enrolments, in staff and in accommodation and equipment. A start has already been made; for the session 1953-54, 670 students were following full-time university courses in the Faculty of Technology. It was then planned to double this number by 1962 and a most encouraging start was made last October, when the number of new enrolments increased by 45 per cent; there is a further increase in the present session.

New chairs in municipal engineering, applied physics, industrial administration, textile chemistry and chemical engineering have been created, and

more are envisaged.

Building extensions approved in 1928 are now coming into use; these extensions were, however, planned to relieve congestion existing thirty years ago, and further space is now essential. Preliminary steps have already been taken to provide a campus for the College and to meet future needs.

From small beginnings more than a hundred and thirty years ago the College has developed to its present stature, and it is confidently expected that, with the additional prestige bestowed by the Charter, its progress in the future will be no less remarkable.

## **OBITUARIES**

## Dr. R. C. L. Perkins, F.R.S.

Dr. R. C. L. Perkins, the distinguished entomologist, best known for his work on the fauna of the Hawaiian Islands, died on September 29 at Bovey Tracy, Devon, at the age of eighty-eight.

Robert Cyril Layton Perkins was born on November 15, 1866, at Badminton, Gloucestershire, the second son of the Rev. Charles Mathew Perkins. He was educated at the Merchant Taylors School in London. In 1885 he won an open classical scholarship to Jesus College, Oxford; but after two years at

Oxford he changed to science.

In 1891 Dr. Perkins was chosen by a committee appointed by the Royal Society and the British Association to undertake an investigation of the land fauna of the Hawaiian Islands. For nearly ten years he worked strenuously for this committee, collecting material in all parts of the Islands. In 1899 his comprehensive volumes on the insect groups and birds began to appear in the "Fauna Hawaiiensis", and continued until 1913, when he completed the general introduction to the whole series. By this time he had already received the Linnean Society's Gold Medal for 1912.

During 1902-4 he worked for the Agricultural Department of the Territory in various capacities. But in 1904 the Hawaiian Sugar Planters' Association put him in charge of the new insect department of its experimental station. His work here with O. H. Swezey and F. Muir was mainly concerned with studying and controlling the pests of sugar cane, by introducing their natural parasites from their countries of origin.

Dr. Perkins was forced to retire in 1912 through ill-health acquired in the strenuous field-work under the exacting climatic conditions of Hawaii. He settled at Newton Abbot in Devon, but continued to work on his accumulated Hawaiian collections and to write about them for more than twenty years. He also continued his studies of British insects and made outstanding contributions to our knowledge of Strepsiptera, bees, crabronid wasps and sawflies. He

was elected a Fellow of the Royal Society in 1920 and in 1951 an honorary Fellow of the Royal Entomological Society of London, of which he had been an ordinary Fellow for more than fifty years.

In 1901 he married Zoe, daughter of A. T. Atkinson,

In 1901 he married Zoe, daughter of A. T. Atkinson, superintendent of public instruction, Honolulu, Hawaiian Islands; she died in 1940, and there are three surviving sons of this marriage. In 1942 he married Mrs. Clara Senior, of Highweek, Newton Abbot, and she died in 1949. His last days were sad ones, with blindness and failing strength. His loss will be regretted by the many who felt the inspiration of his genius and who experienced the encouragement he showed to those younger and less talented than he was.

ROBERT B. BENSON

## Mr. H. L. Kirke, C.B.E.

MR. HAROLD LISTER KIRKE, formerly head of the Research Department and assistant chief engineer of the British Broadcasting Corporation, died in London on August 25 at the age of sixty. He served in the First World War as an officer in the Royal Fusiliers, the Signals Branch of the Royal Engineers and the Royal Corps of Signals. Later he joined the Marconi Company and was concerned with the early development of radio telephone transmitters. He was one of the small band of enthusiastic engineers who established the Writtle experimental broadcasting station in 1922, and two years later he joined the staff of the B.B.C. In 1925 he became head of the development section, which later became the Research Department of the Corporation; and in this capacity he was responsible for many of the technical advances made by the B.B.C. over the ensuing twenty-five years.

Important contributions were made by Kirke to the development of high-quality sound broadcasting at various stages from the studio through the transmitters and aerial systems to the technique of reception. Latterly, his study of the problems associated with sound broadcasting at very high frequencies was particularly valuable, and the decision of the B.B.C. to adopt the V.H.F. frequency-modulation system was based to a great extent on his research work.

Kirke was an active member of the Institution of Electrical Engineers; he was chairman of the Radio Section during 1944-45, and a member of Council from 1947 until 1950. He was also a Fellow of the Institute of Radio Engineers of New York, and was vice-president in 1952. He played a leading part in forming the Acoustics Group of the Physical Society, and was chairman of the Group in 1947. He was appointed C.B.E. in 1947.

Many of those engaged in radio research over the past quarter of a century will remember Kirke as an enthusiastic and pleasant companion at technical visits and demonstrations, and as a wise counsellor at meetings of boards and committees. It was with great sorrow that all his colleagues and associates learnt of his retirement through illness in 1952, two years after his appointment as assistant chief engineer of the B.B.C.

R. L. SMITH-ROSE

## Lieut.-Colonel W. French, C.B.E.

LIEUT.-COLONEL WILLIAM FRENCH, a member of the Council of the City and Guilds of London Institute, who was superintendent of the Institute's Department of Technology during 1934-49, died on September 18. Colonel French had had a varied career in the law, in the army during the First