

CASUALTY ACTUARIAL SOCIETY

1932 YEAR BOOK

Officers, Council and Committees

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(Corrected to February 1, 1932)

Printed for the Society by
GLOBE PRINTING COMPANY, Inc.
38 LIBERTY STREET
NEW YORK CITY

No. 11

CASUALTY ACTUARIAL SOCIETY

NOVEMBER 13, 1931

THE COUNCIL

* <i>Officers:</i>	THOMAS F. TARBELL.....	<i>President</i>
	ROY A. WHEELER.....	<i>Vice-President</i>
	WINFIELD W. GREENE.....	<i>Vice-President</i>
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	WILLIAM BREIBY.....	<i>Librarian</i>
† <i>Ex-Presidents:</i>	SANFORD B. PERKINS.....	1932
	GEORGE D. MOORE.....	1934
† <i>Ex-Vice-Presidents:</i>	SYDNEY D. PINNEY.....	1934
	PAUL DORWEILER.....	1934
† <i>Elected:</i>	EDWIN W. KOPF.....	1932
	JAMES W. GLOVER.....	1932
	JOSEPH LINDER.....	1932
	WILLIAM LESLIE.....	1933
	FRANK R. MULLANEY.....	1933
	HARMON T. BARBER.....	1933
	CHARLES J. HAUGH, JR.....	1934
	RALPH H. BLANCHARD.....	1934
	GUSTAV F. MICHELbacher.....	1934

*Terms expire at the annual meeting in November, 1932.

†Terms expire at the annual meeting in November of the year given.

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CHARLES G. SMITH

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RICHARD M. PENNOCK

MEMBERSHIP OF THE SOCIETY, NOVEMBER 13, 1931

FELLOWS

Those marked (†) were Charter Members at date of organization, November 7, 1914.

Those marked (*) have been admitted as Fellows upon examination by the Society.

Date Admitted	
*Nov. 21, 1930	Ainley, John W., The Travelers Insurance Co., 700 Main Street, Hartford, Conn.
*Nov. 13, 1931	Ault, Gilbert E., Assistant Actuary, Colonial Life Insurance Co., 921 Bergen Ave., Jersey City, N. J.
May 23, 1924	Bailey, William B., Economist, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
*Nov. 20, 1924	Barber, Harmon T., Assistant Actuary, Casualty Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
*Nov. 13, 1931	Batho, Elgin R., Assistant Actuary, Ontario Equitable Life & Accident Insurance Co., Waterloo, Ontario, Canada.
†	Benjamin, Roland, Treasurer, Fidelity & Deposit Co., Baltimore, Md.
†	Black, S. Bruce, President, Liberty Mutual Insurance Co., Park Square Building, Boston, Mass.
Apr. 20, 1917	Blanchard, Ralph H., Professor of Insurance, School of Business, Columbia University, New York.
May 24, 1921	Bond, Edward J., Jr., First Vice-President, Maryland Casualty Co., Baltimore, Md.
May 19, 1915	Bradshaw, Thomas, Vice-President and General Manager, Massey-Harris Co., Limited, 915 King St., Toronto, Canada; President, North American Life Assurance Co. of Canada, Toronto, Canada.
†	Breiby, William, Consulting Actuary, Fackler & Breiby, 25 Church St., New York.
*Nov. 18, 1927	Brown, F. Stuart, Comptroller, Fireman's Fund Indemnity Company, 116 John St., New York.
Oct. 22, 1915	Brown, Herbert D., Chief of U. S. Efficiency Bureau, 408 Winder Building, 17th and F Sts., N. W., Washington, D. C.
Oct. 22, 1915	Brown, William H., Second Vice-President and Secretary, Columbian National Life Insurance Co., 77 Franklin St., Boston, Mass.
June 5, 1925	Brosmith, William, Vice-President and General Counsel, The Travelers Insurance Co. and The Travelers Indemnity Co., 700 Main St., Hartford, Conn.
†	Buck, George B., Consulting Actuary for Pension Funds, 150 Nassau St., New York.
†	Budlong, W. A., Superintendent of Claims, Commercial Travelers Mutual Accident Association, Utica, N. Y.

FELLOWS

Date Admitted	
Apr. 20, 1917	Burhop, William H., Secretary, Employers Mutual Liability Insurance Co., Wausau, Wis.
*Nov. 23, 1928	Burling, William H., The Travelers Insurance Co., 700 Main St., Hartford, Conn.
Feb. 19, 1915	Burns, F. Highlands, President, Maryland Casualty Co., Baltimore, Md.
*Nov. 19, 1929	Cahill, James M., The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Cammack, Edmund E., Vice-President and Actuary, Aetna Life Insurance Co., Hartford, Conn.
*Nov. 21, 1930	Carlson, Thomas O., National Bureau of Casualty and Surety Underwriters, 1 Park Ave., New York.
†	Carpenter, Raymond V., Actuary, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
*Nov. 15, 1918	Coates, Barrett N., Coates and Herfurth, Consulting Actuaries, 114 Sansome St., San Francisco, Calif.
*Nov. 17, 1922	Coates, Clarence S., Federal California Underwriters, Insurance Center Building, San Francisco, Calif.
Oct. 27, 1916	Cogswell, Edmund S., Second Deputy Commissioner of Insurance, State House, Boston, Mass.
Feb. 19, 1915	Collins, Henry, Manager and Attorney, Ocean Accident & Guarantee Corporation and President, Columbia Casualty Co., 1 Park Ave., New York.
*Nov. 23, 1928	Comstock, W. Phillips, London Guarantee & Accident Co., 55 Fifth Ave., New York.
†	Copeland, John A., Consulting Actuary, Candler Building, Atlanta, Ga.
*Nov. 18, 1925	Corcoran, William M., Office of S. H. and Lee J. Wolfe, Consulting Actuaries, 116 John St., New York.
†	Cowles, Walter G., Vice-President, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Craig, James D., Actuary, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
*Nov. 19, 1926	Crane, Howard G., Comptroller, General Reinsurance Corporation, 90 John St., New York.
*Nov. 18, 1927	Davis, Evelyn M., Partner in the firm of Woodward, Fondiller & Ryan, Consulting Actuaries, 90 John St., New York.
†	Dawson, Miles M., Consulting Actuary and Counsellor at Law, 500 Fifth Ave., New York.
†	DeKay, Eckford C., President, Industrial Service Corporation, 84 William St., New York.
†	Dearth, Elmer H., Detroit Athletic Club, Box 2, Detroit, Mich.
*Nov. 17, 1920	Dorweiler, Paul, Actuary, Accident and Liability Department, Aetna Life Insurance Co., Hartford, Conn.
May 19, 1915	Dunlap, Earl O., Assistant Actuary, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
†	Egbert, Lester D., Director, Brown, Crosby & Co., Inc., Insurance Brokers, 96 Wall St., New York.
*Nov. 17, 1922	Elston, James S., Assistant Actuary, Life Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Fackler, Edward B., Consulting Actuary, Fackler & Breiby, 25 Church St., New York.

FELLOWS

Date Admitted	
†	Fallow, Everett S., Actuary, Accident Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Farrer, Henry, Indemnity Insurance Company of North America, 1600 Parkway, Philadelphia, Pa.
Feb. 19, 1915	Fellows, Claude W., President, Associated Indemnity Corporation, Associated Fire & Marine Insurance Co., Associated Insurance Fund, Inc., Associated Insurance Building, 332 Pine St., San Francisco, Calif.
Feb. 19, 1915	Flanigan, James E., Agency Manager, Bankers Life Co., 225 Broadway, New York.
†	Flynn, Benedict D., Vice-President and Actuary, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
Feb. 19, 1915	Fondiller, Richard, Woodward, Fondiller & Ryan, Consulting Actuaries, 90 John St., New York.
†	Forbes, Charles S., Treasurer, Smyth, Sanford and Gerard, Inc., Insurance Brokers, 68 William St., New York; President, Service Mutual Liability Insurance Co., Park Square Building, Boston, Mass.
Nov. 19, 1929	Foster, R. Leighton, Superintendent of Insurance, Province of Ontario, Parliament Building, Toronto, Canada.
†	Franklin, Charles H., Secretary, Continental Casualty Co., 910 South Michigan Ave., Chicago, Ill.
*Nov. 18, 1927	Fredrickson, Carl H., Actuary, Canadian Automobile and Casualty Underwriters Association, 200 Bay St., Toronto, Canada.
Feb. 25, 1916	Froggatt, Joseph, President, Joseph Froggatt & Co., Insurance Accountants, 74 Trinity Place, New York.
†	Furze, Harry, Treasurer, Globe Indemnity Co., 150 William St., New York.
Feb. 19, 1915	Garrison, Fred S., Secretary, The Travelers Indemnity Co., 700 Main St., Hartford, Conn.
*Nov. 20, 1924	Ginsburgh, Harold J., Assistant Secretary, American Mutual Liability Insurance Co., 142 Berkeley St., Boston, Mass.
*Nov. 21, 1930	Glenn, J. Bryan, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
May 19, 1915	Glover, James W., President, Teachers Insurance and Annuity Association of America, 522 Fifth Ave., New York.
*Nov. 13, 1931	Goddard, Russell P., The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Goodwin, Edward S., Goodwin-Beach & Riley, Stock Brokers, 94 Pearl St., Hartford, Conn.
†	Gould, William H., Consulting Actuary, 130 William St., New York.
*Nov. 19, 1926	Graham, Charles M., Assistant Actuary, State Insurance Fund, 625 Madison Ave., New York.
Oct. 22, 1915	Graham, George, Vice-President, Central States Life Insurance Co., 3663 Lindell Blvd., St. Louis, Mo.
Oct. 22, 1915	Graham, Thompson B., Assistant Secretary, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
†	Graham, William J., Vice-President, Equitable Life Assurance Society, 393 Seventh Ave., New York.

FELLOWS

Date Admitted	
May 25, 1923	Granville, William A., Director of Publications, Washington National Insurance Co., 1737 Howard St., Chicago, Ill.
Nov. 19, 1929	Gray, V. Evan, Barrister-at-law, Sterling Tower, 372 Bay St., Toronto, Canada.
†	Greene, Winfield W., Vice-President and Secretary, General Alliance Corporation and General Reinsurance Corporation, 90 John St., New York.
†	Hamilton, Robert C. L., Comptroller, Hartford Accident & Indemnity Co., Hartford, Conn.
†	Hammond, H. Pierson, Actuary, Life Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Hansen, Carl M., President, International Reinsurance Corporation, Pacific Finance Bldg., Los Angeles, Calif.
Oct. 27, 1916	Hardy, Edward R., Secretary-Treasurer, Insurance Institute of America, Inc., 80 John St., New York.
Oct. 22, 1915	Hatch, Leonard W., Member, State Industrial Board, 80 Centre St., New York.
*Nov. 19, 1926	Haug, Charles J., Jr., Actuary, National Bureau of Casualty & Surety Underwriters, 1 Park Ave., New York.
Nov. 17, 1920	Heath, Charles E., Vice-President and Secretary, Standard Surety & Casualty Company of New York, 80 John St., New York.
Nov. 21, 1919	Henderson, Robert, Vice-President and Actuary, Equitable Life Assurance Society, 393 Seventh Ave., New York.
May 17, 1922	Heron, David, Secretary and Chief Statistician, London Guarantee & Accident Co., Ltd., 20 Lincoln's Inn Fields, London, W. C. 2, England.
†	Hillas, Robert J., (Retired) 2 Whippany Road, Morristown, N. J.
Nov. 15, 1918	Hinsdale, Frank W., Secretary, Workmen's Compensation Board, Vancouver, B. C., Canada.
May 23, 1924	Hobbs, Clarence W., Special Representative of the National Convention of Insurance Commissioners, National Council on Compensation Insurance, 151 Fifth Ave., New York.
Nov. 19, 1926	Hodges, Charles E., President, American Mutual Liability Insurance Co., Allied American Mutual Automobile Insurance Co., American Policyholders' Insurance Co., 142 Berkeley St., Boston, Mass.
Oct. 22, 1915	Hodgkins, Lemuel G., Secretary, Massachusetts Protective Association and Massachusetts Protective Life Assurance Co., Worcester, Mass.
†	Hoffman, Frederick L., Consulting Statistician, Prudential Insurance Co.; Research Consultant, Babson Institute, Wellesley Hills, Mass.; Director of Research, Aviation Business Bureau, Inc., 72 Wall St., New York.
Oct. 22, 1915	Holland, Charles H., 215 South 16th St., Philadelphia, Pa.
†	Hughes, Charles, Auditor and Actuary, New York Insurance Department, 80 Centre St., New York.

FELLOWS

Date Admitted	
Nov. 19, 1929	Hull, Robert S., Western & Southern Indemnity Co., Cincinnati, Ohio.
†	Hunt, Burritt A., Assistant Secretary, Accident and Liability Department, Aetna Life Insurance Co., Hartford, Conn.
†	Hunter, Arthur, Vice-President and Chief Actuary, New York Life Insurance Co., 51 Madison Ave., New York.
Nov. 18, 1921	Hutcheson, William A., Vice-President and Actuary, Mutual Life Insurance Co., 32 Nassau St., New York.
Feb. 25, 1916	Jackson, Charles W., Actuary, Postal Life Insurance Co., 511 Fifth Ave., New York.
*Nov. 19, 1929	Jackson, Henry H., Actuary, National Life Insurance Co., Montpelier, Vt.
May 19, 1915	Johnson, William C., Vice-President, Massachusetts Protective Association and Massachusetts Protective Life Assurance Co., Worcester, Mass.
Nov. 23, 1928	Jones, F. Robertson, General Manager, Association of Casualty and Surety Executives; and Secretary-Treasurer, Bureau of Personal Accident and Health Underwriters, 1 Park Ave., New York.
*Nov. 19, 1926	Kelton, William H., Assistant Actuary, Life Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	King, Walter I., Vice-President, Connecticut General Life Insurance Co., 55 Elm St., Hartford, Conn.
*Nov. 21, 1919	Kirkpatrick, A. Loomis, W. A. Alexander & Co., Insurance Brokers, 134 So. La Salle St., Chicago, Ill.
†	Kopf, Edwin W., Assistant Statistician, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
Nov. 23, 1928	Kulp, Clarence A., Professor of Insurance, University of Pennsylvania, Logan Hall, 36th St. and Woodland Ave., Philadelphia, Pa.
Feb. 19, 1915	Laird, John M., Vice-President, Connecticut General Life Insurance Co., 55 Elm St., Hartford, Conn.
Nov. 13, 1931	La Mont, Stewart M., Third Vice-President, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
Nov. 17, 1922	Lawrence, Arnette R., Special Deputy Commissioner of Banking and Insurance, 1203 Military Park Building, 60 Park Place, Newark, N. J.
†	Leal, James R., Vice-President and Secretary, Interstate Life and Accident Co., Interstate Building, 540 McCallie Ave., Chattanooga, Tenn.
†	Leslie, William, Associate General Manager, National Bureau of Casualty & Surety Underwriters, 1 Park Ave., New York.
*Nov. 20, 1924	Linder, Joseph, Partner in the firm of Woodward, Fondiller & Ryan, Consulting Actuaries, 90 John St., New York.
Nov. 18, 1921	Little, James F., Second Vice-President and Associate Actuary, Prudential Insurance Co., Newark, N. J.
Nov. 23, 1928	Lunt, Edward C., Vice-President, Great American Indemnity Co., 1 Liberty St., New York.
Feb. 19, 1915	Maddrill, James D., Consulting Actuary, 351 West 42nd St., New York.
†	Magoun, William N., General Manager, Massachusetts Rating and Inspection Bureau, 89 Broad St., Boston, Mass.

FELLOWS

Date Admitted	
*Nov. 23, 1928	Marshall, Ralph M., National Council on Compensation Insurance, 151 Fifth Ave., New York.
*Nov. 18, 1927	Masterson, Norton E., Actuary, Hardware Mutual Casualty Co., Stevens Point, Wis.
*Nov. 19, 1926	Matthews, Arthur N., The Travelers Insurance Co., 700 Main St., Hartford, Conn.
May 19, 1915	Maycrink, Emma C., Examiner, New York Insurance Department, 80 Centre St., New York.
*Nov. 16, 1923	McClurg, D. Ralph, Secretary and Treasurer, National Equity Life Insurance Co., Little Rock, Ark.
May 23, 1919	McDougald, Alfred, Ellerslie, Beddington Gardens, Wallington Surrey, England.
*Oct. 31, 1917	McManus, Robert J., Statistician, Casualty Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
Feb. 19, 1915	Mead, Franklin B., Executive Vice-President, The Lincoln National Life Insurance Co., Fort Wayne, Ind.
†	Michelbacher, Gustav F., Vice-President and Secretary, Great American Indemnity Co., 1 Liberty St., New York.
†	Miller, David W., Assistant Treasurer, S. W. Strauss & Co., Investment Bonds, 565 Fifth Ave., New York.
†	Milligan, Samuel, Third Vice-President, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
†	Mitchell, James F., Assistant U. S. Manager, General Accident Fire and Life Assurance Corporation, Ltd., 414 Walnut St., Philadelphia, Pa.
†	Moir, Henry, President, United States Life Insurance Co., 156 Fifth Ave., New York.
*Nov. 18, 1921	Montgomery, Victor, Secretary and General Manager, Pacific Employers Insurance Co., 928 So. Figueroa St., Los Angeles, Calif.
Nov. 19, 1926	Mooney, William L., Vice-President, Aetna Life Insurance Co., Hartford, Conn.
†	Moore, George D., Comptroller, Standard Surety & Casualty Company of New York, 80 John St., New York.
†	Morrison, James, Resident Vice-President, Independence Indemnity Co., 90 William St., New York.
†	Mowbray, Albert H., Consulting Actuary, 806 San Luis Road, Berkeley, Calif.
May 20, 1918	Mudgett, Bruce D., Professor of Economics, University of Minnesota, Minneapolis, Minn.
*Nov. 17, 1920	Mueller, Louis H., President, Varney Air Lines, Inc., 310 Balboa Building, San Francisco, Calif.
†	Mullaney, Frank R., Secretary, American Mutual Liability Insurance Co., and American Policyholders' Insurance Co., 142 Berkeley St., Boston, Mass.
May 28, 1920	Murphy, Ray D., Vice-President Equitable Life Assurance Society, 393 Seventh Ave., New York.
†	Nicholas, Lewis A., Assistant Secretary, Fidelity & Casualty Co., 80 Maiden Lane, New York.
†	Oliwers, Edward, Consulting Actuary, P. O. Box 1218, Rio de Janeiro, Brazil.

FELLOWS

Date Admitted	
Nov. 18, 1927	O'Neill, Frank J., President, Royal Indemnity Co. and Eagle Indemnity Co., 150 William St., New York.
†	Orr, Robert K., President, Wolverine Insurance Co., Lansing, Mich.
†	Otis, Stanley, L., Counsellor at Law, Manager, Otis Service, 90 John St., New York.
*Nov. 21, 1919	Outwater, Olive E., Assistant Actuary, Benefit Association of Railway Employees, 901 Montrose Ave., Chicago, Ill.
Nov. 19, 1926	Page, Bertrand A., Vice-President, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
*Nov. 18, 1921	Perkins, Sanford B., Assistant Secretary, Compensation and Liability Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
Nov. 15, 1918	Perry, W. T., Deputy Manager, Ocean Accident and Guarantee Corporation, 36 Moorgate, London, E. C. 2, England.
*Nov. 21, 1930	Perryman, Francis S., Actuary and Assistant Secretary, Royal Indemnity Co., 150 William St., New York.
Nov. 19, 1926	Phillips, Jesse S., President, Great American Indemnity Co., 1 Liberty St., New York.
*Nov. 17, 1922	Pinney, Sydney D., Associate Actuary, Casualty Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
*Nov. 13, 1931	Pruitt, Dudley M., Actuary and Assistant Treasurer, Pennsylvania Indemnity Corporation, Atlantic Building, Philadelphia, Pa.
May 13, 1927	Reid, A. Duncan, President and General Manager, Globe Indemnity Co., 150 William St., New York.
†	Remington, Charles H., Insurance Counselor and Advisor, Suite 1801-1805, French Building, 551 Fifth Ave., New York.
May 23, 1919	Richardson, Frederick, U. S. Manager and Director, General Accident Fire and Life Assurance Corporation, 414 Walnut St., Philadelphia, Pa.
*Nov. 19, 1926	Richter, Otto C., American Telephone & Telegraph Co., 195 Broadway, New York.
May 24, 1921	Riegel, Robert, Professor of Statistics and Insurance, University of Buffalo, Buffalo, N. Y.
*Nov. 16, 1923	Roeber, William F., General Manager, National Council on Compensation Insurance, 151 Fifth Ave., New York.
†	Rubinow, Isaac M., Secretary, Independent Order of B'nai B'rith, 40 Electric Bldg., Cincinnati, O.
†	Scheitlin, E., Assistant Treasurer, Globe Indemnity Co., 150 William St., New York.
†	Senior, Leon S., General Manager, Compensation Insurance Rating Board, 370 Seventh Ave., New York.
*Nov. 13, 1931	Silverman, David, Office of Woodward, Fondiller & Ryan, Consulting Actuaries, 90 John St., New York.
*Nov. 19, 1929	Skelding, Albert Z., Assistant Actuary, National Council on Compensation Insurance, 151 Fifth Ave., New York.
*Nov. 19, 1929	Skillings, Edward S., Associate Actuary, Woodward, Fondiller & Ryan, Consulting Actuaries, 90 John St., New York.

FELLOWS

Date Admitted	
Apr. 20, 1917	Smith, Charles G., Manager, State Insurance Fund, 625 Madison Ave., New York.
Nov. 18, 1927	Stone, Edward C., U. S. Manager, Employers' Liability Assurance Corporation, Limited, and President, American Employers' Insurance Company, 110 Milk St., Boston, Mass.
Feb. 25, 1916	Strong, Wendell M., Associate Actuary, Mutual Life Insurance Co., 32 Nassau St., New York.
Oct. 22, 1915	Strong, William Richard, No. 4 "Sheringham," Cotham Road, Kew, Victoria, Australia.
†	Sullivan, Robert J., Vice-President, The Travelers Insurance Co., and The Travelers Indemnity Co., 700 Main St., Hartford, Conn.
*Nov. 17, 1920	Tarbell, Thomas F., Actuary, Casualty Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Thompson, John S., Vice-President and Mathematician, Mutual Benefit Life Insurance Co., 300 Broadway, Newark, N. J.
Nov. 18, 1921	Toja, Guido, Director General, Istituto Nazionale Delle Assicurazioni, Rome, Italy.
†	Train, John L., Secretary and General Manager, Utica Mutual Insurance Co., 185 Genesee St., Utica, N. Y.
Nov. 17, 1922	Traversi, Antonio T., Consulting Actuary and Accountant, Barrack House, 16 Barrack St., Sydney, Australia.
*Nov. 23, 1928	Valerius, N. M., Accident & Liability Department, Aetna Life Insurance Co., Hartford, Conn.
*Nov. 21, 1919	Van Tuyl, Hiram O., Actuary and Assistant Secretary, Constitution Indemnity Company of Philadelphia, Independence Building, 401 Walnut St., Philadelphia, Pa.
*Nov. 17, 1920	Waite, Alan W., Chief Underwriter, Accident and Liability Department, Aetna Life Insurance Co., Hartford, Conn.
*Nov. 18, 1925	Warren, Lloyd A. H., Professor of Mathematics, University of Manitoba, 64 Niagara St., Winnipeg, Manitoba, Canada.
May 23, 1919	Welch, Archibald, A., President, Phoenix Mutual Life Insurance Co., Hartford, Conn.
Nov. 19, 1926	Wheeler, Roy A., Vice-President and Actuary, Liberty Mutual Insurance Co., Park Square Building, Boston, Mass.
†	Whitney, Albert W., Associate General Manager, National Bureau of Casualty & Surety Underwriters, 1 Park Ave., New York.
*Nov. 13, 1931	Wittick, Herbert E., Assistant Secretary, Pilot Insurance Co., 159 Bay St., Toronto, Canada.
†	Wolfe, Lee J., Consulting Actuary, 116 John St., New York.
May 24, 1921	Wood, Arthur B., Vice-President and Managing Director, Sun Life Assurance Company of Canada, Montreal, Canada.
*Nov. 17, 1920	Young, Charles N., 229 East Benedict Ave., Upper Darby, Pa.

ASSOCIATES

Those marked (*) have been enrolled as Associates upon examination by the Society.

Those marked (1) or (2) have passed Part I or Part II of the Fellowship Examination.

Date Enrolled	
May 23, 1924	Acker, Milton, Manager, Compensation and Liability Department, National Bureau of Casualty and Surety Underwriters, 1 Park Ave., New York.
*Nov. 15, 1918	Ackerman, Saul B., Associate Professor of Insurance, New York University, 90 Trinity Place, New York.
April 5, 1928	Allen, Austin F., Vice-President, Texas Employers Insurance Association and Employers Casualty Co., Dallas, Texas.
*Nov. 15, 1918	Ankers, Robert E., Secretary and Treasurer, Continental Life Insurance Co., District National Bank Building, Washington, D. C.
(1)*Nov.21,1930	Archibald, A. Edward, Associate Actuary, Woodward, Fondiller & Ryan, Consulting Actuaries, 90 John St., New York.
(1)*Nov.17,1922	Barter, John L., Superintendent, Liability Department, Pacific Department, Hartford Accident & Indemnity Co., 720 California St., San Francisco, Calif.
(1)*Nov.23,1928	Bateman, Arthur E., Liberty Mutual Insurance Company, Park Square Building, Boston, Mass.
*Nov. 18, 1925	Bittel, W. Harold, Peoria Life Insurance Co., 410 Main St., Peoria, Ill.
Nov. 17, 1920	Black, Nellis C., Superintendent Statistical Division, Maryland Casualty Co., Baltimore, Md.
*Nov. 23, 1928	Bower, Perry S., Great West Life Assurance Company, Winnipeg, Manitoba, Canada.
Nov. 15, 1918	Brooks, LeRoy, Statistician, U. S. Fidelity & Guaranty Co., Baltimore, Md.
Nov. 20, 1924	Broughton, Thomas W., General Superintendent, Zurich General Accident and Liability Insurance Co., Eastern Department, 80 John Street, New York.
*Nov. 15, 1918	Brunnquell, Helmuth G., Assistant Actuary, The Northwestern Mutual Life Insurance Co., Milwaukee, Wis.
*Oct. 22, 1915	Buffler, Louis, District Manager, Utica Mutual Insurance Co., 907 Chrysler Building, New York.
*Nov. 20, 1924	Bugbee, James M., Maryland Casualty Co., Baltimore, Md.
*Nov. 13, 1931	Burhans, Charles H., Standard Accident Insurance Co., 640 Temple Ave., Detroit, Mich.
March 31, 1920	Burt, Margaret A., Office of George B. Buck, Consulting Actuary, 150 Nassau St., New York.
*Nov. 13, 1931	Cameron, Freeland R., American Surety Co., 100 Broadway, New York.
Nov. 17, 1922	Cavanaugh, Leo D., Vice-President and Actuary, Federal Life Insurance Co., 166 N. Michigan Blvd., Chicago, Ill.

ASSOCIATES

Date Enrolled	
*Nov. 18, 1927	Chen, S. T., Actuarial Department, China United Assurance Society, 34 Bubbling Road, Shanghai, China.
*Nov. 18, 1927	Conrod, Stuart F., Actuary, Western Empire Life Insurance Co., Somerset Block, Winnipeg, Canada.
*Nov. 18, 1921	Constable, William J., Resident Secretary, Lumbermen's Mutual Casualty Co., 260 Tremont St., Boston, Mass.
May 23, 1929	Cowee, George A., Vice-President, Liberty Mutual Insurance Co., Park Square Building, Boston, Mass.
(1)*Nov.19,1926	Davies, E. Alfred, Budget Supervisor, Liberty Mutual Insurance Co., Park Square Building, Boston, Mass.
*Nov. 18, 1925	Davis, Malvin E., Assistant Actuary, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
May 25, 1923	Economidy, Harilaus E., Treasurer, American Indemnity Co., Texas Indemnity Insurance Co., Galveston, Texas.
(1)*Nov.13,1931	Edwards, John, Inspector, Ontario Insurance Department, 91 Arundel Avenue, Toronto 6, Ontario, Canada.
June 5, 1925	Eger, Frank A., Comptroller, Insurance Company of North America and Affiliated Companies, 1600 Arch St., Philadelphia, Pa.
*Nov. 23, 1928	Faith, Edward L., Missouri State Life Insurance Co., 1501 Locust St., St. Louis, Mo.
*Nov. 16, 1923	Fitz, L. Leroy, 33 Walton Park, Melrose Highlands, Mass.
(1)*Nov.18,1927	Fitzgerald, A. H., Assistant Actuary, The Prudential Insurance Company of America, Newark, N. J.
*Nov. 16, 1923	Fleming, Frank A., Actuary, American Mutual Alliance, 60 East 42nd St., New York.
Nov. 20, 1924	Froberg, John, Superintendent, California Inspection Rating Bureau, 216 Pine St., San Francisco, Calif.
(1)*Nov.19,1926	Fuller, Gardner V., Assistant Secretary, National Council on Compensation Insurance, 151 Fifth Ave., New York.
(1)*Nov.19,1929	Furnivall, Maurice L., Assistant Actuary, Accident Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
March 21, 1930	Gallon, Richard W., Vice-President, New Amsterdam Casualty Co., 227 St. Paul St., Baltimore, Md.
(1)*Nov.13,1931	Garwood, Morrie L., Kemper Insurance Organization, Mutual Insurance Building, Chicago, Ill.
*Nov. 17, 1922	Gibson, Joseph P., Jr., General Manager, Excess Underwriters, Inc., 75 Fulton St., New York.
*Nov. 16, 1923	Gildea, James F., The Travelers Insurance Co., 700 Main St., Hartford, Conn.
Nov. 19, 1929	Gordon, Harold R., Executive Secretary, Health & Accident Underwriters Conference, 176 West Adams St., Chicago, Ill.
*Nov. 18, 1927	Green, Walter C., Office of Coates and Herfurth, Consulting Actuaries, 114 Sansome St., San Francisco, Calif.
*Nov. 18, 1921	Haggard, Robert E., Superintendent, Permanent Disability Rating Department, Industrial Accident Commission, State Building, San Francisco, Calif.

ASSOCIATES

Date Enrolled	
*Nov. 17, 1922	Hall, Hartwell L., Assistant Actuary, Connecticut Insurance Department, Hartford, Conn.
(2)*Nov.18,1925	Hall, William D., Managing Underwriters Corp., 1130 Penobscot Bldg., Detroit, Mich.
(1)*Mar.25,1924	Hart, Ward Van Buren, Assistant Actuary, Connecticut General Life Insurance Co., Hartford, Conn.
Nov. 21, 1919	Haydon, George F., General Manager, Wisconsin Compensation Rating & Inspection Bureau, 312 East Wisconsin Ave., Milwaukee, Wis.
Nov. 17, 1927	Hipp, Grady H., Actuary, State Insurance Fund, 625 Madison Ave., New York.
*Oct. 31, 1917	Jackson, Edward T., Statistician, General Accident Fire & Life Assurancé Corporation, 421 Walnut St., Philadelphia, Pa.
Nov. 19, 1929	Jacobs, Carl N., President, Hardware Mutual Casualty Co., Stevens Point, Wis.
(1)*Nov.18,1927	Jamison, Dorothy M., Assistant Actuary, George Washington Life Insurance Co., 1014 Kanawha St., Charleston, W. Va.
(2)*Nov.18,1921	Jensen, Edward S., Actuary, Great Republic Life Insurance Co., 8th and Spring Sts., Los Angeles, Calif.
Nov. 21, 1930	Jones, H. Lloyd, Comptroller, London Guarantee & Accident Co., 55 Fifth Ave., New York.
*Nov. 21, 1919	Jones, Loring D., Assistant Manager, State Insurance Fund, 625 Madison Ave., New York.
*Nov. 17, 1922	Kirk, Carl L., Actuary, Zurich General Accident & Liability Insurance Co., 431 Insurance Exchange, Chicago, Ill.
*Nov. 19, 1926	Kormes, Mark, Assistant Actuary, Compensation Insurance Rating Board, 370 Seventh Ave., New York.
May 9, 1930	Lange, John R., Chief Actuary, Wisconsin Insurance Department, Madison, Wis.
*Nov. 23, 1928	Lipkind, Saul S., Reliance Life Insurance Company, Pittsburgh, Pa.
(1)*Nov.13,1931	Lyons, Daniel J., Assistant Actuary, Columbian National Life Insurance Co., 77 Franklin St., Boston, Mass.
(1)*Nov.13,1931	MacKeen, Harold E., The Travelers Insurance Co., 700 Main St., Hartford, Conn.
*Nov. 18, 1925	Malmuth, Jacob, Examiner, New York Insurance Department, 80 Centre St., New York.
Mar. 24, 1927	Marsh, Charles V. R., Comptroller and Assistant Treasurer, Fidelity & Deposit Co. and American Bonding Co., Baltimore, Md.
(1)*Oct. 27, 1916	McClure, Laurence H., Assistant Sales Manager, Electrical Division, Colt's Patent Fire Arms Manufacturing Co., Hartford, Conn.
*Nov. 17, 1922	McIver, Rosswell A., Actuary, Washington National Insurance Co., 1737 Howard St., Chicago, Ill.
(1)*Nov.17,1922	Michener, Samuel M., Assistant Actuary, Columbus Mutual Life Insurance Co., 580 East Broad St., Columbus, Ohio.
(1)*Nov.13,1931	Miller, Henry C., Comptroller, State Compensation Insurance Fund, Civic Centre, San Francisco, Calif.
(1)*Nov.21,1930	Miller, John H., Associate Actuary, Woodward, Fondiller & Ryan, Consulting Actuaries, 90 John St., New York.

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ASSOCIATES

Date Enrolled	
*Nov. 19, 1926	Milne, John L., Actuary, Presbyterian Ministers' Fund for Life Insurance, 1805-7 Walnut St., Philadelphia, Pa.
Nov. 17, 1922	Montgomery, John C., Secretary and Assistant Treasurer, Bankers Indemnity Insurance Co., 31 Clinton St., Newark, N. J.
May 25, 1923	Moore, Joseph P., President, North American Accident Insurance Co., 275 Craig St., W., Montreal, Canada.
(*)Nov.21,1919	Mothersill, Roland V., Secretary, Anchor Casualty Co., Anchor Insurance Building, St. Paul, Minn.
*Nov. 19, 1929	Muller, Fritz, Secretary-Treasurer, Agrippina Life Insurance Stock Co., Berlin, W. 30 Motzstr. 3, Germany.
(1)*Oct. 27,1916	Newell, William, Assistant Secretary, Sun Indemnity Co., 55 Fifth Ave., New York.
*Nov. 23, 1928	Newhall, Karl, Group Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
*Nov. 18, 1925	Nicholson, Earl H., 731 College Ave., S. E., Grand Rapids, Mich.
*Nov. 13, 1931	Oberhaus, Thomas M., Office of Woodward, Fondiller & Ryan, Consulting Actuaries, 90 John St., New York.
May 23, 1919	Otto, Walter E., Secretary and Treasurer, Michigan Mutual Liability Co., 1209 Washington Blvd., Detroit, Mich.
*Nov. 19, 1926	Overholser, Donald M., 803 East 35th St., Brooklyn, N. Y.
Nov. 20, 1924	Pennock, Richard M., Actuary, Pennsylvania Manufacturers Association Casualty Insurance Co., Finance Building, Philadelphia, Pa.
Nov. 19, 1929	Phillips, John H., Secretary-Actuary, Minnesota Compensation Insurance Board, State Capitol, St. Paul, Minn.
(1)*Nov.13,1931	Pickett, Samuel C., Assistant Actuary, Connecticut Insurance Department, Hartford, Conn.
*Nov. 17, 1920	Pike, Morris, Vice-President and Actuary, Union Labor Life Insurance Co., Machinists Building, Mount Vernon Place, Washington, D. C.
Mar. 24, 1927	Piper, John W., Superintendent of Statistical Department, Hartford Accident & Indemnity Co., 690 Asylum Ave., Hartford, Conn.
(1)*Nov.23,1928	Piper, Kenneth B., Associate Actuary, Woodward, Fondiller & Ryan, Consulting Actuaries, 90 John St., New York.
*Nov. 18, 1927	Poissant, William A., The Travelers Insurance Co., 700 Main Street, Hartford, Conn.
(1)*Nov.17,1922	Poorman, William F., Actuary, Central Life Assurance Society, Fifth and Grand Aves., Des Moines, Iowa.
(1)Nov. 17, 1922	Powell, John M., President, The Loyal Protective Insurance Co., 38 Newberry St., Boston, Mass.
*Nov. 18, 1925	Prenner, Myron R., Actuary, Department of Insurance, Bismarck, N. D.
*Nov. 15, 1918	Raywid, Joseph, President, Joseph Raywid & Co., Inc., 90 William St., New York.
Nov. 19, 1929	Richardson, Harry F., Secretary-Treasurer, National Council on Compensation Insurance, 151 Fifth Ave., New York.
*Nov. 21, 1919	Robbins, Rainard B., Secretary and Actuary for Annuities, Teachers Insurance and Annuity Association, 522 Fifth Ave., New York.
*Nov. 18, 1927	Sarason, Harry M., Missouri State Life Insurance Co., St. Louis, Mo.

ASSOCIATES

Date Enrolled	
Nov. 16, 1923	Sawyer, Arthur, Globe Indemnity Co., 150 William St., New York.
*Nov. 20, 1930	Sevilla, Exequiel S., Actuary, Office of The Insurance Commissioner, Manila, Philippine Islands.
①*Nov.20,1924	Sheppard, Norris E., Lecturer in Mathematics and Mechanics, University of Toronto, Toronto, Canada.
Nov. 15, 1918	Sibley, John L., Assistant Secretary, United States Casualty Co., 80 Maiden Lane, New York.
*Nov. 21, 1930	Sinnott, Robert V., Hartford Accident & Indemnity Co., 690 Asylum Ave., Hartford, Conn.
①*May 9, 1930	Smick, Jack J., National Council on Compensation Insurance, 151 Fifth Ave., New York.
*Nov. 18, 1921	Smith, Arthur G., Assistant General Manager and Actuary, Compensation Insurance Rating Board, 370 Seventh Ave., New York.
①*Nov.19,1926	Somerville, William F., St. Paul Mercury Indemnity Co., St. Paul, Minn.
*Nov. 18, 1925	Sommer, Armand, Manager, Accident and Health Department, Home Indemnity Company, 59 Maiden Lane, New York.
*Nov. 18, 1927	Speers, Alexander A., Actuary, Michigan Life Insurance Co., Detroit, Mich.
*Nov. 15, 1918	Spencer, Harold S., Aetna Life Insurance Co., Hartford, Conn.
Nov. 20, 1924	Stellwagen, Herbert P., Assistant Vice-President, Indemnity Insurance Company of North America, 1600 Arch Street, Philadelphia, Pa.
*Nov. 16, 1923	Stoke, Kendrick, Michigan Mutual Liability Insurance Co., 1209 Washington Blvd., Detroit, Mich.
*Nov. 21, 1930	Sullivan, Walter F., Associated Indemnity Corporation, 332 Pine St., San Francisco, Calif.
①*Nov.19,1929	Taheny, John J., Assistant Vice-President and Attorney, Associated Indemnity Corporation, 332 Pine St., San Francisco, Calif.
Mar. 23, 1921	Thompson, Arthur E., Chief Statistician, Globe Indemnity Co., 150 William St., New York.
①*Nov.21,1919	Trench, Frederick H., Manager, Underwriting Department, Utica Mutual Insurance Co., 185 Genesee St., Utica, N.Y.
①*Nov.20,1924	Uhl, M. Elizabeth, National Bureau of Casualty & Surety Underwriters, 1 Park Ave., New York.
*Nov. 21, 1919	Voogt, Walter G., Treasurer, Associated Indemnity Corporation, 332 Pine St., San Francisco, Calif.
①*Oct. 27, 1916	Waite, Harry V., Statistician, The Travelers Fire Insurance Co., 700 Main St., Hartford, Conn.
May 23, 1919	Warren, Charles S., Secretary, Massachusetts Automobile Rating and Accident Prevention Bureau, 89 Broad St., Boston, Mass.
Nov. 18, 1925	Washburn, James H., Consulting Actuary, 2004 West End Ave., Nashville, Tenn.
①*Nov.18,1921	Waters, Leland L., Secretary-Treasurer, National Accident Insurance Co., Lincoln, Neb.
Nov. 17, 1920	Watson, J. J., Resident Vice-President, American Indemnity Co., and Texas Indemnity Insurance Co., 1307 Kirby Building, Dallas, Texas.

ASSOCIATES

Date Enrolled	
*Nov. 18, 1921	Welch, Eugene R., Associated Indemnity Corporation, 332 Pine St., San Francisco, Calif.
*Nov. 18, 1925	Wellman, Alexander C., Vice-President and Actuary, Protective Life Insurance Co., Birmingham, Ala.
(1)*Nov.21,1930	Wells, Walter I., Massachusetts Protective Association, Worcester, Mass.
Mar. 21, 1929	Wheeler, Charles A., Chief Examiner of Casualty Companies, New York Insurance Department, 80 Centre St., New York.
*Nov. 18, 1927	Whitbread, Frank G., Great West Life Assurance Co., Winnipeg, Manitoba, Canada.
Sept. 17, 1919	Williams, John F., Vice-President, Illinois Life Insurance Co., 1212 Lake Shore Drive, Chicago, Ill.
*Oct. 22, 1915	Williamson, William R., Assistant Actuary, Life Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
*Oct. 22, 1915	Wood, Donald M., Childs & Wood, General Agents, Royal Indemnity and Independence Indemnity Co., 175 W. Jackson Blvd., Chicago, Ill.
*Nov. 18, 1927	Wood, Milton J., Life Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
*Oct. 22, 1915	Woodman, Charles E., Assistant Manager, Ocean Accident & Guarantee Corporation and Comptroller Columbia Casualty Co., 1 Park Ave., New York.
*Nov. 18, 1925	Woolery, James M., Assistant Actuary, Inter-Southern Life Insurance Co., Louisville, Ky.
*Nov. 17, 1922	Young, Floyd E., Assistant Secretary and Actuary, National Fidelity Life Insurance Co., National Fidelity Life Building, Kansas City, Mo.

SCHEDULE OF MEMBERSHIP, NOVEMBER 13, 1931

	Fellows	Associates	Total
Membership, November 21, 1930.....	175	129	304
Additions:			
By election.....	1	..	1
By examination.....	6	9	15
	182	138	320
Deductions:			
By death.....	3	1	4
By withdrawal.....	2	4	6
By transfers from Associate to Fellow.	..	6	6
Membership, November 13, 1931.....	177	127	304

EX-PRESIDENTS AND EX-VICE-PRESIDENTS

EX-PRESIDENTS

	Term
I. M. RUBINOW.....	1914-1916
JAMES D. CRAIG.....	1916-1918
*JOSEPH H. WOODWARD.....	1918-1919
BENEDICT D. FLYNN.....	1919-1920
ALBERT H. MOWBRAY.....	1920-1922
*HARWOOD E. RYAN.....	1922-1923
WILLIAM LESLIE.....	1923-1924
G. F. MICHELbacher.....	1924-1926
SANFORD B. PERKINS	1926-1928
GEORGE D. MOORE.	1928-1930

EX-VICE-PRESIDENTS

	Term
LEON S. SENIOR.....	1920-1922
EDMUND E. CAMMACK	1922-1924
RALPH H. BLANCHARD.....	1924-1926
SYDNEY D. PINNEY.....	1928-1930
PAUL DORWEILER.....	1928-1930

*Deceased

DECEASED MEMBERS

All of the following were Fellows with the exception of those marked * who were Associates.

Date of Death	
Feb. 10, 1920	*Baxter, Don. A., Deputy Insurance Commissioner, Michigan Insurance Department, Lansing, Mich.
Feb. 4, 1920	Case, Gordon, Office of F. J. Haight, Consulting Actuary, Indianapolis, Ind.
July 23, 1921	Conway, Charles T., Vice-President, Liberty Mutual Insurance Co., Boston, Mass.
Jan. 20, 1922	Craig, James McIntosh, Actuary, Metropolitan Life Insurance Co., New York.
Sept. 2, 1921	Crum, Frederick S., Assistant Statistician, Prudential Insurance Co., Newark, N. J.
June 21, 1931	Dawson, Alfred Burnett, Consulting Actuary, New York.
Jan. 18, 1929	Deutschberger, Samuel, Actuary, New York Insurance Department, New York.
July 9, 1922	Downey, Ezekiel Hinton, Compensation Actuary, Pennsylvania Insurance Department, Harrisburg, Pa.
Oct. 30, 1924	Fackler, David Parks, Consulting Actuary, New York.
July 25, 1931	Frankel, Lee K., Second Vice-President, Metropolitan Life Insurance Co., New York.
Aug. 22, 1925	Gaty, Theodore E., Vice-President and Secretary, Fidelity & Casualty Co., New York.
Mar. 8, 1931	*Hall, Leslie Le Vant, Secretary-Treasurer, National Bureau of Casualty & Surety Underwriters, New York.
Mar. 10, 1924	Hookstadt, Carl, Expert, U. S. Bureau of Labor Statistics, Washington, D. C.
Feb. 11, 1928	Kearney, Thomas P., Manager, State Compensation Insurance Fund, Denver, Col.
Oct. 15, 1918	Kime, Virgil Morrison, Actuary, Casualty Departments, The Travelers Insurance Co., Hartford, Conn.
Dec. 9, 1927	Landis, Abb, Consulting Actuary, Nashville, Tenn.
Dec. 20, 1920	*Lubin, Harry, Assistant Actuary, State Industrial Commission, New York.
Mar. 27, 1931	Meltzer, Marcus, Statistician, National Bureau of Casualty & Surety Underwriters, New York.
Aug. 20, 1915	Montgomery, William J., State Actuary, Boston, Mass.
Dec. 19, 1929	Morris, Edward Bontecou, Actuary, Life Department, The Travelers Insurance Co., Hartford, Conn.
July 24, 1915	Phelps, Edward B., Editor, The American Underwriter, New York.
July 30, 1921	Reiter, Charles Grant, Assistant Actuary, Metropolitan Life Insurance Co., New York.
Nov. 2, 1930	Ryan, Harwood Eldridge, Consulting Actuary, New York.
Feb. 26, 1921	Saxton, Arthur F., Chief Examiner of Casualty Companies, New York Insurance Department, New York.
May 9, 1920	Stone, John T., President, Maryland Casualty Co., Baltimore, Md.
June 11, 1930	*Wilkinson, Albert Edward, Actuary, Standard Accident Insurance Co., Detroit, Mich.
Dec. 31, 1927	Wolfe, S. Herbert, Consulting Actuary, New York.
May 15, 1928	Woodward, Joseph H., Consulting Actuary, New York.
Oct. 23, 1927	Young, William, Actuary, New York Life Insurance Co., New York.

STUDENTS

Part I and Part II Passed

The following candidates have been successful in completing the examinations for Associate but have not yet been enrolled as Associates of the Society by reason of the terms of examination rule 4 which reads: "Upon the candidate having passed both Parts I and II he will be enrolled as an Associate, provided he presents evidence of at least one year experience in actuarial, accounting or statistical work in casualty insurance offices or in the teaching of casualty insurance science at a recognized college or university, or other evidence of his knowledge of actuarial, accounting or statistical work as is satisfactory to the Council." Upon the completion of the requirements of the Council in respect to each of these candidates they will be enrolled as Associates:

- ARTHUR, CHARLES R., Manufacturers Life Insurance Company, 100 Bloor St., E., Toronto, Canada.
- BAKER, ROBERT W., 400 Assiniborni Ave., Winnipeg, Manitoba, Canada.
- BATHO, BRUCE, The Franklin Life Insurance Company, Springfield, Ill.
- BRERETON, C. R., Dept. of Insurance, Ottawa, Ontario, Canada.
- CHODORCOFF, WILLIAM, Prudential Insurance Company, Newark, N. J.
- CRIMMINS, JOSEPH, Metropolitan Life Insurance Company, 1 Madison Ave., New York.
- FELDMAN, ISRAEL, Metropolitan Life Insurance Company, Ottawa, Ontario, Canada.
- FOOTE, JEAN VIVIAN, Sparling Hall, Wesley College, Winnipeg, Manitoba, Canada.
- GETMAN, RICHARD A., The Travelers Insurance Company, Hartford, Conn.
- GODDARD, DAVID G., The Travelers Insurance Company, Hartford, Conn.
- HIBBARD, DONALD L., One Shaler Lane, Cambridge, Mass.
- JONES, CHARLES H., Metropolitan Life Insurance Company, 1 Madison Ave., New York.
- KWASHA, HERMAN, The Travelers Insurance Company, Hartford, Conn.
- LAING, CHARLES B., Prudential Insurance Company, Newark, N. J.
- LAIRD, W. DARRELL, 345 Waterloo St., Winnipeg, Manitoba, Canada.
- LEARSON, RICHARD J., John Hancock Mutual Life Insurance Co., 197 Clarendon St., Boston, Mass.
- LEHANE, LEO J., Central Life Insurance Company, Chicago, Ill.
- LEWIS, BARNET, 372 St. John's Ave., Winnipeg, Manitoba, Canada.
- LOADMAN, ARTHUR E., 665 Elgin Ave., Winnipeg, Manitoba, Canada.
- MOORE, HAROLD P. H., 720 West End Ave., New York City.
- MUTH, A. F., Actuarial Department, London Life Insurance Company, London, Canada.
- ORLOFF, CONRAD, Business Men's Assurance Company, Kansas City, Mo.
- PRASOW, ROSE, Actuarial Department, Confederation Life Association, Toronto, Ontario, Canada.
- ROBERTS, JAMES A., The Travelers Insurance Company, Hartford, Conn.
- ROBERTSON, ARTHUR G., 145 Spruce St., Winnipeg, Manitoba, Canada.
- ROOD, HENRY F., The Travelers Insurance Company, Hartford, Conn.
- SCHWARTZ, RICHARD T., Actuarial Department, New York Life Insurance Co., 51 Madison Ave., New York.
- SPELLER, S. I., 791 Selkirk Ave., Winnipeg, Manitoba, Canada.

- SUTHERLAND, HENRY M., Actuarial Department, Sun Life Assurance Company, Montreal, Canada.
- THOMPSON, EMERSON W., The Travelers Insurance Company, Hartford, Conn.
- WALL, DEAN, Actuarial Department, Missouri State Life Insurance Company, St. Louis, Mo.
- WARD, ROBERT G., Columbian National Life Insurance Co., Boston, Mass.
- WILSON, JOHN F., Manufacturers Life Insurance Company, Toronto, Ontario, Canada.
- YATES, J. ARNOLD, The Travelers Insurance Company, Hartford, Conn.

The following candidates for the grade of Associate have passed one of the two parts of the examination, during the last three years:

Part I only

- BARRON, JAMES, JR., General Reinsurance Corporation, 90 John St., New York.
- BERKELEY, ERNEST T., Employers Liability Assurance Corp., 110 Milk St., Boston, Mass.
- DAVIS, MARJORIE, Constitution Indemnity Company, Philadelphia, Pa.
- DRUCKER, ABRAHAM, 303 West 42nd St., New York.
- DUNBAR, WILLIAM A., General Reinsurance Corporation, 90 John St., New York.
- FOREST, JOSEPH H., Liberty Mutual Insurance Company, Park Square Bldg., Boston, Mass.
- GATELY, JOHN J., General Reinsurance Corporation, 90 John St., New York.
- HART, AGNES S., 448 Rosedale Ave., Winnipeg, Manitoba, Canada.
- ISAAC, WILLIAM J., Northwestern National Life Insurance Company, 430 Oak St., Minneapolis, Minn.
- MILLS, JOHN A., Chief Statistician, (American) Lumbermen's Mutual Casualty Company, Mutual Insurance Bldg., Chicago, Ill.
- WOODWARD, BARBARA H., National Bureau of Casualty and Surety Underwriters, One Park Ave., New York City.
- YOUNT, HUBERT W., Liberty Mutual Insurance Company, Park Square Bldg., Boston, Mass.

Part II only

- BERMAN, ALFRED, 270 Atlantic Ave., Winnipeg, Manitoba, Canada.
- BOLTON, ARTHUR L., JR., "Shotover Furze", The Ridings, Headington, Oxford, England.
- CAMPBELL, KENNETH M., Actuarial Department, The Imperial Life Assurance Co., 20 Victoria St., Toronto, Ontario, Canada.
- CHESTER, GEORGE D., The Travelers Insurance Company, Hartford, Conn.
- DIGIULIO, LOUIS, The Travelers Insurance Company, Hartford, Conn.
- GODFREY, CLIFFORD T., 399 Harbison Ave., Winnipeg, Manitoba, Canada.
- GUTHRIE, JOHN A., Ontario Equitable Life & Accident Insurance Co., Waterloo, Ontario, Canada.

CONSTITUTION

(As AMENDED NOVEMBER 23, 1928)

ARTICLE I.—*Name.*

This organization shall be called the CASUALTY ACTUARIAL SOCIETY.

ARTICLE II.—*Object.*

The object of the Society shall be the promotion of actuarial and statistical science as applied to the problems of casualty and social insurance by means of personal intercourse, the presentation and discussion of appropriate papers, the collection of a library and such other means as may be found desirable.

The Society shall take no partisan attitude, by resolution or otherwise, upon any question relating to casualty or social insurance.

ARTICLE III.—*Membership.*

The membership of the Society shall be composed of two classes, Fellows and Associates. Fellows only shall be eligible to office or have the right to vote.

The Fellows of the Society shall be the present members and those who may be duly admitted to Fellowship as hereinafter provided. Any Associate of the Society may apply to the Council for admission to Fellowship. If the application shall be approved by the Council with not more than three negative votes the Associate shall become a Fellow on passing such final examination as the Council may prescribe. Otherwise no one shall be admitted as a Fellow unless recommended by a duly called meeting of the Council with not more than three negative votes followed by a three-fourths ballot of the Fellows present and voting at a meeting of the Society.

Any person may, upon nomination to the Council by two Fellows of the Society and approval by the Council of such nomination with not more than one negative vote, become enrolled as an Associate of the Society, provided that he shall pass such examination as the Council may prescribe. Such examination may be waived in the case of a candidate who for a period of not less than two years has been in responsible charge of the statistical or actuarial department of a casualty insurance organization or has had such other practical experience in casualty or social insurance as in the opinion of the Council renders him qualified for Associateship.

ARTICLE IV.—*Officers and Council.*

The officers of the Society shall be a President, two Vice-Presidents, a Secretary-Treasurer, an Editor, and a Librarian. The Council shall be composed of the active officers, nine other Fellows and, during the four years following the expiration of their terms of office, the ex-Presidents and ex-Vice-Presidents. The Council shall fill vacancies occasioned by death or resignation of any officer or other member of the Council, such appointees to serve until the next annual meeting of the Society.

CONSTITUTION

ARTICLE V.—*Election of Officers and Council.*

The President, Vice-Presidents, and the Secretary-Treasurer shall be elected by a majority ballot at the annual meeting for the term of one year and three members of the Council shall, in a similar manner, be annually elected to serve for three years. The President and Vice-Presidents shall not be eligible for the same office for more than two consecutive years nor shall any retiring member of the Council be eligible for re-election at the same meeting.

The Editor and the Librarian shall be elected annually by the Council at the Council meeting preceding the annual meeting of the Society. They shall be subject to confirmation by majority ballot of the Society at the annual meeting.

The terms of the officers shall begin at the close of the meeting at which they are elected except that the retiring Editor shall retain the powers and duties of office so long as may be necessary to complete the then current issue of *Proceedings*.

ARTICLE VI.—*Duties of Officers and Council.*

The duties of the officers shall be such as usually appertain to their respective offices or may be specified in the by-laws. The duties of the Council shall be to pass upon candidates for membership, to decide upon papers offered for reading at the meetings, to supervise the examination of candidates and prescribe fees therefor, to call meetings, and, in general, through the appointment of committees and otherwise, to manage the affairs of the Society.

ARTICLE VII.—*Meetings.*

There shall be an annual meeting of the Society on such date in the month of November as may be fixed by the Council in each year, but other meetings may be called by the Council from time to time and shall be called by the President at any time upon the written request of ten Fellows. At least two weeks' notice of all meetings shall be given by the Secretary.

ARTICLE VIII.—*Quorum.*

Seven members of the Council shall constitute a quorum. Twenty Fellows of the Society shall constitute a quorum.

ARTICLE IX.—*Expulsion or Suspension of Members.*

Except for non-payment of dues no member of the Society shall be expelled or suspended save upon action by the Council with not more than three negative votes followed by a three-fourths ballot of the Fellows present and voting at a meeting of the Society.

ARTICLE X.—*Amendments.*

This constitution may be amended by an affirmative vote of two-thirds of the Fellows present at any meeting held at least one month after notice of such proposed amendment shall have been sent to each Fellow by the Secretary.

BY-LAWS

(AS AMENDED MAY 21, 1926)

ARTICLE I.—*Order of Business.*

At a meeting of the Society the following order of business shall be observed unless the Society votes otherwise for the time being:

1. Calling of the roll.
2. Address or remarks by the President.
3. Minutes of the last meeting.
4. Report by the Council on business transacted by it since the last meeting of the Society.
5. New membership.
6. Reports of officers and committees.
7. Election of officers and Council (at annual meetings only).
8. Unfinished business.
9. New business.
10. Reading of papers.
11. Discussion of papers.

ARTICLE II.—*Council Meetings.*

Meetings of the Council shall be called whenever the President or three members of the Council so request, but not without sending notice to each member of the Council seven or more days before the time appointed. Such notice shall state the objects intended to be brought before the meeting, and should other matter be passed upon, any member of the Council shall have the right to re-open the question at the next meeting.

ARTICLE III.—*Duties of Officers.*

The President, or, in his absence, one of the Vice-Presidents, shall preside at meetings of the Society and of the Council. At the Society meetings the presiding officer shall vote only in case of a tie, but at the Council meetings he may vote in all cases.

The Secretary-Treasurer shall keep a full and accurate record of the proceedings at the meetings of the Society and of the Council, send out calls for the said meetings, and, with the approval of the President and Council, carry on the correspondence of the Society. Subject to the direction of the Council, he shall have immediate charge of the office and archives of the Society.

BY-LAWS

The Secretary-Treasurer shall also send out calls for annual dues and acknowledge receipt of same; pay all bills approved by the President for expenditures authorized by the Council of the Society; keep a detailed account of all receipts and expenditures, and present an abstract of the same at the annual meetings, after it has been audited by a committee of the Council.

The Editor shall, under the general supervision of the Council, have charge of all matters connected with editing and printing the Society's publications. The *Proceedings* shall contain only the proceedings of the meetings, original papers or reviews written by members, discussions on said papers and other matter expressly authorized by the Council.

The Librarian shall, under the general supervision of the Council, have charge of the books, pamphlets, manuscripts and other literary or scientific material collected by the Society.

ARTICLE IV.—*Dues.*

The dues shall be ten dollars for Fellows payable upon entrance and at each annual meeting thereafter, except in the case of Fellows not residing in the United States, Canada, or Mexico, who shall pay five dollars at the time stated. The dues shall be five dollars for Associates payable upon entrance and each annual meeting thereafter until five such payments in all shall have been made; beginning with the sixth annual meeting after the admission of an Associate as such the dues of any Associate heretofore or hereafter admitted shall be the same as those of a Fellow. The payment of dues will be waived in the case of Fellows or Associates who have attained the age of seventy years.

It shall be the duty of the Secretary-Treasurer to notify by mail any Fellow or Associate whose dues may be six months in arrears, and to accompany such notice by a copy of this article. If such Fellow or Associate shall fail to pay his dues within three months from the date of mailing such notice, his name shall be stricken from the rolls, and he shall thereupon cease to be a Fellow or Associate of the Society. He may, however, be reinstated by vote of the Council, and upon payment of arrears of dues.

ARTICLE V.—*Designation by Initials.*

Fellows of the Society are authorized to append to their names the initials F. C. A. S.; and Associates are authorized to append to their names the initials A. C. A. S.

ARTICLE VI.—*Amendments.*

These by-laws may be amended by an affirmative vote of two-thirds of the Fellows present at any meeting held at least one month after notice of the proposed amendment shall have been sent to each Fellow by the Secretary.

EXAMINATION REQUIREMENTS

SYLLABUS OF EXAMINATIONS

 SUBJECTS

ASSOCIATESHIP: (*Part I: Sections 1 to 4; Part II: Sections 5 to 8*)

- Section 1. Advanced algebra*
- Section 2. Compound interest and annuities certain*
- Section 3. Descriptive and analytical statistics*
- Section 4. Elements of accounting, including double-entry bookkeeping*
- Section 5. Finite differences*
- Section 6. Differential and integral calculus*
- Section 7. Probabilities*
- Section 8. Elements of the theory of life contingencies; life annuities; life assurances*

FELLOWSHIP: (*Part I: Sections 9 to 12; Part II: Sections 13 to 16*)

- Section 9. Policy forms and underwriting practice in casualty insurance*
- Section 10. Investments of insurance companies*
- Section 11. Insurance law and legislation*
- Section 12. Economics of insurance*
- Section 13. Calculation of premiums and reserves for casualty (including social) insurance*
- Section 14. Advanced practical problems in casualty (including social) insurance statistics*
- Section 15. Advanced problems and practical methods of casualty insurance accounting*
- Section 16. Advanced problems in underwriting, administrative and service elements of casualty (including social) insurance*

To assist students in preparation for the examinations, Recommendations for Study have been prepared. This lists the texts, readings and technical material which must be mastered by the candidates. Textbooks are loaned to candidates by the Society.

EXAMINATION REQUIREMENTS

RULES REGARDING EXAMINATIONS FOR
ADMISSION TO THE SOCIETY

(AS AMENDED NOVEMBER 13, 1931)

The Council adopted the following rules providing for the examination system of the Society:

1. Examinations will be held on the last Wednesday and Thursday during the month of May in each year in such cities as will be convenient for three or more candidates.

2. Application for admission to examination should be made on the Society's blank form, which may be obtained from the Secretary-Treasurer. No applications will be considered unless received before the fifteenth day of March preceding the dates of examination.

3. A fee of \$5.00 will be charged for admission to examination. This fee is the same whether the candidate sits for one or two parts and is payable for each year in which the candidate presents himself. Examination fees are payable to the Secretary-Treasurer and must be in his hands before the fifteenth day of March preceding the dates of examination.

4. The examination for Associateship consists of two parts. No candidate will be permitted to present himself for Part II unless he has previously passed in Part I or takes Parts I and II in the same year. If a candidate takes both parts in the same year and passes in one and fails in the other, he will be given credit for the part passed. Upon the candidate having passed both Parts I and II he will be enrolled as an Associate, provided he presents evidence of at least one year experience in actuarial, accounting or statistical work in casualty insurance offices or in the teaching of casualty insurance science at a recognized college or university, or other evidence of his knowledge of actuarial, accounting or statistical work as is satisfactory to the Council.*

* Candidates who have had no insurance experience, or whose experience is limited exclusively to life insurance companies, or who have not had one year of casualty insurance experience, will not be enrolled as Associates after passing Parts I and II, until they have had one year of casualty insurance experience; however, candidates not having one year of casualty insurance experience may, in accordance with a ruling of the Committee on Admissions, be enrolled as Associates upon passing the examination for Fellowship Part I.

EXAMINATION REQUIREMENTS

5. In the case of applicants in the following classes, the Council may, upon receipt of satisfactory evidence that applicants are within the terms of this rule, waive the passing of both Parts I and II of the Associateship Examination. Such applicants may become Associates upon passing Part I of the Fellowship Examination, and may be admitted as Fellows by examination, provided they subsequently pass Part II of the Fellowship Examination.

- (a) Casualty insurance men not less than thirty years of age who have been in the business a number of years and who occupy executive positions.
- (b) Fellows and Associates by examination of the Actuarial Society of America or of the American Institute of Actuaries.

6. The examination for Fellowship is divided into two parts. No candidate will be permitted to present himself for Part II unless he has previously passed in Part I or takes Parts I and II in the same year. If a candidate takes both parts in the same year and passes in one and fails in the other, he will be given credit for the part passed.

7. As an alternative to the passing of Part II of the Fellowship examination, a candidate may elect to present an original thesis on an approved subject relating to casualty or social insurance. Candidates electing this alternative should communicate with the Secretary-Treasurer as to the approval of the subject chosen. All theses must be in the hands of the Secretary-Treasurer before the last Thursday in May of the year in which they are to be considered. Where Part I of the Fellowship examination is not taken during the same year, no examination fee will be required in connection with the presentation of a thesis. All theses submitted are, if accepted, to be the property of the Society and may, with the approval of the Council, be printed in the *Proceedings*.

1931 EXAMINATIONS OF THE SOCIETY

MAY 27 AND 28, 1931

EXAMINATION COMMITTEE
 CHARLES J. HAUGH, JR. - - CHAIRMAN

IN CHARGE OF
 ASSOCIATESHIP EXAMINATIONS
 ALBERT Z. SKELDING, CHAIRMAN
 FRANCIS S. PERRYMAN
 EDWARD S. SKILLINGS

IN CHARGE OF
 FELLOWSHIP EXAMINATIONS
 HAROLD J. GINSBURGH, CHAIRMAN
 NORTON E. MASTERSON
 ARTHUR N. MATTHEWS

EXAMINATION FOR ADMISSION AS ASSOCIATE

PART I

1. (a) There are fifteen letters of which five are A , four are B , three are C and three are D . In how many ways can an arrangement of five letters be made?
 (b) In how many ways can two booksellers divide between them 3 copies of one book, 8 copies of another and 10 copies of another? Either man can take any number of books, but may not take none or all.

2. (a) Find by the binomial theorem $\sqrt[4]{896}$ correct to 4 decimal places.
 (b) Solve

$$\begin{aligned} x - y &= 2 \\ xz - yw &= 3 \\ xz^2 - yw^2 &= 5 \\ xz^3 - yw^3 &= 9 \end{aligned}$$

3. (a) If the equation $x^2 - 15 - m(2x - 8) = 0$ has equal roots, find the value of m .
 (b) Find the value of the repeating decimal $.4\dot{2}\dot{3}$.

4. (a) In England the population increased 15.9% between 1871 and 1881; if the town population increased 18% and the country population 4%, find the ratio of the town population to the country population in 1871.
 (b) Find the middle term of $(x - \sqrt{y})^{14}$.

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5. A loan of \$40,000 was made 1/1/26 repayable in 25 years by half yearly annuity payments on the basis of interest at the rate of 5% per annum convertible quarterly. On 1/1/31 an additional repayment of \$10,000.00 was made with the regular payment then due. Calculate the new annuity payment commencing 7/1/31 assuming that the term is to remain unaltered, and draw up a schedule for the first four new payments showing the amount of principal and interest in each payment and the principal outstanding at each half year.

Given $a_{\overline{50}|} = 28.262312$, $a_{\overline{40}|} = 25.102775$, $a_{\overline{30}|} = 23.556251$ at $2\frac{1}{2}\%$.

6. (a) Define nominal rate of interest.
 Define effective rate of interest.
 Define force of interest.
- (b) Derive an expression for determining the nominal rate of interest when the principal, the compound amount and the time are given, interest convertible m times a year.

7. A loan of \$20,000 is to be repaid in about 40 years by equal half yearly payments of \$583, the first to be paid at the end of the first half year. Interest is charged at the rate of 5% per annum payable half yearly on the outstanding balance of the loan. After 10 years the borrower desires to accelerate repayment by making additional repayments of principal at the end of each year so that the loan is completely repaid by the end of the 20th year, equal amounts of principal being repaid annually. What will be the amounts (to the nearest dollar) of additional payments to be made at the end of the 15th and 20th years?

Given $(1 + i)^{20} = 1.638616$ at $2\frac{1}{2}\%$.

8. Find the purchase price of a bond for \$100 with dividend rate at 6% nominal payable January 1 and July 1 and redeemable after 10 years at par to yield 5% nominal, convertible semi-annually.

Given $a_{\overline{20}|} \text{ at } 2.5\% = 15.58916$.

9. Derive the formula for the amount of an annuity of 1 per annum payable p times a year for n years.

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10. Determine from the following data the approximate value of the median, mean, mode, upper and lower quartiles, and standard deviation.

<i>Value</i>	<i>Frequency</i>
0 - 1	11
1 - 2	17
2 - 3	26
3 - 4	38
4 - 5	56
5 - 6	83
6 - 7	120
7 - 8	163
8 - 9	196
9 - 10	181
10 - 11	93
11 - 12	16

Total frequency 1000

11. What is meant by the term "correlation"?

Do the following statistics indicate a high or low correlation? Compute the Pearsonian coefficient of correlation.

<i>x</i>	0	1	2	3	4	5	6	7	8	9	10
<i>y</i>	19.8	19.2	17.3	15.7	15.4	13.4	12.9	11.7	10.0	8.6	7.8

12. From the following data, compute the coefficient of variability.

<i>Class</i>	<i>Frequency</i>
0 - 4	5
5 - 9	20
10 - 14	45
15 - 19	22
20 - 24	8

13. (a) Define three averages commonly used in statistics and indicate the advantages and disadvantages of each.
- (b) Define skewness, probable error, coefficient of dispersion, regression lines.

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14. On January 6th a company's balance sheet as of the preceding December 31st has just been made up and is

<i>Assets</i>	<i>Liabilities</i>
Cash\$ 5,000	Accounts Payable ...\$15,000
Book Balance..... 15,000	Capital100,000
Stock on Hand.....100,000	Surplus 30,100
Accrued Interest 100	
Accounts Receivable 25,000	
\$145,100	\$145,100

A check for \$6,000 is then received from a firm of lawyers in payment of an account of \$10,000 owing to the company (which had been written off as a bad debt) less 40% collection fee. It is desired to give effect to this item in the balance sheet. What entries should be made on the books of the company and how will the balance sheet then read?

15. (a) How do accounts kept on an "incurred" basis differ from those kept on a "cash" basis?
- (b) Define closing entry, balance sheet, suspense account, sinking fund, reserve.
16. You, *A*, are going to form a partnership with *B* and *C* to engage in the hardware business. You are to invest \$10,000 in cash, *B* is to invest \$5,000 in cash, and *C* is to contribute land and a building worth together \$12,000.
- (a) What is the opening entry?
- (b) What accounts would you suggest for the general ledger?
- (c) For the first year the sales are \$40,000. It is decided to set up a reserve for bad debts equal to 2% of sales. Make the entry. What entry would you make when a specific debt is charged off?

PART II

1. (a) If $y = \left(\frac{x-2}{x-3}\right)^{1/x}$ find $\frac{d x}{d y}$

(b) Integrate: $\int_0^1 \frac{x^3}{(2x+1)^5} dx$

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2. (a) If $y = u^v$ where u and v are functions of x

Develop the formula for $\frac{dy}{dx}$

(b) Integrate $\int \frac{x^2 - 6x - 8}{x^3 - 4x} dx$

3. (a) Find the limiting value of $\frac{a^x - 1}{x}$ as $x \rightarrow 0$

(b) By means of Maclaurin's Theorem find the first four terms in the expansion of $\log_e(1-x)$.

4. Find the length of the arc of the catenary

$$y = \frac{a}{2} \left(e^{\frac{x}{a}} + e^{-\frac{x}{a}} \right)$$

from $x = 0$ to $x = a$.

5. Given $u_0 = 16$

$$u_1 + u_2 = 64$$

$$u_3 + u_4 + u_5 = 266$$

$$u_6 + u_7 + u_8 + u_9 = 1024$$

Assuming $\Delta^3 u_x$ is constant, find u_4 and u_5 .

6. Find by the method of finite difference the sum of the first n terms of the series

$$1 \cdot 3 + 4 \cdot 3^2 + 9 \cdot 3^3 + 16 \cdot 3^4 + 25 \cdot 3^5 + \dots$$

7. If we define $u_x^{(n)}$ as equal to $u_x \cdot u_{x-1} \cdot u_{x-2} \cdot \dots \cdot u_{x-n+1}$

Develop a formula for $\Delta(ax + b)^{(n)}$.

8. (a) If n is the product of 69 integers taken at random find the probability that n is not a multiple of 5.

(b) A and B play for a stake of \$100 each throwing alternately two dice, A commencing; A wins if he throws 6 and B if he throws 7, the game ceasing as soon as either event happens. Find A 's expectation.

9. The 26 letters are placed in a bag. A and B draw alternately with no replacements. The winner is the one drawing most of the 5 vowels. A starts and draws a vowel. What is then his chance of winning?

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10. Three marksmen A, B, C , fire a volley at a target and it is found that two shots hit. If, on the average, A can hit the target 4 out of 5 times, B , 3 out of 4, and C , 2 out of 3, what is the probability that it was C who missed?
11. One die has three faces marked 1; two faces marked 2; and one marked 3. Another die has one face marked 1; two marked 2; and three marked 3. What is the most probable throw with the two dice and what is the chance of that throw?
12. If on the average nine ships out of ten return to port, what is the chance that out of five ships expected, at least three will arrive?
13. (a) A and B are to pay C , aged 25, an annuity of \$1,000 per year for the remainder of his life. A agrees to pay the annuity for the first 15 years, B to pay the annuity thereafter. What is the present value of A 's liability? B 's liability?

$$\begin{aligned} \text{Given } D_{25} &= 30,000 \\ N_{25} &= 525,000 \\ N_{40} &= 200,000 \end{aligned}$$

- (b) Find the interest rate, given

$$\begin{array}{ll} l_x = 69000 & D_x = 7314 \\ l_{x+1} = 68000 & D_{x+1} = 6895 \end{array}$$

14. (a) Show how the life annuity at any age may be expressed in terms of that at the next higher age.
 (b) Express in words the meaning of
 $P_x; {}_n p_x; |{}_n Q_x; {}_n |q_x; {}_n E_x$.
15. Derive the formulae for the following probabilities:
 (a) That at least one of the lives x, y, z will live for one year.
 (b) That the first death among x and y will happen in the n th year from now.

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16. A father bequeaths to his son the sum of \$25,000 to be paid when the son is 21. If the father dies when the son is 15, what is the value, on a 5% basis, of the son's inheritance at the time of the father's death?

$$\text{Given } l_{15} = 96285 \quad l_{21} = 91914 \quad v^6 = .746215$$

EXAMINATION FOR ADMISSION AS FELLOW**PART I**

1. What is the coverage given by the following and how limited as to amount:
 - (a) An engine and machinery policy
 - (b) A credit insurance policy
 - (c) A druggists' liability policy
 - (d) A public official bond
 - (e) A workmen's compensation policy
2. (a) As a fidelity underwriter you are asked to pass upon a bond covering the sales force of a concern employing a large number of salesmen on a commission basis. The salesmen frequently make collections on accounts. What information would you require, and what would be your reaction to the character of this information?
 - (b) In what respect do the basic principles of surety bonding differ from those of general casualty insurance?
3. (a) Define the coverage and illustrate a loss settlement under each of the following forms of Automobile Collision Insurance:
 - Full Coverage
 - \$50 Deductible
 - 50% Retention
 - Cumulative or Participating
 - (b) A car is insured for automobile plate glass coverage and for \$15 deductible collision coverage. The car is involved in an accident and is damaged to the extent of \$25 for plate glass breakage and \$75 for damage to the body of the car. How much must the company pay?
4. (a) An assured takes out an accident policy for \$50 premium and later changes his occupation such that the premium

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for his new occupation would be \$75. He does not notify the company of the change. He is injured while playing golf subsequent to his change in occupation. Describe the basis of settlement.

- (b) What are the major factors to be considered in underwriting an ordinary accident policy?
5. (a) What information is necessary to calculate the premium for a plate glass window?
 (b) What protection can an automobile garage or sales agency secure under an Automobile Dealers' Liability Policy?
6. (a) Under what circumstances may an automobile liability policy be written on a payroll basis? How is the earned premium calculated? What is the minimum annual premium for such a policy?
 (b) Does an Owners', Landlords' and Tenants' Public Liability policy on a department store cover the liability on men sent out to install their products?
 (c) Does an Owners', Landlords' and Tenants' Public Liability policy cover (1) the consumption of food products on the assured's premises, and (2) the consumption of food products away from the assured's premises?
7. Discuss the investment requirements of life, fire and casualty companies. Why are different types of investments necessary for these three classes of companies?
8. Having regard to existing economic conditions, give your opinion of the comparative merits for the investments of a casualty insurance company of the following:

Mortgages:

City property
 Farm property

Stocks:

Preferred
 Common

Bonds:

Municipal
 Foreign Government
 Railroad
 Industrial
 Public Utility
 Mortgage

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9. Discuss the desirability of the establishment by a casualty company of a reserve for fluctuation of market value of investments, touching upon bases, methods of computation, and relation to investment policy.
10. Upon what general principles is statutory regulation of insurance companies based?
11. (a) Distinguish clearly between representations and warranties as applicable to an insurance contract.
(b) Define and state the legal status of each of the following elements of a casualty insurance contract:
 - Application
 - Binder
 - Policy
 - Endorsement
12. What are the principal features of automobile financial responsibility laws? How do they differ from the law in effect in Massachusetts?
13. (a) What is negligence? What are the characteristics of a negligent act?
(b) What were the principal Common Law defenses of an employer in resisting suits for damages arising out of industrial injuries?
14. Define and explain the distinguishing economic differences of the following:
 - Insurance
 - Gambling
 - Self-insurance
 - Speculation
 - Hedging
 - Contracting Out
15. In what sense and under what conditions is risk-taking socially productive?
16. What arguments have been advanced for and against old age pension plans? To what extent have old age pension plans been adopted in this country?

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PART II

1. (a) What are the characteristics of a medium most desirable as a premium basis?
(b) Discuss the advantages and disadvantages of several possible media for use in measuring exposure in workmen's compensation insurance.
2. Name and describe four methods of calculating claim reserves for known cases in compensation and liability insurance.
3. Under what conditions is it possible to calculate accurately the ultimate policy year loss ratio for various lines of casualty insurance by projecting written premiums and paid losses to an ultimate basis by means of the development of the experience of previous policy years?
4. Outline a method for determining a reserve for claim expense to be included in Schedule P, part 2, of the Convention form of annual statement.
5. Discuss the relative value of the following loss ratios as indices of underwriting results for the various lines of casualty insurance:
 - (a) Calendar year paid losses divided by calendar year written premiums.
 - (b) Calendar year incurred losses divided by calendar year earned premiums.
 - (c) Policy year paid losses divided by policy year written premiums.
 - (d) Policy year incurred losses divided by policy year earned premiums.
6. The automobile property damage policy year loss ratio of a certain casualty company increased 10% in 1929 over 1928. Assuming no change in rates over the two-year period, what analysis would you make to determine the causes underlying the increase?

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7. How would you determine the approximate effect of a varying countrywide change in manual rates upon the automobile public liability rate level of a casualty company doing a nationwide business?
8. (a) What are the advantages and disadvantages of the revised Schedule "Z" as used in New York, Massachusetts, Virginia, Georgia and North Carolina over the Schedule "Z" used in New Jersey, Illinois and other states? How does this revised system differ from that used in Pennsylvania and Delaware.
(b) Outline a punch card to be used to prepare loss ratio experience by size of premium and industry schedule under the revised Schedule "Z" now used in New York.
9. Outline a plan for determining the reserves of a multiple line casualty company which would give a more accurate surplus result for internal company study, than the methods provided for in the conventional annual statement blank.
10. What is the purpose of Schedule O of the annual statement and how is this purpose accomplished?
11. Describe the New York Casualty Experience Exhibit. To what extent can the data shown therein be checked against the annual statement?
12. (a) What inconsistencies are present on the disbursements page of the Convention form of the annual statement for casualty companies with respect to classification of expenses?
(b) Sketch a design for a punch card to be used in the distribution of expenses.
13. In determining classifications for workmen's compensation insurance, which should receive the greater consideration, and why—
 - (a) Raw materials and processes, or
 - (b) Products

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14. (a) Discuss the merits of a proposal to write an unlimited liability policy for automobile and general liability lines from the standpoint of both the assured and the insurance company.
(b) Give a brief outline of how you would determine the rates for unlimited automobile public liability insurance.
15. Outline briefly the essential features of a complete administrative system of expense control for a casualty insurance company, touching upon organization and method.
16. In a state whose compensation law does not cover occupational disease, it is proposed, in order to make company practices uniform as to coverage, to attach an optional endorsement giving this coverage to the standard workmen's compensation policy, and to make a charge therefor.
 - (a) As an underwriter, what is your reaction to this proposal?
 - (b) As an actuary, how would you make rates for the coverage which would be equitable, adequate, and non-discriminatory? Indicate basis and method to be employed.

CASUALTY ACTUARIAL SOCIETY

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 Development, Application and Effect of Schedule Rating in Liability and Compensation Insurance. Carl M. Hansen.
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 Schedule Rating Considered from an Actuarial Point of View. Albert H. Mowbray.
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 Schedule Rating of Permanent Injuries. G. F. Michelbacher.
 Division of Payroll. Eckford C. DeKay.
 Liability Loss Reserves. I. M. Rubinow.

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 Accident and Health Insurance from an Actuarial Viewpoint. Walter I. King.
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 Tables for Computing the Present Value of Death Benefits Arising Under the New York Workmen's Compensation Law. Richard Fondiller.
 A New Graphic Method of Using the Normal Probability Curve. Buckner Speed.
 The Determination of Pure Premiums for Minor Classifications on Which the Experience Data is Insufficient for Direct Estimate. Albert H. Mowbray.
 Liability and Workmen's Compensation Loss Reserve. Robert K. Orr.

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- Mortality from External Causes Among Industrial Policyholders of the Metropolitan Life Insurance Company, 1911-1914.* Louis I. Dublin.
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- Work of the Statistical Committee of the Bureau of Personal Accident and Health Underwriters.* Benedict D. Flynn.
- American Methods of Compensating Permanent Partial Disabilities.* I. M. Rubinow.
- Cost Accounting in Casualty Insurance.* Claude E. Scattergood.

VOLUME II

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- The Relation Between Private and Social Insurance.* I. M. Rubinow.
- Should the Compensation Premium Reflect the Experience of the Individual Risk?* Winfield W. Greene.
- The Experience Rating of Workmen's Compensation Risks.* Joseph H. Woodward.
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- Office Practice in the Valuation of Compensation Losses.* Richard Fondiller.
- A Study of Workmen's Compensation Schedule W and the Problems Incident Thereto.* Edward S. Goodwin.

VOLUME III

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- A Suggestion for a Modified Form of Amortization, With a Brief Memorandum of the Applicability of That Principle to the Bonds of Miscellaneous Companies.* S. Herbert Wolfe.
- Scheduled Experience Rating.* Albert H. Mowbray.
- Some Principles of Compensation Merit Rating.* E. H. Downey.
- Note on an Application of Bayes' Rule in the Classification of Hazards in Experience Rating.* Arne Fisher.
- Temporary and Permanent Disability Reserves.* Miles M. Dawson.

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- Provision for Expenses in Workmen's Compensation Premiums. Joseph H. Woodward.
- Group Life Insurance and its Possible Development. Edward B. Morris.
- Revision of Workmen's Compensation Rates. (January-March, 1917.) Harwood E. Ryan.
- Rate Regulation. Albert W. Whitney.
- The Theory of Law Differentials. G. F. Michelbacher.
- Age, Occupation and Residence as Variants of the Rate of Sickness. Albert H. Mowbray.
- Prospects for Social Statistics in the Next Census Year. Edwin W. Kopf.
- Note on the Frequency Curves of Basic Pure Premiums. Arne Fisher.

VOLUME IV

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- The War Insurance Act. James D. Craig.
- The Theory and Practice of Law Differentials. I. M. Rubinow.
- Premiums and Reserves of the Swiss Accident Insurance Institution. Joseph H. Woodward.
- Notes on the Construction of Mortality Tables by Means of Compound Frequency Curves. Arne Fisher.
- Manufacturers' and Contractors' Public Liability Insurance. G. F. Michelbacher.
- Some Essentials of Sickness Statistics. Edwin W. Kopf.

VOLUME IV

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- Economic Problems of the World War. James D. Craig.
- A New Criterion of Adequacy of Exposure. Albert H. Mowbray.
- The Theory of Experience Rating. Albert W. Whitney.
- The Practice of Experience Rating. G. M. Michelbacher.
- The Industrial Compensation Rating Schedule, 1918. E. H. Downey.
- Legal Notes. Richard Fondiller.

VOLUME V

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- The Relation Between the Actuary and the Statistician. James D. Craig.
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