

2014

Data for Question 8 (4 points)

Valuation date: 1/1/2014.

Normal retirement benefit: 3% of highest consecutive three-year average compensation multiplied by years of service.

Segment rates: {5.0%, 6.0%, 7.0% }.

Assumed compensation increases: 3.0% per year.

Selected data for participant Smith:

Gender	Female
Date of birth	1/1/1950
Date of hire	1/1/2011
Date of participation	1/1/2013
2011 compensation	\$275,000
2012 compensation	275,000
2013 compensation	245,000

Question 8

What is the target normal cost for Smith?

- (A) Less than \$94,000
- (B) \$94,000 but less than \$98,000
- (C) \$98,000 but less than \$102,000
- (D) \$102,000 but less than \$106,000
- (E) \$106,000 or more

**430(h)-32**

2014

Data for Question 9 (2 points)

An enrolled actuary is setting the retirement rate assumptions for a plan.

The plan offers actuarially reduced early retirement benefits starting at age 55.

The plan provides unreduced early retirement benefits starting at age 60.

The plan has 5,000 active participants.

Over the past 5 years, there has been a distribution of retirements from ages 55 through 65, and the average retirement age has been 62. The actuary knows of no reason to expect patterns to change significantly in the future.

Consider the following three sets of retirement rates:

<u>Age</u>	<u>I</u>	<u>II</u>	<u>III</u>
55	5%	0%	20%
56	2%	0%	20%
57	2%	8%	20%
58	2%	8%	12%
59	2%	10%	12%
60	15%	10%	10%
61	15%	10%	10%
62	30%	30%	30%
63	15%	0%	20%
64	15%	0%	20%
65	100%	100%	100%
Average Retirement Age	62	62	59

Question 9

Which of these sets of retirement rates would be most reasonable for the plan's funding valuation?

- (A) I
- (B) II
- (C) III

2014

Data for Question 13 (4 points)

Valuation date: 1/1/2015.

Segment rates: {5.0%, 6.0%, 7.0% }.

Compensation increase assumption: 10% per year

Accrued benefit: 8% of final three-year average compensation multiplied by years of service.

Data for sole participant Smith:

Gender	Male
Date of birth	1/1/1952
Date of hire	1/1/2012

	<u>Compensation</u>
2012	\$100,000
2013	150,000
2014	200,000

Question 13

In what range is the target normal cost as of 1/1/2015?

- (A) Less than \$220,000
- (B) \$220,000 but less than \$240,000
- (C) \$240,000 but less than \$260,000
- (D) \$260,000 but less than \$280,000
- (E) \$280,000 or more

2014

Data for Question 19 (1 point)

Consider the following statement with respect to selection of actuarial assumptions for a single-employer plan:

Combined mortality tables (annuitants and non-annuitants) are only permitted for plans with 500 or fewer participants.

Question 19

Is the above statement true or false?

- (A) True
- (B) False

2014

Data for Question 25 (1 point)

Consider the following statement with respect to selection of actuarial assumptions for a single-employer plan:

Regardless of size, a plan is permitted to use either the static mortality table or the generational mortality table for funding purposes.

Question 25

Is the above statement true or false?

- (A) True
- (B) False

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2014

Data for Question 35 (1 point)

Consider the following statement:

The plan actuary should consider the plan's definition of what constitutes a disability (for example, Social Security disability benefit eligibility) in setting a disability incidence assumption for funding purposes.

Question 35

Is the above statement true or false?

- (A) True
- (B) False

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2014

Data for Question 46 (1 point)

A plan provides a post-retirement death benefit of \$200 per year of service.

Consider the following statement:

The 1/1/2015 funding target for the death benefit is determined based on a death benefit of \$200 multiplied by a participant's years of service as of 1/1/2015.

Question 46

Is the above statement true or false?

- (A) True
- (B) False

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2014

Data for Question 51 (3 points)

Valuation date: 1/1/2014.

Plan effective date: 1/1/2009.

Benefit formula: 10% of high three-year average compensation per year of service.

Segment rates: {5.5%, 6.5%, 7.5% }.

Selected data for participant Smith:

Date of birth	1/1/1970
Date of hire	1/1/2007
High three-year average compensation	\$200,000

Selected annuity factors at age 65:

	<u>5.5%</u>	<u>6.5%</u>	<u>7.5%</u>
$\ddot{a}_{65}^{(12)}$	11.41	10.54	9.79

$\$X$  is the funding target for Smith as of 1/1/2014.

Question 51

In what range is  $\$X$ ?

- (A) Less than \$220,000
- (B) \$220,000 but less than \$255,000
- (C) \$255,000 but less than \$290,000
- (D) \$290,000 but less than \$325,000
- (E) \$325,000 or more



2014

Data for Question 54 (4 points)

Valuation date: 1/1/2015.

Annual normal retirement benefit: \$1,200 per year of service, payable monthly.

Early retirement eligibility: Age 55.

Early retirement reduction: 4% per year prior to age 65.

Selected data for participant Smith:

Date of birth	1/1/1951
Date of hire	1/1/2005
Date of retirement	12/31/2014
Elected form of annuity	Ten-year certain only

Selected annuity factors:

	$\ddot{a}_{64}^{(12)}$	${}_{10}\ddot{a}^{(12)}$
Plan assumptions	10.30	7.30
Funding assumptions	11.50	7.69

$\$X$  is the funding target as of 1/1/2015 assuming a single life annuity form of payment.

$\$Y$  is the funding target as of 1/1/2015 given the form of payment elected.

Question 54

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

- (A) Less than \$2,500
- (B) \$2,500 but less than \$5,000
- (C) \$5,000 but less than \$7,500
- (D) \$7,500 but less than \$10,000
- (E) \$10,000 or more

## 2014

### Data for Question 55 (3 points)

Valuation date: 1/1/2015.

Normal retirement benefit: 1.5% times final-year compensation times years of service.

Segment rates for the 2014 and 2015 valuations: {5.5%, 6.5%, 7.5% }.

Compensation increase assumption: 3% per year.

Selected data for sole participant Smith:

Date of birth	1/1/1972
Date of hire	1/1/1998
2013 compensation	\$50,000
2014 compensation	75,000

Selected age 65 annuity factors for 2015:

<u>5.5%</u>	<u>6.5%</u>	<u>7.5%</u>
11.41	10.54	9.79

$\$X$  = 1/1/2015 funding target.

$\$Y$  = 1/1/2015 funding target calculated as if the actual 2014 compensation was equal to the expected compensation at 1/1/2014.

### Question 55

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

- (A) Less than \$10,500
- (B) \$10,500 but less than \$12,500
- (C) \$12,500 but less than \$14,500
- (D) \$14,500 but less than \$16,500
- (E) \$16,500 or more

2015

Data for Question 13 (4 points)

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

Segment rates: {5.0%, 6.0%, 7.0% }.

Assumed compensation increases: 3.0% per year.

Data for all participants as of 1/1/2016:

	<u>Smith</u>	<u>Jones</u>
Gender	Female	Female
Age	60	65
Status	Active	Retired
2015 compensation	\$50,000	
Service	10	
Annual benefit		\$10,000
Benefit form		Single life annuity

Question 13

In what range is the funding target as of 1/1/2016?

- (A) Less than \$193,000
- (B) \$193,000 but less than \$197,000
- (C) \$197,000 but less than \$201,000
- (D) \$201,000 but less than \$205,000
- (E) \$205,000 or more

2015

Data for Question 19 (1 point)

A plan is amended to provide that lump sums will be offered during a limited early retirement window.

Consider the following statement related to selection of actuarial assumptions for minimum funding purposes:

Only the probabilities of electing the available forms of payment should be considered during a review of assumptions.

Question 19

Is the above statement true or false?

- (A) True
- (B) False

2015

Data for Question 21 (1 point)

Plan year: 11/1 - 10/31.

Valuation date: 11/1/2016.

Valuation interest rate: 24-month average segment rates with no lookback.

Consider the following statement:

Under HATFA, the segment rates are adjusted using the 25-year average of the segment rates for the period ending 9/30/2015, as limited by the permissible corridor.

Question 21

Is the above statement true or false?

(A) True

(B) False

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2015

Data for Question 33 (4 points)

Plan effective date: 1/1/2011.

Valuation date: 1/1/2015.

Accrued benefit: 9% of highest five-year average compensation per year of service.

Segment rates: {5.0%, 6.0%, 7.0%}.

Selected data for participant Smith:

Gender	Male
Date of birth	1/1/1978
Date of hire	1/1/2008

<u>Year</u>	<u>Compensation</u>
Before 2011	\$100,000
2011	300,000
2012	100,000
2013	100,000
2014	300,000

Selected annuity values:

	<u>5.0%</u>	<u>6.0%</u>	<u>7.0%</u>
$\ddot{a}_{65}^{(12)}$	11.83	10.91	10.11

Question 33

In what range is the 2015 funding target for Smith?

- (A) Less than \$100,000
- (B) \$100,000 but less than \$125,000
- (C) \$125,000 but less than \$150,000
- (D) \$150,000 but less than \$175,000
- (E) \$175,000 or more

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2015

Data for Question 40 (2 points)

Selected interest rates for 2016 plan year:

IRC section 430 24-month average for the 3<sup>rd</sup> segment rate: 5.00%

25-year average interest rate for stabilization under HATFA:

Segment 1	5.50%
Segment 2	7.00%
Segment 3	7.75%

Selected interest rates for 2021 plan year:

IRC section 430 24-month average for the 3<sup>rd</sup> segment rate: 5.00%

25-year average interest rate for stabilization under HATFA:

Segment 1	5.00%
Segment 2	6.50%
Segment 3	7.00%

$X\%$  is the difference between the 3<sup>rd</sup> segment rates used for minimum funding for the 2016 and 2021 plan years.

Question 40

In what range is  $|X\%|$ ?

- (A) Less than 1.60%
- (B) 1.60% but less than 1.80%
- (C) 1.80% but less than 2.00%
- (D) 2.00% but less than 2.20%
- (E) 2.20% or more

2015

Data for Question 42 (1 point)

A plan sponsor switches actuarial consulting firms.

Consider the following statement related to selection of actuarial assumptions for minimum funding purposes:

Before the new Enrolled Actuary can sign the Form 5500 Schedule SB, the new Enrolled Actuary must perform an experience study to review all assumptions employed by the prior actuary.

Question 42

Is the above statement true or false?

- (A) True
- (B) False

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2015

Data for Question 45 (2 points)

The plan actuary considers changing the mortality assumption used to determine the 1/1/2015 funding target.

The plan has a total of 2,425 participants.

Consider the following choices for the mortality assumption:

- I. The prescribed static mortality table for the valuation year, with combined annuitant/nonannuitant rates.
- II. The prescribed mortality table as of the base year, with generational projection using Projection Scale AA and with separate rates for annuitants and nonannuitants.
- III. A static plan-specific substitute mortality table based on the plan's actual experience.

Question 45

Which, if any, of the above mortality assumptions would be permitted?

- (A) None
- (B) I only
- (C) II only
- (D) III only
- (E) The correct answer is not given by (A), (B), (C), or (D) above

2015

Data for Question 57 (1 point)

Consider the following statement related to selection of actuarial assumptions for minimum funding purposes:

All assumptions, other than those prescribed by law, should reflect the plan sponsor's best estimate of experience under the plan.

Question 57

Is the above statement true or false?

- (A) True
- (B) False