

THE next election to the research scholarships of the Grocers' Company for the prosecution of original research in sanitary science will take place in May, and applications for them are invited until April 14. The scholarships are each of the annual value of 300*l.*, plus an allowance for apparatus and other expenses. They are tenable for a year, with the possibility of renewal for a second or a third year. Applications, upon a form to be provided, should be sent to the Clerk of the Company, Grocers' Hall, E.C.2.

THE second session of the summer school for post-graduate mathematics, organised by the Extra Mural Department of the University of Manchester, will be held at University College, Bangor, on August 24-September 5. The object of the school, which is recognised by the Board of Education, is to afford facilities for advanced study in mathematics to teachers and others who have read mathematics for a university degree. The following three alternative courses are proposed: (a) Atomic structure and the quantum theory, by Prof. Sydney Chapman (Imperial College of Science, London); (b) theory of functions, by Prof. L. J. Mordell (University of Manchester); (c) higher geometry, by Mr. H. W. Richmond (King's College, Cambridge). Particulars may be obtained from Miss D. Withington, The University, Manchester. Application should be made at an early date, as the holding of the courses depends to some extent upon the number of applications received.

IN any college where a large staff is employed, the duties and interests cover a wide variety of subjects, and the results of research work are often scattered over technical journals and the proceedings of many societies, a procedure which fails to provide an adequate view of the work of the college as a whole. The authorities of the Royal Technical College, Glasgow, have been considering this matter, and have resolved to publish an official journal, which will contain records of the research work done in the college, and thus prove an incentive to junior workers in particular. A copy of the first number of the Journal of the college is now before us, and contains records of eleven researches conducted in the college, representing chemistry, metallurgy and engineering. The name of the editor does not appear, but he is to be congratulated upon the production, and especially upon the useful feature of printing a short abstract of each paper immediately under its title. The research activities of the college may be judged by the articles which appear in this issue. These include papers on some acyl derivatives of hydrazine; the formation and constitution of certain double salts with a review and criticism of van 't Hoff's theory; radio-active substances as indicators with a study of the adsorption of lead and bismuth by ferric hydroxide and the adsorption of thorium by basic ferric acetate and by barium sulphate by this method; the hydroferro- and hydroferri-cyanides of the organic bases and some applications; the separation of the components of petroleum with the view of utilising this commodity as a raw material for chemical industries; the iron-carbon diagram; the copper-zinc system; the petrological and chemical examination of slag and metal samples from a basic open-hearth furnace. These papers are followed by two on engineering subjects which occupy nearly one half of the issue; the subjects are the pipe loss in steam nozzles, and turbine wheel friction, on both of which the Royal Technical College has already given authoritative papers. The last paper deals with the structure and mode of life of the sulphur-bacteria and their value as indicators of pollution. The appearance of this Journal will be welcomed alike by science and engineering workers, and cannot fail to be beneficial to research workers in the college itself.

Early Science at Oxford.

April 6, 1686. Mr. Aston communicated amendments of ye Treatise *De Moventibus in Fluido*, and Mr. Ash sent a Demonstration of the 2d and 5th books of Euclide, and ye whole doctrine of proportion done more briefly than heretofore; for both which ye Secretary was ordered to returne ye thanks of ye Society.

April 7, 1685. A very rationall Discourse concerning Weather, written some time since by Dr. Garden (by way of Letter to his Friend Mr. Scougall) was read. The Society ordered their thanks to be returned, both to Dr. Middleton and to Dr. Garden, for the communication of so considerable a piece of Philosophy. One passage in Dr. Garden's discourse deducing the Rise and Fall of Vapours from their weight in respect to that of the Air, (intimating, that ye Vapours arise, when specifically lighter, and fall when specifically heavier, than the Air). Mr. President, not denying this to be true, added herunto, that Subterranean heats, or other ferments, may bear some part in producing this effect; as impelling upwards those Vapours, which, being specifically heavier than the Air, fall again in a little time: An instance of which he gave in ye boyling of Water, where the vapours are forced upwards by the fire placed under the Vessel, and, having lost that impetus, which raised them, and being intensively heavier than the Air, sink down again.

A Letter from Mr. Aston mentioned a Catalogue of Rarities, brought from Ceylon, by Dr. Heerman of Leyden, and preserved according to a peculiar way known to him. A Transcript of this Catalogue is desired. The remaining half of Mr. Leewenhoeck's Letter concerns the Salts of Wine, Vinegar &c, was read.

April 8, 1684. Mr. Ballard discoursed concerning ye Magnetism of Drills, being by way of answer to a letter of Mr. Aston's on that subject, dated March ye 15th. Six or seven severall Drills were caused to be made before my face; and ye bit, or point, of every one became a North Pole, onely by ye hardning, before they ever came to be workd either in Iron, or any other Matter. That peices of plain Iron in shape like Drills (that is something long, and small,) do always change their Poles, as they are inverted (ye end downward being over ye North Pole) he finds not allways true. Mr. Hunt's experiments on drilling were repeated, but his conclusions were found not to be always confirmed. Mr. Bernard read a letter of his to Dr. Huntingdon, concerning ye place of ye fixed stars, as treated of in severall Arabic authors, given to Merton College Library by ye Doctor.—There being some discourse concerning ye insipid tast of ye Ice of Seawater, it was queried, whether sea-water might not be sweetned, and rendred serviceable.

April 10, 1688. The Standards of the wine, corn, and Ale Gallons, kept at St. Marys, were examined by Dr. Bernard, Mr. Walker and Mr. Caswell. They were filled with Pump-water, and then weighed. The weights compared with a former experiment by this Society of the weight of a cubic foot of water, give the quantitys of these Gallons in cubic Inches, &c.

Wine—Gallon - -	232 : 00	} cubic Inches.
Corn—Gallon - -	270 : 43	
Ale—Gallon - -	280 : 15	

The variation of the Needle at Oxford July 22nd 1687 was found to be 5°20' West.

Dr. Bernard presented the Society with his book *De Ponderibus et Mensuris Antiquis*; for which the Society returned their thanks.