to, or in substitution for, an insurance policy. Thus the various types of options would be as follows:—

(*a*) A deferred annuity or equivalent cash payment with a considerable benefit in the event of death while in service—to be obtained from insurance companies by means of "endowment assurance" policies of varied types.

(*b*) A deferred annuity or equivalent cash payment with return of accumulated contributions in the event of death while in service—to be obtained from insurance companies by means of a "sinking fund" policy (or, if necessary, in individual cases by separate investment as above).

(*c*) A deferred annuity without any return of premiums in the event of death while in service—to be obtained from insurance companies.

V. *Ownership of Benefit.*—(*a*) The governing body should hold the policy or other equivalent accrued benefit in trust for the beneficiary so long as he remains at the institution, and the beneficiary should execute some form of legal document which would enable the governing body so to do.

(*b*) On the transfer of a beneficiary from one institution to another within the federated system, the whole of the accrued benefit should be transferred to the second institution.

(*c*) In the event of a beneficiary leaving an institution before the retiring age, for any reason other than that indicated in (*b*) above, he should have the right to the whole of the accrued benefit, but the governing body should have the right to determine how the accrued benefit should be given.

The advisory committee states that universities and colleges would be prepared to inaugurate a superannuation system on the basis of the foregoing principles, but, as in most cases increased outlay will thereby be involved ultimately, it is unreasonable to expect them to adopt the proposals until they know the amount of the assistance they may expect to receive by way of grant. The committee therefore makes recommendations for a further distribution of the money held in reserve.

Grants are made to thirteen universities and colleges varying from 1000*l.* each in the case of the Universities of Liverpool and Manchester, to 300*l.* each in the case of Bedford College, London, London School of Economics, East London College, and Reading University College. The colleges at Nottingham and Southampton do not receive additional grants.

The additional grants now recommended, together with those announced in March, 1912, dispose of a yearly sum of 148,000*l.* out of the 149,000*l.* available. The committee recommends that the annual balance of 1000*l.*, together with the balance of 2550*l.* from previous Exchequer grants, should be held over to meet contingencies.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

BIRMINGHAM.—The Lord Mayor of Birmingham has opened a fund for the establishment of a memorial to the late Vice-Chancellor, Alderman C. G. Beale, whose services to the city were such as to demand a permanent monument to his name. It is proposed to devote the money subscribed to two objects, both of which would certainly have had the approval of the late Vice-Chancellor, viz. the endowment of a chair in the University (to be called the Beale chair), and the equipment of one of the rooms in the new Natural History Museum of the city with a collection of British birds and their nests in natural surroundings. Already promises to the amount of 9000*l.* have been received, including one donation of 5000*l.*, earmarked for the Beale chair, from that most generous friend of the University Sir Charles Holcroft.

CAMBRIDGE.—The General Board of Studies will proceed shortly to appoint a University lecturer in the philosophy of religion. The appointment is for three years from October 1, 1913. The annual stipend is 100*l.* Candidates are requested to send their applications to the Vice-Chancellor, with testimonials, if they think fit, on or before Friday, April 11.

Mr. A. Harker has been nominated to represent the University at the twelfth International Geological Congress to be held in Canada in August next.

OXFORD.—Sir William Mitchell Ramsay will deliver the Romanes lecture at the Sheldonian Theatre on Thursday, May 8, at 3 p.m. The subject of the lecture is "The Imperial Peace."

Mr. R. B. Bourdillon, lecturer in chemistry at Balliol College, has been elected to a fellowship in chemistry on the teaching staff of University College.

The degree of M.A. has been conferred by a decree of Convocation on Prof. W. H. Perkin, F.R.S., fellow of Magdalen College, the recently elected Waynflete professor of chemistry.

At the same Convocation, the statute altering the constitution of Congregation by abolishing the qualification of residence, and making other changes with the view of confining the membership to the "teaching and administrative elements in the University and the colleges," passed its final stage by 77 votes to 49.

In the Educational Supplement of *The Times* of March 4 an important letter appears from Prof. Poulton, F.R.S., pointing out that the extension of the scientific departments of the University was one of the principal objects had in view by the promoters of the original purchase for the University of the ground known as the Parks. The letter directs attention to a scheme which was devised some years ago, though not accepted by the University, in accordance with which a space of ten or eleven acres adjoining the museum at the south-west angle of the Parks would be definitely allocated to the purposes of the scientific departments at present existing or to be established in future. This would leave six-sevenths of the present open space untouched and unthreatened by building.

SHEFFIELD.—Dr. Sophia M. V. Witts has been appointed to the newly instituted post of lady tutor in anatomy.

MR. AUGUSTINE HENRY, reader in forestry, University of Cambridge, has been appointed to the professorship of forestry recently established in the Royal College of Science for Ireland.

DR. A. R. FORSYTH, F.R.S., formerly Sadlerian professor of pure mathematics in the University of Cambridge, has been appointed chief professor of mathematics at the Imperial College of Science and Technology, South Kensington.

As announced already, a course of four public lectures on the theory of the solid state, will be delivered at University College (University of London), by Prof. W. Nernst, director of the Institute of Physical Chemistry in the University of Berlin, at 6 p.m. to-day, March 6, and at 5 p.m. on March 7, 10, and 11. The chairman at the first lecture will be Sir William Ramsay, K.C.B.

AT the annual meeting of the court of governors of the Middlesex Hospital, on February 27, Prince Alexander of Teck, in moving the adoption of the report, announced an anonymous gift of about

10,000*l*. The object of the gift is to defray the cost of erecting a new pathological block and institute of hygiene. The scheme is one which the governors have been anxious to carry out for some time, as the present accommodation is wholly inadequate, but lack of funds has hitherto proved an insurmountable barrier to progress in this direction. The plans have been prepared, and it is hoped the work will be started almost immediately.

AT the meeting of the executive committee of the Carnegie Foundation for the Advancement of Teaching, held on February 11, it was announced that Mr. Andrew Carnegie had given an additional 250,000*l*. to the foundation. The gift is in the form of 4 per cent. bonds and the income is to be set aside for special investigation relative to the purposes of the original foundation of pensioning college professors. The money is to be devoted to the endowment of a division of educational inquiry and makes permanent provision for studies hitherto conducted by the foundation out of its general fund. It is the plan of the trustees to proceed with the new endowment to make other studies similar to those already published concerning medical education and in particular to study legal education in its relation to the supply of lawyers and the cost of legal process.

AN appeal on behalf of the British and Foreign Blind Association, 206 Great Portland Street, London, W., signed by four blind members of the executive council, including Mr. H. M. Taylor, F.R.S., is being circulated. One of the chief objects of the association is the maintenance of a printing press of works in embossed type; and properly to carry out this and other good works the council finds that extended premises are necessary. The sum of 10,000*l*. has been expended in carrying out part of the work entailed by the scheme for a new building, and the completion of the work, including adequate equipment, necessitates the raising of a further sum of 29,000*l*. The council is anxious that the invested funds of the association, producing an annual income of some 400*l*., should not be touched. To maintain the work on an enlarged scale an increase of 1000*l*. in annual subscriptions is needed. Donations or subscriptions should be sent to the honorary treasurer, Mr. Douglas A. Howden, or to the secretary-general.

THE report of the committee of University College, London, for the year ending last month is full of interesting particulars of the manifold activities of the institution. The total number of students during the session 1911–12 was 1679, being an increase of 79 over that of the preceding session. Of these students 403 were engaged in post-graduate study and research. In the faculty of science there were 392 students, and in engineering 174. Of the 403 post-graduate and research students, 117 were women. There were 710 registered internal students of the University of London, compared with 678 in the previous year. We notice that the sums promised and paid, together with interest on deposit and rents, for the new chemical laboratories, amounted in July last to upwards of 38,000*l*. A tender for the erection of the fabric at a cost of 39,000*l*. has been accepted, and the work is being pushed forward. A sum of about 28,000*l*. will be required to complete the laboratories, and it is earnestly hoped that the necessary amount will be speedily forthcoming; so that the completion of the scheme and the opening of the laboratories may not be delayed.

THE erection of new chemical laboratories is not the only important step in progress for the development of the buildings of University College, London. The recently published report of the committee of the college gives, in addition to an account of the formal opening last December of the new Pharmacology Institute, particulars of the plans being adopted to provide a great hall for examinations and ceremonial occasions. The site of All Saints' Church, Gordon Square, the west wall of which adjoins the Carey Foster Laboratory, has been acquired at a cost of 5900*l*., which, together with legal expenses, has been provided temporarily from current income, pending the provision of the necessary sum. The Ecclesiastical Commissioners have approved the scheme for the reconstruction of the existing church building. Under this scheme the old building will be so altered as to provide a hall capable of accommodating 1100 persons. The purchase of the site, together with the expenses of reconstruction and refitting, will involve an expenditure of 10,000*l*.; it is desirable to provide an organ, in addition to the ordinary fittings at a cost of 2000*l*., making the total cost 12,000*l*.

SOCIETIES AND ACADEMIES.

LONDON.

Royal Society, February 27.—Sir Archibald Geikie, K.C.B., president, in the chair.—F. **Soddy**: The periodic law from the point of view of recent results in radio-activity.—C. F. **Jenkin** and D. R. **Pye**: The thermal properties of carbonic acid at low temperatures. The paper describes a series of experiments made in the engineering laboratory at Oxford, undertaken with the object of checking by direct measurements the accuracy of the accepted CO_2 entropy-temperature diagram, due to Mollier, and of extending the diagram to lower temperatures, *i.e.* from $-30°$ C. to $-50°$ C.—E. **Roberts**: Re-reductions of Dover tidal observations, 1883–4, &c.—Prof. F. **Keeble**, Dr. E. F. **Armstrong**, and W. N. **Jones**: The formation of anthocyan pigments in plants. Part iv., The chromogens. The results of the experiments described in this paper lend support to the hypothesis that the anthocyan pigments of plants are produced by the oxidation of colourless chromogens. Under certain conditions a coloured flower may be caused to reverse its pigment-forming process and to reduce the pigment which it contains to a colourless state. By again changing the conditions the pigment-forming mechanism may be made to resume activity and to give rise to pigments identical in colour with those of the normal intact flower. Whether the flower forms pigment or remains colourless depends on the degree of hydration of its tissues. If water be withdrawn from the tissues oxydase activity falls off, the activity of "reducing-bodies" becomes increased—actually or relatively—pigment formation is inhibited, and the pigment in existence already is reduced to chromogen. The flower becomes colourless. If water be supplied to the decolorised tissues, oxydase resumes its activity and chromogens are oxidised to pigments.—W. N. **Jones**: The formation of the anthocyan pigments of plants. Part v., The chromogens of white flowers. This paper, which deals with the biochemistry of the pigment-forming mechanism contained in white flowers, is a continuation of the work summarised in part. iv. of the present series of communications. As shown in the latter paper, the pigments of flowers may be reduced to the state of colourless chromogens and may be re-formed by artificial means from those chromogens. In the present paper it is shown that chromogens may be obtained from some white flowers and may be caused by similar treatment to give rise to pigments.—Mabel P. **FitzGerald**: The changes in the breathing and the blood at various nigh altitudes. The observations described in the paper were made during the summer of 1911 on persons residing in