

This competition was designed to stimulate a healthful rivalry in the undergraduate work of mathematics departments in colleges and universities in the United States and Canada and is open only to undergraduates. The examination questions were taken from the fields of calculus, higher algebra, differential equations and geometry.

The competition is made possible by the trustees of the William Lowell Putnam Intercollegiate Memorial Fund, left by Mrs. Putnam in memory of her husband, a member of the Harvard class of 1882. It is sponsored by the Mathematical Association of America and is held annually.

W. D. CAIRNS,
Secretary-Treasurer

DEGREES CONFERRED BY THE UNIVERSITY OF PENNSYLVANIA ON THE OCCASION OF THE DEDICATION OF THE FRANKLIN INSTITUTE

As part of the ceremonies of the dedication of the Franklin Institute of Philadelphia, degrees were conferred on May 20 by the University of Pennsylvania on five scientific men who gave lectures. In conferring these degrees Dr. Thomas S. Gates, president of the university, made the following citations:

GEORGE DAVID BIRKHOFF: For many years mathematicians have recognized you as a leader; your work and inspiration have guided the path of many to high places in American research. Your great genius has opened new fields in differential equations and dynamics. With your powerful methods in these fields, you have shed new light on the problem of three bodies, on the calculus of variations and on topology.

ARTHUR LOUIS DAY: Under your expert and generous direction the Geophysical Laboratory of the Carnegie Institution has more than fulfilled the purpose of its founder to encourage discovery and the application of knowledges

to the improvement of mankind. With skilful new techniques you and your staff have plotted the equilibria of rock formations at atmospheric pressures, have synthetically reproduced the laboratory of nature far below the earth's crust, and have revealed the history of oceans by exploring the strata of their deepest beds.

GILBERT NEWTON LEWIS: An intuitive yet logical investigator, you have with brilliant results brought your own dynamic energy and insight to bear upon the phenomena of forces determining molecular structures. In the School of Chemistry of the University of California you have organized a center of teaching and research which has influenced the work of physical chemists everywhere. It is through minds such as yours that the world comes increasingly to "the knowledge of causes and secret motions of things, and the enlarging of the bounds of human empire, to the effecting of all things possible."

THOMAS HUNT MORGAN: The great figures in science have ever been more than recorders of newly discovered fact. The true pathfinders have been those who, like you, idealize their task and bring to it the fervor of imagination and faith. Preserving always that most difficult balance between old and new you have opened new vistas in the structure of germ cells and the mechanism of heredity which have won a Nobel Prize and acknowledged leadership. Your boldly constructive mind and your enthusiasm have inspired a notable group of co-workers who will carry to dark places the torch you have lighted.

LOUIS MARTIN: As Marie Curie has written, in science we must be interested in things, not in persons. Yet it is with peculiar pleasure that the Franklin Institute and the University of Pennsylvania welcome you to-day as the worthy inheritor of a great tradition. In your studies of the toxins of diphtheria and tetanus, your work on the hospitalization of contagious diseases, and the treatment of sleeping sickness and meningitis you have successfully applied methods learned from your distinguished predecessor. As hospital director and Director of the Pasteur Institute you have brought a new brilliance to the medical science of your country.

SCIENTIFIC NOTES AND NEWS

DR. JOHN J. ABEL, who retired with the title emeritus in 1932 from the professorship of pharmacology at the Johns Hopkins University, now director of the Laboratory of Endocrine Research, has been elected a foreign member of the Royal Society, London. Dr. Abel celebrated his eighty-first birthday on May 19.

DR. ROSS G. HARRISON, Sterling professor of biology at Yale University, has been elected a foreign member of the Royal Swedish Academy of Science, Stockholm.

DR. HARVEY CUSHING, professor of neurology emeritus in the School of Medicine of Yale University and professor of surgery emeritus of Harvard University, has been elected an honorary member of the Biological Society of Vienna.

DR. RICHARD GOLDSCHMIDT, professor of zoology, University of California, has been elected a foreign member of the Royal Society of Copenhagen.

At the eighty-fifth commencement exercises of the University of Maine the doctorate of science will be conferred on Dr. Harry Steenbock, professor of agricultural chemistry at the University of Wisconsin.

FORMAL presentation of the Mendel Medal of Villanova College to Dr. Thomas Parran, surgeon general of the U. S. Public Health Service, was made at a dinner given in his honor on May 18.

DR. O. A. JOHANSEN, head of the department of entomology at Cornell University, was given a testimonial dinner on the evening of April 30 by his col-