

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

MR. EVAN SPICER, chairman of the London County Council, will distribute the prizes and certificates at the annual conversazione of the Northampton Institute, Clerkenwell, E.C., on Friday, January 25.

THE annual general meeting and dinner of the Central Technical College Old Students' Association will be held at the Trocadero Restaurant, Piccadilly Circus, W., on Saturday, February 23. Applications for tickets should be sent to Mr. R. J. Caldwell, 40 Salehurst Road, Crofton Park, London, S.E.

THE department of archæology of the University of Pennsylvania has received a gift of 800*l.* from Mr. Eckley Brinton Coxé, jun. The donor has specified that of the gift 172*l.* a year shall be paid for five years to the new curator of the department of Egyptology, Dr. D. Randall MacIver, who is now in Egypt, where he has been instructed to begin excavations.

MR. SIDNEY WELLS, principal of the Battersea Polytechnic, and a member of the consultative committee of the Board of Education, has been appointed Director-General of the Department of Agriculture and Technical Education for Egypt. This department has been created in order to develop, organise, and control technical education in Egypt generally. It will be concerned with all the Government educational institutions of every kind, and also with the non-Government technical institutions.

A PRIVATE donation has enabled the Meteorological Committee to invite applications for an appointment as reader in dynamical meteorology. The readership will be of the annual value of 350*l.*, and will be tenable for three years at any British university that may be approved for the purpose and affords the required facilities. The duty of the reader will be primarily to promote the science of meteorology by mathematical investigation, and he will be expected to give annually a short course of about twelve lectures. Further details may be obtained from the Director of the Meteorological Office, 63 Victoria Street, London, S.W.

THE annual report of the council of University College, London, has just been issued. The number of students in the college for the session 1905-6 was 1396; of these, 134 were post-graduate and research students. The report contains particulars of the benefactions received during the year, which include valuable grants from the Drapers' Company, from the Chadwick trustees, and the sum of 2500*l.* collected by the Jewish Historical Society for the maintenance of the Mocatta library. The report also contains a summary of the research work done during the past session; the lists of the publications by professors, assistant teachers, and senior students occupy fourteen pages. The steps that have been taken for the union of the college and the University of London are summarised in the report. On January 1 of the present year the college ceased to be a school of the University, and became incorporated with it, thus realising the aims of those who in 1826 founded it. It is the first college to be thus incorporated with the University, and it is understood that its example will be followed by King's College. Important additions have been made during the past year to the departments of physics and chemistry, and a plan has been worked out for the rearrangement of many of the college departments. This will be possible when the new buildings for the school of advanced medical studies, now in course of erection by the generosity of Sir Donald Currie, and the new buildings of University College School at Hampstead, are completed.

SOCIETIES AND ACADEMIES.

LONDON.

Mathematical Society, January 10.—Prof. W. Burnside, president, in the chair.—An exhibition of models of four-dimensional figures was made by Mrs. A. Stott. The models are sections by three-dimensional flat spaces of the six regular hypersolids of a flat space of four dimensions. The sections are in general polyhedra; and corresponding

faces of different polyhedra, forming a series of sections of the same regular hypersolid, are coloured identically in order to show the relations between the different sections. Other models show the grouping about a point of the regular hypersolids which have the space-filling property.—The uniform convergence of Fourier's series: Dr. E. W.

Hobson. The coefficients of the Fourier's series determined by an assigned function are defined by integrals, which may be determinate when the extended definition of integration introduced by Lebesgue is used, although they have no meaning when integration is interpreted in accordance with Riemann's definition. It is shown in the paper that whenever the coefficients of the Fourier's series, determined by a function $f(x)$ in the interval $\pi > x > -\pi$, are, in this sense, determinate, and the function $f(x)$ is continuous throughout a sub-interval included in this interval, and this function is of limited total fluctuation in the whole interval, the Fourier's series so determined converges uniformly in the sub-interval.—Hyper-even numbers and Fermat's numbers: Lieut.-Colonel A. **Cunningham**. The hyper-even numbers are formed in

sequence as 2^n , 2^{2^n} , $2^{2^{2^n}}$, and so on. Fermat's numbers are of the form $2^{2^n} + 1$. The numbers ξ which are such that $2\xi \equiv 1 \pmod{m}$ are the *Haupt-exponents* of 2 for the modulus m . The paper is occupied with tracing the relations which connect together the residues of successive hyper-even numbers, the uneven factors of the *Haupt-exponents*, and the Fermat's numbers.—Riemann's hypergeometric function: Dr. E. W. **Barnes**. It is shown how the differential equation of the hypergeometric series, and likewise that of Riemann's function, can be solved respectively by means of certain contour integrals, and how the known solutions can all be obtained by deforming the contour. The relations between the various forms of solution, which hold in the neighbourhoods of the singular points, can be traced very simply by means of the general formulæ. The method is applied to obtain asymptotic approximations to zonal harmonics in the case where the index increases indefinitely.—Partial differential equations of the second order, having integral systems free from partial quadratures: Prof. A. R. **Forsyth**. The integral systems discussed are those in which three variables x, y, z are expressed in terms of two parameters u, v , an arbitrary function of u , an arbitrary function of v , and differential coefficients of these two functions. The object of the paper is to determine the forms of the differential equations which possess integrals of the type in question, and to construct the integrals of such equations.—The singular points of certain classes of functions of several variables: G. H. **Hardy**. The theory of the singularities of functions of one variable, defined by Taylor's series, may be said to be tolerably complete, but in the case of functions of several variables little advance has been made. The purpose of this paper is, by the consideration of a few of the simplest cases, to make a beginning with the problem of classifying types of power series in two or more variables according to the nature of their singularities.—The singularities of functions defined by Taylor's series: G. H. **Hardy**.—Asymptotic approximation to integral functions of zero order: J. E. **Littlewood**.—The reducibility of covariants of binary quatics of infinite order: P. W. **Wood**.—The forms of the stream lines due to the motion of an ellipsoid in infinite fluid, frictionless or viscous: Dr. T. **Stuart**.

Geological Society, December 19, 1906.—Sir Archibald Geikie, Sec.R.S., president, in the chair.—The post-Cretaceous stratigraphy of southern Nigeria: J. **Parkinson**. In this paper, which is a first attempt to outline the sequence of the later deposits of southern Nigeria (now including the colony of Lagos), a series of beds is described from four localities—three from the western side of the Niger, and one around Calabar near the Kameruns frontier. The alluvium of the river-beds and the lower terraces are referred to, and the succeeding sediments grouped under three heads.—The geology of the Oban Hills (southern Nigeria): J. **Parkinson**. The country described in this paper comprises some 1800 square miles of the Eastern Province of southern Nigeria, adjacent to