

extending agricultural education are not included in the amounts shown.

Income of Agricultural and Mechanical Colleges for 1910-11.

| | £ |
|--|-----------|
| Income from State endowment | 22,890 |
| Appropriations for current expenses ... | 1,004,990 |
| Tax levy " " | 575,820 |
| Appropriations for increase of plant ... | 558,410 |
| Tax levy " " | 100,440 |
| Total State aid | 2,262,550 |
| From land grant of 1862 | 156,670 |
| From other land grants | 47,090 |
| Additional endowment | 450,000 |
| Total Federal aid | 653,760 |
| From other endowment funds | 149,800 |
| Tuition and incidental fees | 487,310 |
| Other sources | 562,500 |
| Total income | 4,115,920 |

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

DR. R. G. MCKERRON has, with the approval of the King, been appointed professor of midwifery in the University of Aberdeen, in succession to Prof. W. Stephenson, who has resigned.

THE foundation stone of a new college for the training of teachers at Dundee was laid on Thursday last by Lord Camperdown. The cost of the building will be 60,000l., and provision will be made for 400 students.

PROF. J. LORRAIN SMITH, F.R.S. (at present professor of pathology and pathological anatomy in the University of Manchester) has been appointed to the chair of pathology in the University of Edinburgh, in succession to Prof. W. S. Greenfield, who is retiring from the position.

THE sum of 5000l. has been given by the Lord Lieutenant of Berkshire, Mr. J. H. Benyon, towards the new buildings of University College, Reading. The donor has apportioned his gift between the new hall, the Letters Buildings, the Agricultural Buildings, and the new St. Patrick's Hall.

THE Board of Agriculture has issued a scheme under which the University College of North Wales, Bangor, will undertake advisory work in forestry for the whole of Wales. Prof. F. Story, professor of forestry at the College, has been appointed to the position of advisory officer for all Wales under this scheme. Prof. Story will retain his professorship, but Mr. Thomson Thomson has been appointed assistant lecturer under him.

THE Senate of the projected University of Western Australia recently advertised eight professorships, and the Agent-General for the State reports that the response has been of a character justifying the belief of good appointments being made. The Senate now invites applications for lectureships in veterinary science and mental and moral philosophy. It is stated that Crawley Park, near Perth, which contains spacious grounds, is likely to be selected as the site of the new institution.

THE fourth international congress of physical education is to be held in Rome on October 24 to 27. Discussions are to take place on the organisation of physical education as a preparation for military

service; a rational method of physical training in primary, middle, and secondary schools; the value of sports in physical education, and their physiological limitations; the physical education of woman in relation with her function in the family and in society; respiratory gymnastics and choral singing in schools; open-air schools; the physical exercises suitable for the prophylaxis of tuberculosis.

THE following are the arrangements for the opening of the winter session of certain of the medical schools:—That of St. Bartholomew's Hospital will be inaugurated on October 1 by an old students' dinner; at Charing Cross Hospital the prizes will be distributed on October 2 by the Bishop of Peterborough and Lady Mary Glyn; at St. George's Hospital the prizes will be distributed on October 1, and an address delivered by Mr. H. B. Grimsdale on "The present Duty of the Medical Citizen"; at Guy's Hospital there will be a *conversazione* on October 4 by the Pupils' Physical Society, the session commencing on October 1; at the London Hospital the Schorstein memorial lecture will be delivered on October 1 by Prof. T. W. Griffith; at the London School of Medicine for Women an address on "Common Sense" will be given on October 1 by Dr. Jane Walker; King's College Hospital will hold a dinner on October 1; at the Middlesex Hospital the prizes will be distributed on October 1 by Sir Charles Wyndham, and an address delivered by Dr. W. S. Lazarus-Barlow on "The Genius of the Infinitely Little"; at St. Mary's Hospital on October 1 the Lord Mayor of London will deliver an address and distribute the prizes; in connection with St. Thomas's Hospital there will be an old students' dinner on October 1; the Westminster Hospital School will have a dinner on October 3; a dinner, on October 2, will inaugurate the new session of the University College Hospital School; there will be a *conversazione* on October 1 in connection with the University of Birmingham; an address will be given on October 1 at the University of Manchester by Dr. H. D. Rolleston on "Universities and Medical Education," and at the University of Leeds an address will be delivered on October 1 by Sir Alfred Keogh, K.C.B.

THE new session of the Sir John Cass Technical Institute, Aldgate, E.C., which is especially devoted to technical training in experimental science and in the artistic crafts, will commence on Monday, September 23. The instruction in experimental science provides systematic courses in mathematics, physics, and chemistry for London University examinations, in addition to the courses on higher technological instruction, which form a special feature of the work of the institute. In connection with the latter, several new departures are being made for the coming session. The curriculum of the fermentation industries has been much developed, and now includes courses of instruction on brewing and malting, on bottling and cellar management, and power and mechanical plant in the brewery, on the microbiology of the fermentation industries, and on the chemistry and technology of hops, in addition to courses in chemistry and physics for those who have not sufficient previous knowledge of these subjects. In the department of physics and mathematics a special course of lectures and demonstrations will be given on colloids, which will deal with the methods employed in their investigation and their relation to technical problems; also a special course of lectures on the theory and application of mathematical statistics, in which the application of modern mathematical methods of dealing with statistical data in social, educational, economic, and physical problems will be discussed and opportunity

given to students to investigate problems on their own account. In the metallurgy department, in addition to the ordinary courses of instruction in general metallurgy, several special courses of an advanced character are provided. The special courses on liquid, gaseous and solid fuel have also been extended, and in addition to a course of lectures, will include laboratory work on fuel analysis, and on technical gas analysis. It is also of interest to note that included amongst the language classes is a course on scientific and technical German.

A LONG resolution embodying the oft-repeated education demands of the Trade Union Congress was adopted unanimously at a meeting of the congress at Newport (Mon.) on September 4. The main points are as follows:—(1) A national system of education under full public control, free from the primary school to the university; (2) The adequate maintenance of school children; (3) Scientific physical education with annual individual medical inspection, and records showing the physical development of each child; (4) that secondary and technical education be an essential part of every child's education, and secured by such a reform and extension of the scholarship system as will place a maintenance scholarship within the reach of every child, and thus make it possible for all children to be full-time day pupils up to the age of sixteen; (5) That the best intellectual and technical training be provided for the teachers of the children, that each educational district shall be required to train the number of pupil teachers demanded by local needs, and to establish training colleges, preferably in connection with universities or university colleges; (6) that the provision of educational buildings and facilities be obligatory upon the local authority, which shall always retain administrative control of the buildings and facilities so provided; (7) that the cost of education be met by grants from the Imperial Exchequer, and by the restoration of misappropriated educational endowments. The congress placed on record its emphatic disapproval of the refusal of Ministers of Education to grant the demand for a Royal Commission to inquire into such endowments; and instructed the Parliamentary Committee once more to press for the appointment of such a Royal Commission, which shall inquire into:—(a) The finances of the universities and of the great public schools; and to issue a report containing a statement of the history and present value of those endowments which were originally intended for the poor; (b) the conditions of scholarships and other aids in universities and public schools; (c) the relations with lower education institutions; (d) the government of universities and public schools, and to bring forward recommendations showing how these institutions may be brought under full public control.

SECONDARY education in New South Wales has now been organised completely, and Mr. Board, the director of education, in announcing at the beginning of July last a series of appointments to the high schools, described the character of the system which has now been inaugurated. We learn, from *The Sydney Morning Herald*, that Mr. Board claims for the New South Wales scheme of secondary education that it assigns a definite time for the studies of a secondary school, making four years the minimum which any student should spend on these studies. Another good point is the certificating system, which connects the secondary school with the primary school on one hand and the university on the other, and also leads definitely to certain well-marked types of career—for example, the technical or the commercial. Attached to the scheme of certificates is the system of examination. The examinations are, in the first place,

school examinations as well as tests of individual attainments. In the second place, the results of the examination will be modified by consideration of the school record of the pupil, and, again, the examination can only follow upon the completion of a specific programme of studies that has occupied a definite period of time, and in the last place the examinations for the certificates are closely associated with the thorough inspection of the schools. A specially constituted board of examiners, representing both the University and the Education Department, will determine the award of all certificates. In a few years there will be a large number of efficient high schools under the control of the Department of Public Instruction, and it is hoped that a leaving and intermediate examination will be carried on somewhat on the lines of that in Scotland. The alternative scheme, which was not adopted, was a system of inspection and examination by the University of Sydney. That is not, however, the true function of a university. Sydney has acted wisely in not undertaking it, though the University may assist, as it has done, to strengthen the State Education Department, and get it to organise secondary education as well as primary and technical.

SOCIETIES AND ACADEMIES.

CALCUTTA.

Asiatic Society of Bengal, August 7.—R. K. Bhide: Two more new species of Gramineæ from Bombay. Two new species of grasses are described, (1) *Chloris quinquesetica*, collected by Mr. G. A. Gammie, and subsequently by the author, from Bassein, and (2) *Sporobolus scabrifolius*, collected by the author from Rannebennur.—Manindra Nath Banerjee: A measure of chemical affinity. The chemical activity of an element bears a simple relation to its density; if its atomic volume be divided by its density, the figure obtained, for which the name "specific extensity" is suggested, gives a measure of the chemical activity of the element. For instance, platinum, which is a very inactive element, is near one end of the scale with a specific extensity of 0.42; hydrogen, a very active one, is near the other end with a specific extensity of 127.25. There are a number of exceptions to the rule, the most obvious being the inactive gases found in the atmosphere.—Rev. H. Hosten: The mouthless Indians of Megasthenes. According to Megasthenes, there lived near the sources of the Ganges a tribe of people, the Astomoi, who had no mouth, but merely orifices through which they breathed. They ate and drank nothing. When they went on a distant journey, they took with them certain roots and flowers or wild apples, on the perfumes of which they subsisted. "Should they inhale very foul air death is inevitable." The tribe is found mentioned in conjunction with the Trispithami (men of three spans long), the Pygmies, and the Scyritæ or Scyratæ (Kirâtas), tribes whose characteristic features are distinctly Mongolian or Himālayan. A number of texts are quoted to prove that the "foul air" against which the Astomoi had to protect themselves represents the phenomenon known as *mal-de-montagne*, or breath-seizure, and that the "wild apples" they used as antidote were onions, dried apples, and apricots, nostrums employed in the Himalayas wherever breath-seizure prevails. The fact that some hill tribes used in their travels fruits of which they inhaled the perfume, lest the "foul air" should kill them, seems then to have led to the idea that they subsisted on nothing else. From this to the belief that they needed no mouth, and, in fact, had none, or "instead of mouths had orifices through which they breathed," the infer-