., University Professor of Zoology and Director, University Zoological Laboratory, Madras. (1938).
6. AJREKAR, S. L., B.A., I.E.S. (retd.), Bhandarkar Institute Road, Poona 4.
7. ANANDA RAO, K., Rao Bahadur, M.A., I.E.S., Professor of Mathematics, Presidency College, Madras.
8. ASH, W. C., B.Sc., M.Inst.C.E., A.M.I.Mech.E., Bengal Club, Calcutta.
9. AUDEN, J. B., M.A. (Cantab.), Geologist, Geological Survey of India, 27 Chowringhee, Calcutta. (1938).
10. AWATI, P. R., B.A., D.I.C., I.E.S. (retd.), 759/20 Deccan Gymkhana, Poona 4.
11. BAGCHEE, K. D., D.Sc., D.I.C., Forest Botanist, Imperial Forest Research Institute, Dehra Dun, U.P.
12. BAGCHI, K. N., Rai Bahadur, B.Sc., M.B., D.T.M., F.R.I.C., Chemical Examiner to the Government of Bengal and Professor of Chemistry, Calcutta Medical College, Calcutta. (1940).
13. BAHL, K. N., D.Sc., D.Phil., Professor of Zoology, Lucknow University, Lucknow.
14. BANERJEE, K., D.Sc., Mahendralal Sircar Professor of Physics, Indian Association for the Cultivation of Science, 210 Bowbazar Street, Calcutta. (1939).
15. BANERJI, A. C., M.Sc., M.A., F.R.A.S., I.E.S., Professor of Mathematics, Allahabad University, Allahabad.
16. BANERJI, I., D.Sc., Lecturer in Botany, Calcutta University, 35 Ballygunge Circular Road, Calcutta. (1945).
17. BANERJI, S. K., O.B.E., D.Sc., Director-General of Observatories, Lodi Road, New Delhi.
18. BARDHAN, J. C., D.Sc. (Cal. & Lond.), Lecturer in Chemistry, Calcutta University, 92 Upper Circular Road, Calcutta. (1942).
19. BASU, J. K., M.Sc., Ph.D. (Lond.), Soil Physicist to the Government of Bombay, Sholapur. (1941).
20. BASU, N. M., M.A., Senior Professor of Physiology, Presidency College, Calcutta. (1944).
21. BEESON, C. F. C., C.I.E., D.Sc., Thames House, near Eynsham, Oxford.
22. BEHARI, RAM, M.A., Ph.D., Reader in Mathematics, Delhi University and Professor, St. Stephen's College, Delhi. (1941).
23. BHABHA, H. J., Ph.D., F.R.S., Director, Tata Institute of Fundamental Research, Bombay. (1941).
24. BHADURI, P. N., Ph.D., F.R.M.S., F.R.H.S., F.L.S., Lecturer in Botany, Calcutta University, 35 Ballygunge Circular Road, Calcutta. (1944).
25. BHARADWAJA, Y., M.Sc., Ph.D. (Lond.), F.L.S., University Professor and Head of the Department of Botany, Benares Hindu University, Benares. (1937).
26. BHARUCHA, F. R., B.A., D.Sc., Professor of Botany and Head of the Department, Royal Institute of Science, Bombay. (1939).
27. BHASKARA SHASTRI, T. P., Rao Sahib, M.A., F.R.A.S., Director, Nizamiah Observatory, Begumpet, Hyderabad (Deccan).
28. BHATTNAGAR, SIE S. S., Kt., O.B.E., D.Sc., F.R.S., F.R.I.C., F.Inst.P., Director of Scientific and Industrial Research, University Buildings, Delhi.
29. BHATTACHARYA, D. R., Rai Bahadur, D.Sc., Ph.D., F.Z.S., Professor of Zoology, Allahabad University, 7 Malaviya Road, Allahabad.
30. BOMFORD, G., Lt.-COL., R.E., Survey of India, Temporary Secretariat, Delhi. (1935).



31. **BOB, N. L.,** C.I.E., M.A., D.Sc., F.L.S., Chief Refugee Administrator, Assam, Ashley Hall, Shillong. (1941).
32. **BOSE, D. M.,** M.A., B.Sc., Ph.D., Director, Bose Institute, 93 Upper Circular Road, Calcutta.
33. **BOSE, G. S.,** D.Sc., M.B., Head of the Department of Experimental Psychology, Calcutta University, 92 Upper Circular Road, Calcutta.
34. **BOSE, N. K.,** M.Sc., Ph.D., Director, River Research Institute, Anderson House, Alipore, Calcutta. (1938).
35. **BOSE, P. K.,** D.Sc., Director, Indian Lac Research Institute, Namkum, Ranchi. (1944).
36. **BOSE, R. C.,** M.A., Lecturer in Statistics, Calcutta University, Presidency College, Calcutta. (1942).
37. **BOSE, S. N.,** M.Sc., Khaira Professor of Physics, Calcutta University, 92 Upper Circular Road, Calcutta.
38. **BOSE, S. R.,** M.A., Ph.D., F.R.S.E., Professor of Botany, Carmichael Medical College, Calcutta. (1935).
39. **BRAHMACHARI, SIR U. N.,** Kt., Rai Bahadur, M.A., M.D., Ph.D., F.R.A.S.B., K.I.H., Physician, Medical College Hospitals, Calcutta (retired), 19 Loudon Street, Calcutta.
40. **BURRIDGE, W.,** D.M., M.A. (Oxon), Professor of Physiology, Lucknow University, Lucknow.
41. **CALDER, C. C.,** B.Sc. (Agr.), F.L.S., 18 Gladstone Place, Aberdeen, Scotland.
42. **CHATTERJEE, N. C.,** Rai Bahadur, D.Sc., F.R.E.S., A.I.I.Sc., Assistant Forest Entomologist, Forest Research Institute, Dehra Dun. (1942).
43. **CHOPRA, B. N.,** D.Sc., F.L.S., Offg. Director, Zoological Survey of India, Kaisar Castle, Benares Cantt. (1935).
44. **CHOPRA, SIR R. N.,** Kt., C.I.E., M.D., Sc.D., F.R.A.S.B., F.R.C.P., BREVET-COL., I.M.S. (retired), Director, Drug Research Laboratory, Jammu-Tawi, Jammu and Kashmir State.
45. **CHOWDHURY, J. K.,** M.Sc., Dr.Phil. (Berlin), Reader in Chemistry, Dacca University, Ramna, Dacca. (1938).
46. **CHOWDHURY, K. AHMAD,** M.B.E., B.A., B.Sc., M.S., D.Sc., Wood Technologist, Forest Research Institute, New Forest, Dehra Dun. (1940).
47. **COULSON, A. L.,** D.Sc., D.I.C., F.G.S., Superintending Geologist, Geological Survey of India, 27 Chowringhee, Calcutta. (1935).
48. **CROOKSHANK, H.,** B.A., D.Sc., B.A.I., Capt., A.I.R.O., Director, Geological Survey of India, 27 Chowringhee, Calcutta. (1938).
49. **DAS, A. K.,** D.Sc. (Dr. d'etat) (Paris), Meteorologist, Meteorological Office, Willingdon Air Station, New Delhi. (1943).
50. **DASTUR, R. H.,** M.Sc., Cotton Physiologist, Institute of Plant Industry, Indore.
51. **DATTA, S.,** M.Sc., D.Sc., D.I.C., Principal, Rajshahi College, Rajshahi. (1935).
52. **DATTA, CAPTAIN S. C. A.,** D.Sc., F.R.S.E., M.R.C.V.S., D.T.V.M., A.I.R.O., No. 41, Indian Veterinary Recep. Hospital, No. 12 A.B.P.O. (1938).
53. **DE, M. N.,** M.B. (Cal.), M.R.C.P. (Lond.), Professor of Medicine, Medical College and First Physician, Medical College Hospital, Calcutta. (1942).
54. **DE, P.,** M.B. (Cal.), F.R.C.P.E., Professor of Physiology, Medical College, Calcutta. (1943).
55. **DESAI, R. D.,** M.Sc., D.Sc. (Lond.), D.I.C., Department of Chemical Technology, Bombay University, Matunga Road, Bombay. (1942).
56. **DEY, B. B.,** D.Sc., F.R.I.C., I.E.S., Director of Public Instruction, Madras.
57. **DHAR, N. R.,** D.Sc., F.R.I.C., I.E.S., Deputy Director of Public Instruction, U.P., Allahabad.
58. **DHAR, S. C.,** M.Sc., D.Sc. (Cal., Edin.), F.R.S.E., Professor and Head of the Department of Mathematics, Nagpur University, Nagpur. (1938).
59. **DIKSHIT, B. B.,** Ph.D. (Edin.), M.R.C.P. (Edin.), D.P.H. (Calcutta), M.B.B.S. (Bombay), Officer-in-charge, Pharmacology Department, Haffkine Institute, Bombay. (1941).
60. **DUNN, J. A.,** D.Sc., D.I.C., F.G.S., Superintending Geologist, Geological Survey of India, 27 Chowringhee, Calcutta. (1935).
61. **DUTT, S. B.,** D.Sc., D.I.C., Professor of Chemistry, Delhi University, Delhi. (1935).
62. **ELWIN, VERRIER, M.A.,** D.Sc. (Oxon), F.R.A.I., Fellow, Morton College, Oxford; Bhumijan Seva Mandal, Patangarh P.O., Dindori Tahsil, Mandla Dist., C.P. (1943).
63. **EVANS, P.,** B.A., F.G.S., c/o Messrs. Burma Oil Co., Ltd., Britannic House, Finsbury Circus, London, E.C.2.
64. **FERMOR, SIR LEWIS L.,** Kt., O.B.E., D.Sc., A.R.S.M., M.Inst.M.M., F.G.S., F.R.A.S.B., F.R.S., 24 Durdham Park, Bristol 6.
65. **FOWLER, GILBERT J.,** D.Sc., F.R.I.C., Consulting Chemist, Central Hotel, Bangalore.

66. FOX, SIR CYRIL S., Kt., D.Sc., M.I.Min.E., F.G.S., F.R.A.S.B., 5 Loudon Court, Moira Street, Calcutta.
67. GANGULY, P. B., D.Sc. (London), Principal, Science College, Patna. (1945).
68. GEE, E. R., M.A., F.G.S., Superintending Geologist, Geological Survey of India, 27 Chowringhee, Calcutta. (1935).
69. GHOSH, B. N., D.Sc. (Lond.), Department of Applied Chemistry, Calcutta University, 92 Upper Circular Road, Calcutta. (1942).
70. GHOSH, J., M.A., Ph.D., Principal, Hooghly Mohsin College, Chinsurah. (1936).
71. GHOSH, SIR J. C., Kt., D.Sc., Director, Indian Institute of Science, Malleswaram, Bangalore.
72. GHOSH, P. K., M.Sc., D.I.C., D.Sc. (Lond.), Geologist, Geological Survey of India, 27 Chowringhee, Calcutta. (1941).
73. GHOSH, P. N., M.A., Ph.D., Sc.D. (Hon.), F.Inst.P., Ghose Professor of Applied Physics, Calcutta University, 92 Upper Circular Road, Calcutta.
74. GHOSH, R. N., D.Sc., Reader in Physics, Allahabad University, 152 South Malaka, Allahabad. (1939).
75. GHOSH, Sudhamoy, D.Sc. (Edin.), F.R.I.C., Professor of Chemistry, School of Tropical Medicine, Calcutta. (1945).
76. GHURRYE, G. S., M.A., Ph.D., Professor of Sociology, University of Bombay, Fuller Road, Bombay. (1941).
77. GILL, P. S., M.Sc., Ph.D. (Chicago), Professor and Research Associate, Forman Christian College, Lahore. (1945).
78. GLENNIE, E. A., D.S.O., Brigadier, R.E., Survey of India, Delhi.
79. GRAVELY, F. H., D.Sc., F.R.A.S.B., 52 London Road, Reading, England.
80. GUHA, B. C., D.Sc., Chief Technical Advisor, Food Department, Division III, New Delhi. (1941).
81. GUHA, B. S., M.A., Ph.D., F.R.A.S.B., Zoological Survey of India, Kaiser Castle, Benares Cantt.
82. GUHA, P. C., D.Sc., Professor of Organic Chemistry, Indian Institute of Science, Malleswaram, Bangalore. (1935).
83. GUPTA, J. C., M.B. (Cal.), Professor of Pharmacology and Officer-in-charge, Indigenous Drugs Inquiry (I.R.F.A.), School of Tropical Medicine and Medical College, Calcutta. (1945).
84. HADDOW, J. R., O.B.E., B.Sc., M.R.C.V.S., D.V.S.M., I.V.S., Deputy Director and Officer-in-charge, Pathology and Bacteriology Section, Imperial Veterinary Research Institute, Muktesar-Kumaun, U.P.
85. HENDRY, D., M.C., B.Sc., N.D.A., Director, Imperial Chemical Industries (India) Ltd., 18 Strand Road, Calcutta. (1938).
86. HERON, A. M., D.Sc., F.G.S., F.R.G.S., F.R.S.E., F.R.A.S.B., Mines and Geology Office, Hyderabad (Deccan).
87. HORA, S. L., Rai Bahadur, D.Sc., F.R.S.E., F.Z.S., F.R.A.S.B., Director of Fisheries, Bengal, 1 Deodar Street, Calcutta.
88. HUQUE, SIR M. AZIZUL, Kt., C.I.E., M.A., B.L., Member of Viceroy's Council, Department of Commerce, Industries and Civil Supplies, 5 Mansingh Road, New Delhi. (1944).
89. HUSAIN, M. AFZAL, Khan Bahadur, M.A., M.Sc., I.A.S., Member, Famine Inquiry Commission, Department of Food, Government of India, New Delhi.
90. ISHAQ, MOHAMMED, M.Sc., Ph.D., D.I.C., Head of the Department of Physics, Muslim University, Aligarh. (1940).
91. IYENGAR, M. O. P., M.A., Ph.D., F.L.S., University Professor of Botany, Madras University, Triplicane, Madras.
92. JOSHI, A. C., D.Sc., Assistant Professor of Botany, Benares Hindu University, Benares. (1938).
93. JOSHI, S. S., D.Sc. (London), Principal and Head of the Department of Chemistry, Benares Hindu University, Benares. (1945).
94. KAPUR, S. N., Ph.D., Officer on Special Duty, Timber Directorate, Department of Supply, 17 Curzon Lane, New Delhi.
95. KHAN, HAMID, M.Sc., LL.B., Ph.D., Warden of Fisheries, Punjab, 2 Sanda Road, Lahore. (1944).
96. KHASTGIR, S. R., Ph.D., D.Sc., F.R.S.E., Reader in Physics, Dacca University, Ramna, Dacca. (1944).
97. KICHLU, P. K., D.Sc., Professor of Physics, Government College, Lahore. (1935).
98. KINI, M. G., CAPTAIN, M.C., M.B., M.Ch. (Orth.), F.R.C.S.E., F.R.S.E., Surgeon and Superintendent, Stanley Hospital, Royapuram, Madras. (1944).
99. KOTHARI, D. S., M.Sc., Ph.D., Professor of Physics, Delhi University, Delhi. (1936).

100. KRISHNA, S., C.I.E., Ph.D., D.Sc., F.I.C., Forest Biochemist, Forest Research Institute, New Forest, Dehra Dun (U.P.).
101. KRISHNAN, K. S., D.Sc., F.R.S., Professor of Physics, Allahabad University, Allahabad.
102. KRISHNAN, K. V., M.B.B.S., L.R.C.P., D.B., D.Sc., Professor of Microbiology, All-India Institute of Hygiene and Public Health, Calcutta.
103. KRISHNAN, M. S., A.R.C.S., Ph.D., D.I.C., Geologist, Geological Survey of India, Bhimasena Gardens, Mylapore, Madras. (1935).
104. KUNDU, B. C., Ph.D. (Leeds), F.L.S., Professor of Botany, Presidency College, Calcutta. (1945).
105. LAL, R. B., M.B.B.S., D.P.H., D.T.M. & H., D.B., Professor of Vital Statistics and Epidemiology, All-India Institute of Hygiene and Public Health, Calcutta. (1935).
106. LAW, S. C., M.A., B.L., Ph.D., F.Z.S., M.B.O.U., 50 Kailas Bose Street, Calcutta. (1936).
107. MACMAHON, P. S., M.Sc., B.Sc. (Oxon), F.I.C., I.E.S., Professor of Chemistry, Lucknow University, Lucknow.
108. MADHAVA, K. B., M.A., A.I.A. (Lond.), Special Officer (Population Data), Government, of India, Statistical Laboratory, Presidency College, Calcutta. (1940).
109. MAHADEVAN, C., M.A., D.Sc., Assistant Superintendent, Hyderabad Geological Survey, Hyderabad-Deccan. (1945).
110. MAHAJANI, G. S., M.A., Ph.D., Principal and Professor of Mathematics, Fergusson College, Poona 4.
111. MAHALANOBIS, P. C., O.B.E., F.R.S., M.A., B.Sc., I.E.S., Professor of Physics, Presidency College, Calcutta.
112. MAHANTI, P. C., D.Sc., F.Inst.P., Assoc. A.I.E.E., Lecturer in Applied Physics, Calcutta University, 92 Upper Circular Road, Calcutta. (1945).
113. MAHESHWARI, P., D.Sc., Head of the Department of Biology, Dacca University, Ramna, Dacca. (1935).
114. MAJUMDAR, D. N., M.A., Ph.D., F.R.A.I., Lecturer in Anthropology, Lucknow University, Lucknow. (1940).
115. MAJUMDAR, G. P., Ph.D., Professor of Botany, Presidency College, Calcutta. (1943).
116. MAJUMDAR, R. C., Dr.Phil.Nat. (Jena), Reader in Physics, Delhi University, Delhi. (1941).
117. MATTHAI, GEORGE, M.A., Sc.D., F.L.S., F.Z.S., F.R.S.E., Professor of Zoology, Punjab University, Lahore.
118. MEHRA, H. R., M.Sc., Ph.D., Reader in Zoology, Allahabad University, Allahabad.
119. MEHTA, K. C., Rai Bahadur, M.S., Ph.D., Sc.D., Professor of Botany, Agra College, Agra.
120. MILLS, J. P., M.A., I.C.S., F.R.A.S.B., Secretary to H.E. the Governor of Assam, Government House, Shillong, Assam. (1936).
121. MITRA, SUBODH, M.D., F.R.C.S., F.R.C.O.G., Associate Professor of Midwifery, Carmichael Medical College, Calcutta. (1944).
122. MITRA, S. C., M.A., D.Phil. (Leip.), Lecturer in Psychology, Calcutta University, 92 Upper Circular Road, Calcutta. (1941).
123. MITRA, S. K., M.B.E., D.Sc., Ghose Professor of Physics, Calcutta University, 92 Upper Circular Road, Calcutta.
124. MITTER, P. C., M.A., Ph.D., Palit Professor of Chemistry, Calcutta University, 92 Upper Circular Road, Calcutta.
125. MOOKERJEE, H. K., D.Sc., D.I.C., Sir Nilratan Sirkar Professor of Zoology and Head of the Department, Calcutta University, 35 Ballygunge Circular Road, Calcutta. (1939).
126. MOWDAWALLA, F. N., M.A., M.I.E.E., Mem.A.I.E.E., M.I.E., 301 Frere Road, Fort, Bombay.
127. MUDALIAR, SIB A. RAMASWAMI, K.C.S.I., Member of Viceroy's Council, Department of Supply, New Delhi. (1944).
128. MUKERJI, B., M.B. (Cal.), M.D., D.Sc. (Michi.), F.A.Ph.S. (U.S.A.), Offg. Director, Biochemical Standardisation Laboratory, Government of India, 110 Chittaranjan Avenue, Calcutta. (1943).
129. MUKHERJEE, J. N., C.B.E., D.Sc., F.C.S., F.R.A.S.B., Director, Imperial Agricultural Research Institute, New Delhi.
130. NAIK, K. G., D.Sc., F.I.C., Retired Principal, Baroda College, Baroda; Camp Pratapganj, B.B. & C.I. Ry.
131. NARAYANAMURTI, D., B.Sc., Dr.Ing., Officer-in-charge, Wood Preservation Section, Forest Research Institute, New Forest, Dehra Dun. (1940).
132. NARLIKAR, V. V., B.Sc. (Bom.), B.A. (Cantab.), F.R.A.S., Professor of Mathematics and Head of the Department, Benares Hindu University, Benares. (1939).
133. NATH, RAJ, Ph.D., D.I.C., Professor of Geology, Benares Hindu University, Benares. (1943).

134. NATH, VISHWA, M.Sc., Ph.D., F.R.M.S., Professor of Zoology, Government College, Lahore. (1940).
135. NAYAR, U. S., M.A., Ph.D. (London), Head of the Department of Statistics, Travancore University, Trivandrum. (1945).
136. NEOGI, P., M.A., Ph.D., I.E.S. (retd.), 44A New Shambazar Street, Calcutta. (1936).
137. NORMAND, SIR CHARLES W. B., Kt., C.I.E., M.A., D.Sc., c/o Midland Bank, Gloucester Road, London, S.W. 7.
138. OLVER, COL. SIR ARTHUR, C.B., C.M.G., F.R.C.V.S., Principal, Royal Veterinary College, Edinburgh.
139. PANDIT, C. G., O.B.E., M.B.B.S., Ph.D., D.P.H., D.T.M., Director, King Institute of Preventive Medicine, Guindy, Madras. (1939).
140. PANJA, G., M.B., D.Bact., Professor of Bacteriology and Pathology, School of Tropical Medicine, Calcutta. (1944).
141. PARANJPE, G. R., M.Sc., A.I.I.Sc., I.E.S., Principal and Professor of Physics, Royal Institute of Science, Bombay. (1937).
142. PARANJPE, SIR R. P., Kt., D.Sc., High Commissioner for India, Canberra, Australia.
143. PARIJA, P., O.B.E., M.A., D.Sc., I.E.S., Vice-Chancellor, Utkal University, Cuttack.
144. PASRICHA, C. L., M.A., M.B., B.Chir., M.R.C.S., L.R.C.P., Lt.-Col., I.M.S., Director, School of Tropical Medicine, Calcutta. (1939).
145. PERCIVAL, F. G., O.B.E., Ph.D., F.G.S., Superintendent of Mines and Quarries, Tata Iron & Steel Co., Ltd., 3 Beldih Lake Road, Jamshedpur. (1936).
146. PICHAMUTHU, C. S., B.Sc., Ph.D. (Glasgow), F.R.S.E., Professor and Head of the Department of Geology, Central College, Bangalore. (1942).
147. PINFOLD, E. S., M.A., F.G.S., Geologist, The Attock Oil Co., Rawalpindi.
148. PRASAD, B. N., M.Sc., D.Sc., Ph.D., Reader in Mathematics, Allahabad University, Allahabad. (1936).
149. PRASAD, MATA, D.Sc., F.I.C., Professor of Inorganic and Physical Chemistry, Royal Institute of Science, Bombay. (1935).
150. PRASHAD, BAINI, O.B.E., D.Sc., F.R.S.E., F.L.S., F.Z.S., F.R.A.S.B., Adviser on Fisheries, Government of India, Department of Education, Health and Lands, New Delhi.
151. PRUTHI, H. S., M.Sc., Ph.D., Sc.D., F.R.A.S.B., Imperial Entomologist, Imperial Agricultural Research Institute, New Delhi.
152. QURESHI, MUZAFARUDDIN, Ph.D., Professor of Chemistry, Osmania University, Hyderabad (Deccan).
153. RAJ, B. SUNDARA, Diwan Bahadur, M.A., Ph.D., Fisheries Development Officer, Civil Secretariat, U.P., Lucknow. (1935).
154. RAKSHIT, H., D.Sc., F.Inst.P., Lecturer in Physics, Calcutta University, 92 Upper Circular Road, Calcutta. (1943).
155. RAMANATHAN, K. R., Diwan Bahadur, M.A., D.Sc., Superintending Meteorologist, Meteorological Office, Poona 5.
156. RAMDAS, L. A., M.A., Ph.D., Agricultural Meteorologist, Meteorological Office, Poona 5. (1935).
157. RAMIAH, K., M.B.E., L.Ag., M.Sc. (Cantab.), Dip.Agr. (Cantab.), Geneticist, Institute of Plant Industry, Indore. (1942).
158. RANDHAWA, M. S., M.Sc., I.C.S., Deputy Commissioner, Rae Bareli, U.P. (1943).
159. RANGASWAMI AYYANGAR, G. N., Rao Bahadur, B.A., I.A.S. (retd.), Rama Mandiram, 4 Ramaswami Street, Thyagarayanagar, Madras.
160. RAO, B. RAMA, M.A., D.I.C., F.G.S., Director, Geological Survey Department, Mysore State, Bangalore.
161. RAO, B. SANJIVA, M.A., Ph.D., Head of the Department of Chemistry, Mysore University, Central College, Bangalore. (1944).
162. RAO, C. V. HANUMANTHA, M.A., Professor of Mathematics, Punjab University, Lahore.
163. RAO, H. SRINIVASA, M.A., D.Sc., Assistant Superintendent, Zoological Survey of India, Kaiser Castle, Benares Cantt. (1937).
164. RAO, K. RANGADHAMA, D.Sc. (Madras and London), Professor of Physics, Andhra University, Guntur. (1937).
165. RAO, L. RAMA, M.A., F.G.S., Principal, Intermediate College, Bangalore. (1939).
166. RAO, M. V. RADHAKRISHNA, M.B., B.S., Ph.D. (Andhra), Assistant Director, Haffkine Institute, Parel, Bombay. (1945).
167. RAY, J. N., D.Sc., Ph.D., F.R.I.C., Director of Drugs and Dressings, Office of the Director-General of Supply, Medical Division, New Delhi. (1935).
168. RAY, P. R., M.A., Khaira Professor of Chemistry, Calcutta University, 92 Upper Circular Road, Calcutta.

169. RAY, R. C., D.Sc. (Lond.), F.R.I.C., Professor of Chemistry, Science College, Bankipore, Patna. (1943).
170. ROONWAL, MITHAN LAL, M.Sc., Ph.D. (Cantab.), Assistant Superintendent, Zoological Survey of India, Benares Cantt.; GHQ(I) Indian Field Typhus Research Team, c/o No. 6 A.B.P.O. (1945).
171. ROW, R., M.D., D.Sc., Lt.-COL., I.M.S. (Hon.), 27 New Marine Lines, Bombay 1.
172. ROY, S. C., M.Sc., D.Sc., F.R.Met.Soc. (Lond.), Meteorologist, India Meteorological Department, Lodi Road, New Delhi. (1940).
173. ROY, S. K., Ph.D., Professor of Geology, Indian School of Mines, Dhanbad. (1940).
174. ROY, S. N., M.Sc., Lecturer in Statistics, Calcutta University, Presidency College, Calcutta. (1944).
175. SAHA, M. N., D.Sc., F.R.S., F.R.A.S.B., Palit Professor of Physics, Calcutta University, 92 Upper Circular Road, Calcutta.
176. SARKAR, P. B., Dr. ès Sc., A.I.C., Lecturer in Chemistry, Calcutta University, 92 Upper Circular Road, Calcutta. (1935).
177. SAVUR, S. R., M.A., L.T., Ph.D., Regional Director, The Observatory, 15 Mowbrays Road, Teynampet, P.O., Madras. (1941).
178. SEN, B. M., M.A., M.Sc., I.E.S., (retired), 16 Palm Avenue, Ballygunge, Calcutta.
179. SEN, J. M., Rai Bahadur, B.Sc., M.Ed. (Leeds), Dip.Ed. (Oxford), T.D. (London), F.R.G.S., Principal, Krishnagar College, Krishnagar. (1935).
180. SEN, N. R., D.Sc., Ph.D., Ghose Professor of Applied Mathematics, Calcutta University, 92 Upper Circular Road, Calcutta.
181. SESHADRI, T. R., M.A., Ph.D. (Manchester), Vikrama Deo Professor and Head of the Departments of Chemistry and Chemical Technology, Andhra University; Biochemical Laboratory, Chepauk, Madras. (1942).
182. SETNA, S. B., M.Sc., Ph.D. (Cantab.), F.R.M.S., Director of Fisheries, Bombay; Pилоо Minar, 15 Walton Road, Apollo Reclamation, Bombay. (1943).
183. SEYMOUR SEWELL, R. B., Lt.-COL., C.I.E., M.A., Sc.D., F.R.S., M.R.C.S., L.R.C.P., F.Z.S., F.L.S., F.R.A.S.B., Zoological Laboratory, Cambridge University, Cambridge. (1936).
184. SHAH, R. C., M.Sc., Ph.D. (Lond.), Professor of Organic Chemistry, Royal Institute of Science, Bombay. On deputation to Government of India as Development Officer (Anti-gas) in the Supply Department. 3006 Ventikoppal Main Road, Mysore. (1941).
185. SHARIF, M., D.Sc., Ph.D., Entomologist, Haffkine Institute, Parel, Bombay. (1939).
186. SHORTT, H. E., C.I.E., M.D., Ch.B., D.T.M. & H., D.Sc., Lt.-COL., I.M.S., Inspector-General of Civil Hospitals, Assam, Shillong. (1936).
187. SIDDIQI, M. R., M.A., Ph.D., Director of Research Institute, Osmania University, Hyderabad (Deccan). (1937).
188. SINGH, B. K., M.A., Sc.D., F.I.C., I.E.S., Professor of Chemistry, Allahabad University, Allahabad.
189. SINGH, B. N., M.Sc., D.Sc., Benares Hindu University, Benares. (1941).
190. SINTON, J. A., V.C., O.B.E., M.D., D.Sc., D.P.H., D.T.M., Lt.-COL., I.M.S., Malaria Laboratory, Horton Hospital, Epsom, Surrey, England.
191. SIRCAR, A. C., M.A., Ph.D., Professor of Chemistry, Presidency College, Calcutta (retired); Vill. and P.O. Suapur, via Baira, Dacca. (1937).
192. SIRKAR, S. C., D.Sc., Lecturer in Physics, University College of Science, 92 Upper Circular Road, Calcutta. (1942).
193. SOHONI, V. V., B.A. Hons., M.Sc., Superintending Meteorologist, India Meteorological Department, New Delhi. (1942).
194. SOKHEY, S. S., M.A., M.D., D.T.M. & H., Lt.-COL., I.M.S., Director, Haffkine Institute, Parel, Bombay.
195. SONDHI, V. P., M.B.E., M.Sc., F.G.S., Geologist, Geological Survey of India, 27 Chowringhee, Calcutta. (1941).
196. SOPARKAR, M. B., M.D., B.Hy., 117 Khar, Bombay 21. (1937).
197. SPENCER, E., D.Sc., Ph.D., F.I.C., A.R.S.M., M.I.M.M., F.G.S., Consulting Chemist, Bird & Co., Chartered Bank Buildings, Clive Street, Calcutta.
198. SRIVASTAVA, P. L., Rai Sahib, M.A., D.Phil., Reader in Mathematics, Allahabad University, Allahabad. (1935).
199. SUBRAHMANYAN, V., D.Sc., F.I.C., Professor of Biochemistry, Indian Institute of Science, Malleswaram, Bangalore.
200. SUKHATME, P. V., D.Sc. (Lond.), Ph.D., Statistician, Imperial Council of Agricultural Research, New Delhi. (1943).
201. SUR, N. K., D.Sc., Meteorologist, Meteorological Office, Ganeskhind Road, Poona 5. (1938).
202. TAWDE, N. R., M.Sc., Ph.D. (Lond.), Professor of Physics, Royal Institute of Science, Bombay. (1942).

203. TAYLOR, SIR JOHN, Kt., C.I.E., D.S.O., M.D., D.P.H., MAJOR-GENERAL, I.M.S. (retired), 58 Cornwall Gardens, Kensington, London, S.W. 7.
204. TEMPLE, F. C., (Hony. Col.) A.F. (I.), C.I.E., V.D., A.D.C., 28 Victoria Street, London, S.W.1. (1937)
205. TOSHNIWAL, G. R., D.Sc., Meteorologist, India Meteorological Department, Lodi Road, New Delhi. (1943).
206. TRIBEDI, B. P., M.B. (Cal.), D.B. (Lond.), Professor of Pathology, Medical College and Bacteriologist to the Government of Bengal, Calcutta. (1943).
207. UKIL, A. C., M.B., M.S.P.E., F.S.M.F. (Hon. causa) Tuberculosis Research Officer, All-India Institute of Hygiene and Public Health, Calcutta. (1935).
208. UPPAL, B. N., M.B.E., Ph.D., Plant Pathologist to Government of Bombay, College of Agriculture, Poona 5. (1944).
209. VACHELL, E. T., M.A. (Cantab.), F.G.S., F.Inst.P., Senior Geologist (India), Burma Oil Company, Digboi, Assam. (1942).
210. VENKATARAMAN, K., M.S.Tech., Ph.D., D.Sc., Director, Department of Chemical Technology, Bombay University, Matunga Road, Bombay. (1939).
211. VENKATESACHAR, B., Rao Bahadur, M.A., F.Inst.P., Ambika Vilas, Bull Temple Road, Basavangudi, Bangalore.
212. VIJAYARAGHAVAN, T., Ph.D. (Oxon), Reader in Mathematics, Dacca University, Ramna, Dacca.
213. VISWANATH, B., Rao Bahadur, C.I.E., F.I.C., F.C.S., Director of Agriculture, Madras Presidency, Madras.
214. WADIA, D. N., M.A., B.Sc., F.G.S., F.R.G.S., F.R.A.S.B., Mineral Adviser, Department of Planning and Development, Imperial Secretariat, North Block, New Delhi.
215. WARE, F., C.I.E., F.R.C.V.S., I.V.S., Director of Animal Husbandry, U.P., Lucknow.
216. WEST, W. D., M.A., Sc.D. (Cantab.), Geologist, Geological Survey of India, 27 Chowringhee, Calcutta.
217. WHEELER, R. E. M., D.Litt. (London), Hon.D.Litt. (Bristol), Director-General of Archaeology in India, Simla. (1945).
218. WHEELER, T. S., D.Sc., Ph.D., F.R.C.Sc.I., F.I.C., F.Inst.P., M.I.Chem.E., Professor of Chemistry, University College of Dublin (National University of Ireland), Science Buildings, University College, Dublin.
219. YAJNIK, N. A., M.A., D.Sc., A.I.C., Chief Chemist, Tata Chemicals Ltd., Mithapur, Kathiawar, J. & D. Ry. (1940).

## HONORARY FELLOWS.

1. APPLETON, E. V., M.A., D.Sc., F.R.S., Secretary, Department of Scientific and Industrial Research of Great Britain, London.
2. BAILEY, E. B., F.R.S., Director-General, Geological Survey of Great Britain, Exhibition Road, South Kensington, London, S.W.7.
3. BLAKESLEE, A. F., Smith College, Northampton, U.S.A.
4. BOHR, NIELS, N.L., Institute for Advanced Studies, Princeton, U.S.A.
5. BOWER, F. O., Sc.D. (Cantab.), LL.D., F.R.S., Emeritus Professor of Botany, Glasgow University, 2 The Crescent, Ripon, Yorks.
6. CHRISTOPHERS, SIR RICKARD, Kt., C.I.E., O.B.E., M.B., Brevet-Colonel, I.M.S. (retired), 186 Huntingdon Road, Cambridge.
7. DALE, SIR HENRY HALLETT, Kt., O.M., G.B.E., M.A., M.D., F.R.C.P., Hon.D.Sc., Hon.M.D., Hon.LL.D., Director of the Davy-Faraday Research Laboratory and Fullerian Professor of Chemistry in the Royal Institution, and President, Royal Society of London, London.
8. DIELS, LUDWIG, Director-General of the Botanical Garden and Museum, 7 Königin Luise Strasse, Berlin-Dahlem, Germany.
9. DONNAN, F. G., F.R.S., Formerly Director, Sir William Ramsay Laboratory, University College, 23 Woburn Square, London, W.C.1.
10. EDMUNDS, CHARLES W., A.B., M.D., Professor of Pharmacology and Therapeutics, University of Michigan Medical School, Ann Arbor, Michigan, U.S.A.
11. EINSTEIN, ALBERT, N.L., Princeton University, New Jersey, U.S.A.
12. FISHER, R. A., Sc.D., F.R.S., Galton Professor in the University of London, London.
13. GOODRICH, E. S., M.A., D.Sc., F.R.S., Linaere Professor of Zoology and Comparative Anatomy, University Museum, Oxford.
14. GREENWOOD, M., MAJOR, D.Sc., F.R.C.P., F.R.S., Professor of Epidemiology and Vital Statistics, London School of Tropical Medicine and Hygiene, London.
15. HILL, A. V., O.B.E., Sc.D., F.R.S., M.P., Foulerton Research Professor, University College, London, and Secretary, Royal Society, London.

16. HOLLAND, SIR THOMAS H., K.C.S.I., K.C.I.E., D.Sc., F.R.S., Principal, University of Edinburgh, Edinburgh.
17. HOPKINS, SIR FREDERICK GOWLAND, Kt., M.A., D.Sc., N.L., F.R.S., Sir William Dunn Professor of Biochemistry in the University of Cambridge, Cambridge.
18. LAWRENCE, E. O., Radiation Laboratory, California University, Berkeley, U.S.A.
19. MARSHALL, SIR GUY A. K., C.M.G., F.R.S., Director, Imperial Institute of Entomology, London.
20. MILLIKAN, R. A., President of the California Institute of Technology, U.S.A.
21. NIGGLI, P., Professor of Mineralogy and Petrology, Federal Polytechnical University and University of Zurich, Switzerland.
22. ROBINSON, SIR ROBERT, D.Sc., F.R.S., Waynflete Professor of Organic Chemistry in the Dyson Perrins Laboratory, Oxford University, Oxford.
23. RUSSELL, SIR E. JOHN, D.Sc., F.R.S., Director, Rothamsted Agricultural Experimental Station, Harpenden, Herts, England.
24. SHERRINGTON, SIR CHARLES S., O.M., G.B.E., N.L., F.R.S., Formerly Waynflete Professor of Physiology in the University of Oxford, Broomside, Valley Road, Ipswich, England.
25. WENYON, C. M., C.M.G., C.B.E., F.R.S., Director-in-chief, Wellcome Bureau of Scientific Research, 183 Euston Road, London, N.W.1.

## APPENDIX II.

## ABSTRACT PROCEEDINGS OF THE COUNCIL, 1945.

[*Note.*—These abstracts of the proceedings of the Council relate to questions dealt with which are likely to be of interest to the Fellows. Routine matters and matters which are under consideration are not included.]

1. Considered the question as to whether Archaeology should be regarded as a science coming within the purview of the National Institute of Sciences of India.

It was resolved that the nomination paper of the candidate proposed for election on the basis of his work in Archaeology should not be referred to any Sectional Committee but should be taken into consideration by the Council at the time of selecting candidates for Fellowship. (14-5-1945.)

2. The Council adopted the following modifications to Regulations regarding election of Ordinary Fellows (modifications are in italics). (18-6-1945.)

Regulation A1. Every candidate shall be proposed and recommended by a certificate in writing signed by four or more Fellows, of whom at least three shall certify their recommendation from personal knowledge, but either of the two Secretaries shall have power to sign a certificate on behalf of a Fellow not resident in India on receiving a written request from him. The certificate shall specify the name, rank, profession, qualifications including a list of publications, and the usual place of residence of the candidate in a form prescribed by the Council. *This form shall also include a brief statement of the actual nature and value of the essential research submitted by the candidate and of his contribution to new knowledge.* The form being delivered to one of the Secretaries or the Assistant Secretary shall be registered, with the date of delivery in a book to be kept for the purpose, and read at the next meeting of the Council, and unless otherwise ordered, shall be suspended in some convenient place in the office of the Institute until the day of election. A Fellow may propose or second only one candidate; plural proposing or seconding shall invalidate all his nominations. But a Fellow who has nominated or seconded one candidate can support others.

Regulation A3. At a meeting of the Council of the National Institute held in April, the names of all candidates proposed prior to the first day of April, and subsequent to the last announcement of names of candidates, and also the names of those candidates whose certificates have been resuspended as hereinafter provided, shall be announced by one of the Secretaries from a printed list arranged in alphabetical order without reference to the dates of the certificates of the candidates, together with *brief statements of the actual nature and value of the research work of the candidates* and names of the Fellows by whom each candidate is proposed, seconded and supported; and a copy shall immediately thereafter be sent to every Fellow.

3. Resolved that a Committee consisting of Prof. M. N. Saha, Prof. J. N. Mukherjee and Prof. P. C. Mahalanobis be appointed to suggest the steps to be taken to ensure that names of suitable persons are not left out from the list of proposals for election as Ordinary Fellows. (23-7-1945.)

## APPENDIX III.

Copy of letter dated the 17th October, 1945, from the Deputy Educational Adviser to the Government of India, to the President, National Institute of Sciences of India:—

‘I am glad to inform you that the Government of India have decided to recognise the National Institute of Sciences of India as the premier scientific organisation in this country. The question of granting a Royal Charter to the National Institute has also been taken up by the Government of India with His Majesty’s Government and it is hoped a decision will be available in the very near future.’



## APPENDIX IV.

## COMMITTEES, 1945.

## SECTIONAL COMMITTEES.

## (1) 'Mathematics' Committee for Mathematics, Astronomy and Geodesy:—

	To serve until Dec. 31.
Mr. T. P. Bhaskara Shastri .. .. .	1946.
Prof. K. B. Madhava (Secretary and Convener) .. .. .	1946.
Principal G. S. Mahajani .. .. .	1947.
Dr. P. V. Sukhatme .. .. .	1947.
Mr. R. C. Bose .. .. .	1948.
Dr. T. Vijayaraghavan .. .. .	1948.

## (2) 'Physics' Committee for Physics and Meteorology:—

Prof. H. J. Bhabha .. .. .	1946.
Principal G. R. Paranjpe .. .. .	1946.
Dr. S. K. Banerji .. .. .	1947.
Prof. M. N. Saha .. .. .	1947.
Prof. K. S. Krishnan .. .. .	1948.
Prof. D. S. Kothari (Secretary and Convener) .. .. .	1948.

## (3) 'Chemistry' Committee for Pure and Applied Chemistry:—

Prof. Mata Prasad .. .. .	1946.
Prof. T. R. Seshadri .. .. .	1946.
Prof. P. Ray (Secretary and Convener) .. .. .	1947.
Rao Bahadur B. Viswanath .. .. .	1947.
Sir S. S. Bhatnagar .. .. .	1948.
Sir J. C. Ghosh .. .. .	1948.

## (4) 'Engineering Sciences' Committee for Engineering, Metallurgy, Electrotechnics and kindred subjects:—

Mr. E. S. Pinfold .. .. .	1946.
Mr. F. N. Mowdawalla .. .. .	1946.
Prof. P. N. Ghosh .. .. .	1947.
Dr. E. Spencer .. .. .	1947.
Mr. W. C. Ash .. .. .	1948.
Dr. Gilbert J. Fowler (Secretary and Convener) .. .. .	1948.

## (5) 'Geology' Committee for Geology, Palæontology, Mineralogy and Geography:—

Sir Cyril S. Fox .. .. .	1946.
Dr. W. D. West (Secretary and Convener) .. .. .	1946.
Dr. H. Crookshank .. .. .	1947.
Mr. D. N. Wadia .. .. .	1947.
Dr. M. S. Krishnan .. .. .	1948.
Prof. L. Rama Rao .. .. .	1948.

## (6) 'Botany' Committee for Pure and Applied Botany, Forestry and Agronomy:—

Prof. M. O. P. Iyengar .. .. .	1946.
Prof. K. C. Mehta .. .. .	1946.
Dr. N. L. Bor .. .. .	1947.
Mr. P. Parija (Secretary and Convener) .. .. .	1947.
Prof. S. P. Agharkar .. .. .	1948.
Mr. K. Ramiah .. .. .	1948.

## (7) 'Zoology' Committee for Pure and Applied Zoology and Anthropology including Ethnology:—

					To serve until Dec. 31.
Dr. D. N. Majumdar	..	..	..	..	.. 1946.
Prof. P. R. Awati	..	..	..	..	.. 1946.
Prof. K. N. Bahl	..	..	..	..	.. 1947.
Dr. H. S. Pruthi (Secretary and Convener)	..	..	..	..	.. 1947.
Dr. Verrier Elwin	..	..	..	..	.. 1948.
Prof. H. K. Mookerjee	..	..	..	..	.. 1948.

## (8) 'Physiology' Committee for Animal Physiology, Pathology, Bacteriology, Psychology and other Medical and Veterinary subjects:—

Dr. G. Bose	..	..	..	..	.. 1946.
Dr. R. B. Lal	..	..	..	..	.. 1946.
Dr. C. G. Pandit	..	..	..	..	.. 1946.
Sir U. N. Brahmachari	..	..	..	..	.. 1947.
Mr. J. R. Haddow	..	..	..	..	.. 1947.
Rai Bahadur J. M. Sen	..	..	..	..	.. 1947.
Rai Bahadur K. N. Bagchi (Secretary and Convener)	..	..	..	..	.. 1948.
Lt.-Col. C. L. Pasricha	..	..	..	..	.. 1948.
Lt.-Col. S. S. Sokhey	..	..	..	..	.. 1948.

---



## APPENDIX VI.

## INDIAN SCIENCE ABSTRACTS RESERVE FUND.

	Rs.	A.	P.		Rs.	A.	P.
To Balance .. ..	1,532	6	6	By Balance .. ..	6,532	6	6
Set apart for completing 'Indian Science Abstracts' in the budget estimates for 1944-45 .. ..	5,000	0	0				
	<u>6,532</u>	<u>6</u>	<u>6</u>		<u>6,532</u>	<u>6</u>	<u>6</u>

## APPENDIX VII.

## ROCKEFELLER FOUNDATION GRANT FUND.

	Rs.	A.	P.		Rs.	A.	P.
To Balance from last account ..	1,200	0	0	By distribution during the year	3,700	0	0
Receipt during the year ..	17,500	0	0	Balance .. ..	15,000	0	0
	<u>18,700</u>	<u>0</u>	<u>0</u>		<u>18,700</u>	<u>0</u>	<u>0</u>

## APPENDIX VIII.

## CHANDRA KALA HORA MEMORIAL MEDAL FUND.

Founded from a donation of Rs.3,000 by Rai Bahadur S. L. Hora and Mrs. Hora in memory of their daughter to be bestowed triennially on the person who has made conspicuously important contributions to the development of fisheries in India during the five years preceding the year of award.

	Rs.	A.	P.		Rs.	A.	P.
To Cash donation .. ..	3,000	0	0	By purchase of investment in			
Interest received during the year less Bank charges ..	36	11	0	3½% G.P. Notes 1842/43	-		
	<u>3,036</u>	<u>11</u>	<u>0</u>	of the face value ..	3,000	0	0
Advance from General Fund	4	13	0	Appreciation .. ..	9	6	0
	<u>3,041</u>	<u>8</u>	<u>0</u>	Interest less Income-tax ..	24	10	0
				Bank charges .. ..	7	8	0
					<u>3,041</u>	<u>8</u>	<u>0</u>

## APPENDIX IX.

## IMPERIAL CHEMICAL INDUSTRIES (INDIA) RESEARCH FELLOWSHIPS FUND.

	Rs.	A.	P.		Rs.	A.	P.
To advance received against contribution for administration, travelling, etc. ..	13,200	0	0	By Travelling, advertisement, etc.	1,908	9	0
	<u>13,200</u>	<u>0</u>	<u>0</u>	Balance .. ..	11,291	7	0
					<u>13,200</u>	<u>0</u>	<u>0</u>

## APPENDIX X.

## BUDGET ESTIMATES.

In view of the likely transfer of the headquarters to Delhi early in 1946 and of the grant from the Government of India, provisional budget estimates only are given below. Final budget estimates will be prepared by the Council at its meeting to be held in April 1946.

	1944-45 Estimates.	1944-45 Actuals.	1945-46 Estimates.
	Rs.	Rs.	Rs.
<i>Ordinary Receipts.</i>			
Subscriptions .. .. .	7,000	6,438	7,000
Interest .. .. .	1,800	1,785	1,800
Sale of publications including 'Indian Science Abstracts' .. .. .	400	286	400
Grants-in-aid from Universities .. .. .	1,000	1,000	1,000
Grants-in-aid from Government of India .. .. .	12,000*	6,000	6,000†
Grants towards publication of Papers .. .. .	1,400	....	2,500
Miscellaneous Receipts .. .. .	....	7	....
Contributions from Opening Balance .. .. .	1,400	....	10,900
	<u>25,000</u>	<u>15,516</u>	<u>29,600</u>
<i>Extraordinary Receipts.</i>			
Admission Fees .. .. .	384	96	416
Part payment of Compounding Fee .. .. .	..	250	140
	<u>384</u>	<u>346</u>	<u>556</u>
Salaries and Allowances .. .. .	6,000	2,701	8,700
Publications other than 'Indian Science Abstracts', and including Circulars .. .. .	8,500	4,779	10,000
Publication of 'Indian Science Abstracts' .. .. .	5,000**	....	5,000††
Honoraria, etc., for preparing abstracts for 'Indian Science Abstracts' .. .. .	1,000	....	1,000
Contributions to co-operating Academies under Rule 19 .. .. .	1,300	1,092	1,200
Postage .. .. .	600	513	600
Stationery .. .. .	250	187	250
Audit Fees .. .. .	50	50	50
Travelling .. .. .	500	339	1,000
Office Rent .. .. .	600	600	600
Honoraria, etc., for preparing Register of Scientific Personnel .. .. .	1,000	....	1,000
Miscellaneous Expenses (including Bank charges) .. .. .	200	503	200
Balance credited to General Fund .. .. .	....	4,752	....
	<u>25,000</u>	<u>15,516</u>	<u>29,600</u>
<i>Extraordinary Payments.</i>			
Funding of Admission Fees and Compounding Fees .. .. .	384	346	556

\* Grants sanctioned for the years 1944-45 and 1945-46.

† Grant for the year 1945-46 had not been received during the financial year ended 30th November, 1945.

\*\* Funded to 'Indian Science Abstracts' Reserve Fund.

†† Additional provision has been made for the publication of 'Indian Science Abstracts'.