

Electrical Engineering Department was one of several options. He graduated with honours at the age of twenty and commenced research in automatic control. It would be more truthful to say that he continued with work he had already started as an undergraduate. He took an M.Sc. degree at twenty-one and a Ph.D. at twenty-three, followed by a Turner and Newall fellowship which allowed him time to develop his work on techniques for handling the frequency response analysis of essentially non-linear control systems. His first teaching appointment was a lectureship in control in the Electrical Engineering Department at Queen's University, Belfast. This gave opportunity for the development of his latent skill in lecturing, his love of explaining the difficult in simple terms and his ability to demonstrate the most profound principles in feed-back theory using model trains and 'Meccano'. His research work led into the fields of statistical processes and to self-adapting systems. Most of his work has been published in the *Proceedings of the Institution of Electrical Engineers* and on several occasions that body has awarded him prizes for his papers. He is an inventor with many patents to his credit, and his most recent work, a combination of invention and scientific research, is the self-adaptive analogue computer. Given some initial conditions and a goal, this computer will optimize the design of a control system and cut down man time on design by trial and error. This device opens up a new way of thought for the control engineer.

#### Biological Chemistry in the University of Manchester : Prof. G. R. Barker

DR. G. R. BARKER, formerly reader in biological chemistry in the University of Manchester, has been appointed to a newly-established chair of biological chemistry at that University. Dr. Barker was educated at Nottingham High School from 1932 until 1936 and at University College, Nottingham, from 1936 until 1939. He was awarded a B.Sc.(London) in 1939 and from 1939 until 1942 he continued his studies at University College, Nottingham, as a research student under (the late) Prof. J. Masson Gulland, being awarded a Ph.D.(London) in 1944. He was appointed assistant lecturer in chemistry at University College, Nottingham, in 1942 and was promoted lecturer in 1946. In the same year he was appointed lecturer in chemistry in the University of Manchester where he was promoted to senior lecturer in biological chemistry in 1959 and to reader in biological chemistry in 1963. In 1951-52 Dr. Barker worked in the United States as a Rockefeller Foundation Fellow at the Sloane Kettering Institute for Cancer Research, New York, and in 1962 he was awarded the degree of D.Sc.(Manchester) in recognition of his research work in chemistry and biological chemistry. Dr. Barker is the author or co-author of a large number of articles on topics in chemistry and biological chemistry which have been published in a wide range of scientific journals. Since 1949 he has also been a regular contributor to the *Annual Report of the British Empire Cancer Campaign*. His present research interests are in the field of nucleic acids in relation to growth and genetic characteristics in micro-organisms, plants, ascites tumour cells and animal cells in tissue culture.

#### Student Grants

IN a written answer in the House of Commons on May 24, the Secretary of State for Education and Science, Mr. A. Crosland, stated that he had received the report of the Standing Advisory Committee on Grants to Students and the necessary regulations would be laid before the House in due course to enable the standard value of awards to be increased as from September 1. The standard maintenance allowances in awards for first degree and comparable courses would be increased to £370 per annum for students in college, hall, hostel or lodgings at the Universities of Oxford, Cambridge and London and

further establishments in the London area, and to £275 for those living at home. For students at other universities the increases would be to £340 per annum and £275 per annum, respectively. A recognized student in England and Wales resident in a college of education or approved lodgings would receive a grant of £156 per annum and such students living in their parental or husband's home would receive a grant of £295, or £370 for a student living in a home he maintains himself (£400 in London). In Scotland a college of education student would continue to receive the same award as a university student. The grant for students attending a university or establishment of further education abroad would be increased to £370 a year. Payments in respect of periods outside the normal yearly attendance would be increased to 17s. 6d. a day for a student living away from home and to 10s. a day for a student living at home, and would apply to those undertaking a recommended course of vacation study under guidance. Allowances for dependants, etc., would be increased to £190 for the spouse or other adult dependent; £80 for the first dependent child; £60 for the second, and £55 for each further dependent child. The "Two-Homes" grant would be £65 and for mature students the grant for each year of age over twenty-five would be £20, up to a maximum of £100. Veterinary students would receive the additional £15 for necessary expenditure on instruments already received by medical students; the travel element in the grants would be increased to £12 and that for books, instruments, stationery, etc., to £35 (£27 at colleges of education).

#### Use of Scientific Manpower

IN reply to questions in the House of Commons on May 25 the Prime Minister said that the terms of reference of the new Committee on Manpower Resources for Science and Technology had been widened to include consideration of the use made of existing scientists and technologists. The reconstituted Committee reports to the Secretary of State for Education and Science and the Minister of Technology jointly, but all decisions are the responsibility of the Cabinet as a whole. While in the past the Committee had tended to limit itself to statistical surveys of the estimated need for scientists and technologists in relation to the training programme and education, he thought that in the new situation the use now made of Britain's scientists and technologists in the application of their discoveries in industry was of at least equal importance, and that was the function of the Ministry of Technology.

#### Grants for Scottish Agricultural Colleges and Institutes

IN a written answer in the House of Commons on May 26, the Secretary of State for Scotland, Mr. W. Ross, stated that grants for agricultural colleges in Scotland from the Department of Agriculture and Fisheries in Scotland had risen from £886,000 in 1960-61 to £997,000 in 1963-64 and £1,082,000 in 1964-65. For research institutes, the corresponding figures were £1,239,000; £1,390,000; and £1,614,000. These figures include both maintenance and capital grants and for the colleges are based on an approximate division between teaching and advisory functions.

#### The Carnegie Trust for the Universities of Scotland

THE sixty-third annual report of the Carnegie Trust for the Universities of Scotland covers the year 1963-64 (Pp. 64. Edinburgh, 1965) in which grants to universities and other institutions and expenditure on the research scheme totalled £135,248, and awards to students for fees, vacation scholarships for students of exceptional merit, and the exchange scheme for selected medical students, totalled £11,330. Progress with schemes previously approved for capital grant was slow and only £67,820 was utilized in 1963-64, but the pace should