

1989

Data for Question 5

Actuarial cost method: Aggregate.

Actuarial assumptions:

Interest rate: 6%.

Compensation increases: 5% per year.

Preretirement deaths and terminations: None.

Retirement age: 65.

Valuation results as of 1/1/89:

Normal cost as of 1/1	\$ 31,250
Present value of future benefits	
Active participants	900,000
Inactive participants	100,000
Actuarial value of assets	500,000
Annual compensation	1,000,000

Contribution for 1989: \$31,250 paid on 1/1/89.

During 1989, there were no new entrants to the plan.

There were no experience gains or losses during 1989 other than an experience gain of \$30,000 due to the deaths of three retired participants.

Question 5

In what range is the normal cost for 1990 as of 1/1/90?

- (A) Less than \$30,000
- (B) \$30,000 but less than \$31,000
- (C) \$31,000 but less than \$32,000
- (D) \$32,000 but less than \$33,000
- (E) \$33,000 or more

1998

Data for Question 14

Normal retirement benefit: 75% of final year salary.

Actuarial cost method: Aggregate.

Actuarial assumptions:

Interest rate: 7% per year.

Salary increases: 5% per year.

Pre-retirement decrements: None.

Selected valuation results as of 1/1/97:

Present value of benefits:	
Active:	\$4,087,881
Inactive:	0
Value of assets:	\$500,000
Annual salaries:	\$1,000,000
Normal cost:	\$178,328

Plan experience during 1997:

Rate of return during 1997: 9%.

Salary increases: 4%.

There were no new entrants, deaths, retirements or other terminations of employment.

Normal cost was paid 1/2/97. There were no other contributions during 1997.

Question 14

In what range is the normal cost at 1/1/98?

- (A) Less than \$178,500
- (B) \$178,500 but less than \$181,500
- (C) \$181,500 but less than \$184,500
- (D) \$184,500 but less than \$187,500
- (E) \$187,500 or more

2003

Data for Question 8 (3 points)

Plan effective date: 1/1/2002.

Normal retirement benefit: 2.50% of final compensation per year of service.

Normal retirement age: 63.

Actuarial cost method: Unit credit.

Selected actuarial assumptions:

Valuation interest rate	7% per year
Salary increases	3% per year

Data for sole participant:

Date of birth	1/1/1968
Date of hire	1/1/1993
2001 compensation	\$42,000

Contribution for 2002: \$7,000 paid on 4/1/2002.

Experience (gain)/loss for 2002 from sources other than investments: \$0.

Unfunded accrued liability as of 1/1/2003: \$28,000.

Selected annuity value: $\ddot{a}_{63}^{(12)} = 9.22$

Question 8

In what range is the investment experience for 2002 as of 1/1/2003?

- (A) Gain of \$2,250 or more
- (B) Gain greater than \$750 but less than \$2,250
- (C) Gain or loss less than or equal to \$750
- (D) Loss greater than \$750 but less than \$2,250
- (E) Loss of \$2,250 or more

2014

Data for Question 48 (5 points)

Type of Plan: Multiemployer.

Normal retirement benefit: 2% of final compensation per year of service.

Actuarial cost method: Aggregate.

Credit balance at 12/31/2013: \$0.

Selected information as of 1/1/2014:

Actuarial (market) value of assets	\$10,000,000
Present value of future benefits	30,000,000
Present value of future compensation	200,000,000
Expected total compensation for 2014	10,000,000
Valuation interest rate	7.0%
Compensation increase assumption	6.0% per year

All participants are active and under age 50. There were no new entrants during 2014.

The contribution for 2014 was the normal cost paid at 1/1/2014.

Plan experience was as assumed for 2014 except salaries, which increased by 10%.

$\$X$ is the contribution in the **smallest amount that satisfies the minimum funding standard** as of 12/31/2015, if all assumptions had been met.

$\$Y$ is the contribution in the **smallest amount that satisfies the minimum funding standard** as of 12/31/2015, based on actual plan experience.

Question 48

In what range is $|\$X - \$Y|$?

- (A) Less than \$45,000
- (B) \$45,000 but less than \$55,000
- (C) \$55,000 but less than \$65,000
- (D) \$65,000 but less than \$75,000
- (E) \$75,000 or more