

particular branch of post-office telegraph business with its licence or consent.

Mr. Preece in conclusion congratulated the Society on its great success.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE

CAMBRIDGE.—The Cambridge mathematical tripos this year contains 102 names. There are 33 classed as wranglers, 33 as senior optimes, 33 as junior optimes, and 3 agrotant. In 1879 the list contained 91 names: 28 wranglers, 33 senior optimes, 29 junior optimes, and 1 agrotant. The senior wrangler, Mr. Joseph Larmor, of St. John's, is a native of Belfast, and was born in 1857. He was educated at the Royal Academical Institution and Queen's College, Belfast. In 1874 he graduated at the Queen's University, Belfast, obtaining a double first in mathematical and experimental sciences, with two gold medals and exhibitions. He obtained similar distinction when he became M.A. In 1876 he entered the University of London, where he obtained an exhibition for mathematics, subsequently being awarded the Arnott exhibition and medal in experimental physics. At the first B.A. examination in 1878 he obtained the University scholarship in mathematics. He subsequently proceeded to the degree of B.Sc. In 1876 he obtained an open scholarship at St. John's, and has been on several occasions a prizeman at the college examinations. The next in order are Mr. Joseph John Thomson, of Trinity College; Mr. Walter Burt Allcock, a scholar of Emmanuel; and Mr. Homersham Cox, of Trinity. It is remarkable that the senior wranglers of two successive years have been from Queen's College, Belfast.

Among the wranglers this year, if the list had been complete, Miss Scott of Girton College would have been bracketed eighth wrangler. Moreover, she is younger than many of the wranglers, being still under twenty-two. Possibly she may go in for the Smith's Prize examination, although in the present state of regulations it would be impossible to award it to a lady. Nevertheless this achievement must be one more blow to those who would persistently keep ladies from having Cambridge degrees. Miss Scott intends to proceed to a degree at London University in physics. The fourth place in the first class of the recent moral sciences tripos was secured by Miss Martin of Newnham; and it is said that the only names in the first class in the historical tripos were those of two lady students, also of Newnham. No men were placed in the first class in this tripos.

Prof. Stuart reopens his workshop at Cambridge this term, and there will be practical instruction in the use of tools in iron and wood which will be provided, and also more advanced classes for those who have already acquired a knowledge of the use of tools. Classes will be formed in mechanism, engineering, drawing, applied mechanics, theory of structures and the application of higher mathematics to engineering. The professor means to found a first-class school for civil and mechanical engineering, and evidently intends to leave no stone unturned to accomplish this object, as well as to teach candidates for the University examinations.

Mr. Garnett will lecture on heat in the Cavendish Laboratory on Mondays, Wednesdays, and Fridays, this term.

OXFORD.—In a congregation held on the afternoon of February 3, Mr. Vernon Harcourt's amendment to the form of statute, respecting degrees in Natural Science came on for discussion. It will be remembered that the preamble of the statute alone remains, enacting that it is expedient for the University to grant degrees in Natural Science. When it appeared by counsel's opinion that the new degree in Natural Science would not confer on the graduate the privileges of a member of convocation, all the clauses of the proposed statute were rejected after a close division last term. Mr. Harcourt's proposal was to insert a clause in the statute to the effect that "every person who shall have been admitted to the degree of Natural Science shall also be admitted to the degree of Master of Arts." This proposal was defeated by a large majority, 27 voting for it, and 110 against it.

The examiners for the Burdett-Countts geological scholarship have given notice that the examination will commence on Monday, February 16, at 10 a.m. The scholarship is tenable for two years, and is open to all members of the University who have passed all the necessary examinations for the B.A. degree, and shall not have exceeded their twenty-seventh term. The

examiners are Prof. Prestwich, Dr. Odling, and Mr. Hatchett Jackson.

There will be an election to at least one junior studentship in natural science at Christ Church, on February 21. Candidates must not have exceeded the age of twenty on January 1, 1880. Papers will be set in chemistry, biology, and physics, but no candidate will be allowed to offer himself in more than two of these subjects. The examination begins on February 11.

The composition of the governing body of the French University has been the occasion of protracted and violent debates in the French Senate. It was only by a few votes that M. Ferry obtained its secularisation and expelled all ministers of every denomination.

The Geneva University numbers now 525 students and assistants, 134 more than last year, of whom 106 are in the faculty of science, 208 in that of literature, 35 in philosophy, 15 in theology, 54 in law, and 107 in medicine; 125 are Swiss, strangers to Geneva, and 200 foreigners.

We learn from a paper just published in the *Journal* of the Russian Ministry of Public Instruction that the number of scholars in all Russian colleges (gymnasias) reached 53,072 in 1878. But the figures as to the number of scholars who have terminated their studies in colleges are very unsatisfactory. Out of 57,917 scholars who entered the colleges during six years (1872 to 1877), only 6,511, *i.e.*, 2.5 per cent. terminated their studies, 51,406 having left the colleges without having received attestations of maturity. In "Real" schools, where the whole education is based on the study of natural science instead of that of language, the percentage is far more satisfactory.

SCIENTIFIC SERIALS

Zeitschrift für wissenschaftliche Zoologie, 33 Bd. 3 Heft, December, 1879, contains:—Conrad Keller, studies on the organisation and development of *Chalinula fertilis*, pl. 18 to 20.—Dr. G. Haller, contributions towards a knowledge of the *Lamodipodes filiformes*; commencing with a very careful and detailed account of the anatomical details to be met with in that group, it proceeds to an account of the life-history of the species, with a paragraph on their mimicry, under the heading "Darwinia": among the epizootic animals described is a very curious new species of Podophrya, with a long tapering and transversely striated stalk, and possessing a nucleus, with nucleolus, and to this follows the systematic portion, in which several new species of Proto, Caprella, and Podalirius are described and figured, pl. 21 to 23.—Olga Metschnikoff, on the morphology of the pelvic and shoulder girdles in cartilaginous fishes, pl. 25 and 26.—A. Gruber, on new infusoria, describes a number of new genera of fresh water infusoria.—Prof. Selenka, on a siliceous sponge with an octoradiate structure, and on the development of sponge-osses, pl. 27 and 28.

Nyt Magazin för Naturvidenskaberne, 25de Bind, 2det Hefte, 1879.—D. C. Danielssen and J. Koren, the echinoderms of the Norwegian North Sea Expedition. Several very remarkable new genera and species belonging to the Holothuriadæ are described and excellently figured in this part.—Leonard Stejneger, contributions towards the Western ornithological fauna.

Journal de Physique, January.—On the thermal laws of the electric spark in gases, by Prof. Villari.—Projection of images formed between two plane mirrors, by Prof. Bibart.—On the compressibility of air and carbonic acid at 100°, according to M. Regnault's experiments, by M. Bouty.—Chloride of lime battery, by M. Niaudet.—Photometric researches on coloured flames, by M. Gouy.—New producer of electricity based on capillarity, by M. Debrun.

Reale Istituto Lombardo di Scienze e Lettere, Rendiconti, vol. xii., fasc. xx.—On the structure of the peripheric and central medullated nerve fibres, by Prof. Golgi.—On the temperature and humidity of the air, and the formation of dew in the neighbourhood of great lakes, by Prof. Cantoni.—On the conditions of most suitable form and exposure of evaporimeters, by the same.

SOCIETIES AND ACADEMIES

LONDON

Royal Society, January 15.—"Results of an Inquiry into the Periodicity of Rainfall." By G. M. Whipple.