

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

CAMBRIDGE.—Mr. W. D. Niven, F.R.S., has been appointed an Elector to the Plumian Professorship of Astronomy, and Sir W. H. Broadbent an Elector to the Downing Professorship of Medicine.

Mr. J. Graham Kerr, of Christ's College, well known for his adventurous journeys as a naturalist in South America, has been elected a Fellow of Christ's College.

PROF. G. B. HOWES, F.R.S., is to receive the honorary degree of LL.D. from the University of St. Andrews.

WHEN a shorthand writer, only familiar with the phonographic signs of the vocabulary of every-day life, endeavours to take notes of a science lecture, he soon finds his deficiencies. To exercise pupils in the art of making shorthand notes during lectures, Mr. Percy E. Kingsford, of Dover College, has inaugurated a course of special science lectures (with experiments and other illustrations) as nearly as possible of the character of those which his students will receive when they pass to the science or technical college, or medical school. The practice thus afforded the students will be very valuable. Science lecturers who have suffered at the hands of newspaper reporters, and have had ideas fathered upon them which they would be the first to repudiate, will join with us in wishing that all phonographers would undergo a similar course of training in reporting scientific lectures. It is very difficult to obtain an accurate verbatim report of the speeches made at any meeting where scientific subjects are discussed.

AN open competitive examination for the entry of engineer students in Her Majesty's Navy, and for the entry of students in Naval Construction, will shortly be held. The opportunities offered by this branch of the naval service are not so widely known as they ought to be. Candidates for the studentships must not be less than fourteen, nor more than seventeen years of age. A competitive examination is held every year in April, the subjects being arithmetic, writing from dictation, composition, grammar, French (or German or Italian), Latin, elementary physics and chemistry, geography (including physical geography), algebra (including quadratic equations), Euclid's Elements (Books I.-IV., VI., and definitions of V.), and freehand drawing. Successful candidates go to the admirable Engineering College—the Royal Naval Engineering College—at Keyham, Devonport, and there receive, under Prof. A. M. Worthington, F.R.S., a thorough course of instruction in the various branches of engineering science, while at the same time they receive practical training in the Dockyard. The best of means is thus afforded the students of acquiring the groundwork of the theoretical and practical knowledge required of a modern naval engineer. During the five years which the students have to serve at Keyham, the parents or guardians are required to pay the sum of 40*l.* per annum; but for this the students receive an excellent education, as well as board and lodging and medical attendance. At present, a large number of the students come from naval ports, such as Portsmouth and Devonport; but if the studentships were more widely known, doubtless many places which are now but rarely represented would send in candidates for them.

THE jubilee of Queen's College, London, will be celebrated during the first week in May. The College was founded in 1848, and incorporated by Royal Charter in 1853. It was the pioneer of the movement for the development of educational facilities for women, and in the list of past and present professors and lecturers the names of a number of distinguished men of science occur. Among the names of Fellows of the Royal Society who have served the College, but have now passed away, we notice D. T. Ansted, Edward Forbes, W. B. Carpenter, and W. A. Miller; while among the present Fellows whose names figure in the list are Prof. H. G. Seeley and Prof. J. M. Thomson. The College curriculum is divided into three parts for students of different ages, and in each of the departments the development of mental powers without undue strain is the object of the instruction, preparation for public examinations being given but secondary consideration. A college which in these days does not shape its curriculum according to the syllabuses of examining bodies deserves encouragement; and Queen's College should, therefore, not lack responses to the appeal which the Council issued for means to enlarge and generally improve the

premises, so as to meet the increased requirements of modern education. Among the additions will be a large lecture-room for science lectures. The estimated cost of the whole work will exceed 7000*l.*, of which sum more than 3000*l.* have still to be raised. The College has no endowment for such purposes, and it appeals for help to all who recognise the important share it has taken in the development of women's education. The object is a worthy one, and it is to be hoped that the greater portion of the sum required will be raised before the jubilee celebration in May. The Lady Resident would be glad to receive the names and addresses of old students, in order to send invitations for the forthcoming event.

A COPY of the general report on public instruction in the North-western Provinces of Oudh, for the year 1896-97, has been received. The institution of a Faculty of Science in the University of Allahabad is referred to, and mention is made of various other efforts to encourage the study of science. What appears to be more needed than anything else is a more liberal supply of apparatus for experimental purposes. It is discreditable that Prof. Murray, who has charge of the physical science classes in one of the Government colleges, should have to report: "We have about nine metre scales in the laboratory; no two are exactly alike, and which (if any) is correct it is impossible to say. Similarly the variations in our various measures of resistance one with another are in some cases as much as 30 per cent. of the whole." But notwithstanding this unsatisfactory state of things, the report shows that means are being taken to strengthen the colleges on the science sides, both by providing additional apparatus and by increasing the accommodation. The subjoined extract from the report shows that the development is taking place on the right lines:—"Steps have been and are being taken to make school education less bookish, and more practical. An English writer, after thirty years of teaching, has recently urged that geography should be taught mainly by means of map drawing; that text-books should be used chiefly as books of reference; that lessons in arithmetic and geometry should include practical work in measurement; that in teaching modern languages the written or spoken language should be made the basis, and instruction in grammar founded upon it; that mastery of English does not come by grammar and analysis, but by observation and practice; and that true science consists in a scientific habit of mind, and not in a knowledge of scientific facts. These views appear to me to be fully applicable to India, and as a matter of fact similar aims have been kept in mind latterly in these provinces, particularly as regards geography, arithmetic, geometry and science. The idea of using text-books in most subjects as books of reference is, however, so contrary to the notions of masters and boys that it will be long before the new revelation is generally received."

SCIENTIFIC SERIALS.

American Journal of Science, February.—The 27-day auroral period and the moon, by H. H. Clayton. Auroras were observed in 1895 on January 19, February 15, March 14, and April 10, with no intermediate cases. The probability of an accidental distribution in this manner is only 1 in 19,683. This period is probably due to the varying position of the moon north and south of the equator. When the moon's period is counted from its greatest northern position, there is a maximum on the 14th day, which coincides with the moon's greatest southern declination. There are minima on the 6th and 20th days, and a secondary maximum on the first day. The moon is an electrified-body, charged negatively like the earth, and the potential gradient at the earth's surface depends upon the moon's position in the heavens.—Some products found in the hearth of an old furnace upon the dismantling of the Trethellan tinworks, Truro, Cornwall, by W. P. Headden. The ores smelted in this furnace for about 100 years were the usual Cornish tin-ores carrying some arsenopyrite, which is cobaltiferous, and accounts for the cobalt in the samples. The chief products described are stannous sulphide, SnS, with some iron, a new iron arsenide, FeAs, an arsenide of tin, Sn₃As, and stannic oxide, or an artificial "wood tin." The latter was an irregular mass weighing about one and a half pounds. There was a central portion of metallic tin running lengthwise through the mass. It was probably formed by slow oxidation of a block of tin, but whether that was due to simple air and moisture or to other hot gases cannot now be determined.—Kant as a natural philosopher, by G. F. Becker.