tion for Archeology, Andover, Mass., toward the cost of publication of the data from collaborative studies upon the Boylston Street Fishwier [the remainder of the cost having been secured elsewhere], $300.

Philip M. Morse and Julius A. Stratton, professor and associate professor of physics, respectively, the Massachusetts Institute of Technology, for assistance in completing the calculation of tables of functions involved in the theory of wave radiation and scattering, $450.

Leigh Hoadley, professor of zoology, Harvard University, for assistance in the study of nerve processes arising from isolated portions of the embryonic brain, and the differentiated tissues into which the processes lead, $150.

ALUMNI LECTURES AT THE UNIVERSITY OF CINCINNATI

DR. A. J. CARLSON, of the University of Chicago, in his excellent address "Science *versus* Life," the nineteenth annual Sigma Xi lecture in Philadelphia on December 30 last,[1] mentions that the universities are quite generally lax in arranging for advanced science lectures to be offered to their graduates in "Alumni Go Back to College" courses. The department of chemical engineering of the University of Cincinnati is at least one faculty which has arranged for a series of free talks, "Recent Trends in Chemical Engineering," to be given at monthly intervals, only to their alumni. Half the evenings are devoted to lectures by the faculty, the others by their own alumni who have become distinguished in some field of chemical engineering.

"Industrial Bacteriology," October 16, Dr. H. S. Greene, associate professor of chemical engineering, University of Cincinnati.

"Food Technology," November 14: (a) "Evolution of the Modern Bake Oven," Michael J. Colacurcio, assistant superintendent, Strietman Biscuit Co., Cincinnati. (b) "Some Phases," George Garnatz, chief of staff, Kroger Food Foundation, Cincinnati.

"Physical Chemistry," December 9, Dr. E. F. Farnau, professor of physical chemistry, University of Cincinnati.

"Industrial Colloids," January 16: (a) "Synthetic Sudsing, Detergent and Wetting Agents," W. F. Schanzle, Procter and Gamble, Cincinnati. (b) "Glues," Clark B. Rose, plant engineer and director of research, Chemical Products Corporation, Cincinnati. (c) "Rubber Technology," Joseph Rochoff, head of laboratories, Dayton Rubber Manufacturing Company, Dayton.

"Metallurgy," February 26, Dr. R. O. McDuffie, associate professor of metallurgy, University of Cincinnati.

"Paper Technology," March 18: (a) "Technical Development of Coated Paper," Alex J. Wildman, research engineer, Champion Paper and Fibre Company, Hamilton, Ohio. (b) "Twenty Years of Progress in the Technology of Uncoated Paper," Daniel Fuentes, control chemist, Champion Paper and Fibre Company.

An inexpensive dinner get-together precedes each talk. This year, the first in which the plan was adopted, practically 30 per cent. of the alumni within twenty-five miles of Cincinnati attended the talks which have been given so far. So much enthusiasm has been aroused that a similar series of lectures is already planned for next year. The advantages to both the alumni and faculty are so obvious that they need not be stated.

S. B. ARENSON

AWARDS IN THE WILLIAM LOWELL PUTNAM MATHEMATICAL COMPETITION

PROFESSOR W. D. CAIRNS, secretary-treasurer of the Mathematical Association of America, has announced that the department of mathematics of Brooklyn College has won the first prize of $500 in the fourth annual William Lowell Putnam Mathematical Competition. The members of the winning team were Richard Bellman, Peter Chiarulli, Hyman Zimmerberg. The second prize of $300 is awarded to the department of mathematics of the University of Pennsylvania, the members of whose team were S. I. Askovitz, Hyman Kamel, P. C. Rosenbloom. The third prize of $200 is awarded to the department of mathematics of the Massachusetts Institute of Technology, the members of the team being J. R. R. Baumberger, Eugene Calabi, W. S. Loud.

In addition to these prizes to the departments of mathematics with winning teams, a prize of $50 each is awarded to the following five persons whose scores ranked highest in the six-hour examination (the names are arranged in alphabetical order): R. F. Arens, University of California at Los Angeles; S. I. Askovitz, University of Pennsylvania; A. M. Gleason, Yale University; E. L. Kaplan, Carnegie Institute of Technology; P. C. Rosenbloom, University of Pennsylvania. Of these five, one will later be chosen to receive a $1,000 graduate scholarship for one year at Harvard University. This award will be announced later. The members of the three winning teams will receive individual cash prizes according to the ranks of their teams, and all individuals receiving prizes will also receive medals.

Honorable mention has been awarded this year to three teams and to six individuals. The teams are from the Department of Mathematics, Carnegie Institute of Technology, Pittsburgh, members being R. E. Beatty, E. L. Kaplan, N. H. Painter; the Department of Mathematics, Cooper Union Institute of Technology, New York, members being Murray Klamkin, Benjamin Lax, Samuel Manson; and the Department of Mathematics, Yale University, New Haven, mem-

[1] Printed in winter, 1940, issue of the Sigma Xi quarterly.