

2014

Data for Question 1 (4 points)

Valuation date: 1/1/2015.

The plan provides a temporary \$1,000 monthly supplement payable from retirement to age 62 to participants who complete 15 years of service and retire from active employment after attaining age 60.

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

Selected data for participant Smith:

Gender	Male
Date of birth	1/1/1955
Date of hire	1/1/1995

Assumed rates of retirement:

<u>Age</u>	<u>Rate</u>
60	35%
61	25%

No preretirement death is assumed.

$\$X$  is the portion of the funding target as of 1/1/2015 attributable to Smith's temporary supplement.

Question 1

In what range is  $\$X$ ?

- (A) Less than \$9,500
- (B) \$9,500 but less than \$9,750
- (C) \$9,750 but less than \$10,000
- (D) \$10,000 but less than \$10,250
- (E) \$10,250 or more

## 2014

### Data for Question 2 (3 points)

Selected information as of 1/1/2015:

Funding standard carryover balance	\$25,000
Prefunding balance	75,000
Minimum required contribution	\$100,000
Effective interest rate	6.0%

Actual rate of return on assets during 2015: (5.0%)

No quarterly installments are required for the 2015 plan year.

An election is made on 1/1/2015 to apply \$15,000 of the funding balances to the 2015 minimum required contribution.

A contribution of \$115,000 is made on 12/1/2015.

### Question 2

In what range is the prefunding balance as of 1/1/2016?

- (A) Less than \$94,000
- (B) \$94,000 but less than \$95,000
- (C) \$95,000 but less than \$96,000
- (D) \$96,000 but less than \$97,000
- (E) \$97,000 or more

## 2014

### Data for Question 5 (4 points)

Valuation date: 1/1/2015.

Funding standard carryover balance as of 1/1/2015: \$170,000.

Prefunding balance as of 1/1/2015: \$110,000.

Actual rate of return on assets for 2015: 22.50%.

Selected information as of 1/1/2015:

Minimum required contribution	\$260,000
Effective interest rate	6.20%

On 1/1/2015, the plan sponsor elects to apply \$250,000 of balances to offset the minimum required contribution for 2015.

For the 2015 plan year, the plan sponsor contributes \$300,000 on 7/1/2015 and \$200,000 on 7/1/2016.

**\$X** is the maximum permissible amount the plan sponsor may elect to add to prefunding balance as of 1/1/2016, assuming the election takes place after the 7/1/2016 contribution.

### Question 5

In what range is **\$X**?

- (A) Less than \$460,000
- (B) \$460,000 but less than \$490,000
- (C) \$490,000 but less than \$520,000
- (D) \$520,000 but less than \$550,000
- (E) \$550,000 or more

2014

Data for Question 10 (4 points)

Valuation date: 1/1/2015.

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

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

Selected information as of 1/1/2015:

Funding standard carryover balance	\$1,000
Prefunding balance	5,000
Actuarial (market) value of assets	55,000
Compensation increase assumption	3% per year
Effective interest rate	7%
Shortfall amortization bases arising in prior years	None

Selected data for sole participant Smith:

Date of birth	1/1/1972
Date of hire	1/1/2000
2014 compensation	\$100,000

Selected annuity factors:

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

The plan sponsor did not make any election to use funding balances to meet the 2015 minimum requirement.

Question 10

In what range is the **minimum required contribution**?

- (A) Less than \$2,300
- (B) \$2,300 but less than \$3,300
- (C) \$3,300 but less than \$4,300
- (D) \$4,300 but less than \$5,300
- (E) \$5,300 or more

2014

Data for Question 11 (3 points)

Prefunding balance as of 1/1/2014: \$25,000.

Selected information as of 1/1/2014:

Actuarial (market) value of assets	\$1,100,000
Funding target	1,000,000
Minimum required contribution	100,000
Effective interest rate	6%

Actual rate of return on plan assets for 2014: 10%.

Required quarterly installments for 2014 plan year: \$0.

There was no election made to use the prefunding balance for the 2014 plan year.

Contribution paid on 2/1/2015 for the 2014 plan year: \$150,000.

$\$X$  is the maximum prefunding balance as of 1/1/2015.

Question 11

In what range is  $\$X$ ?

- (A) Less than \$66,000
- (B) \$66,000 but less than \$68,000
- (C) \$68,000 but less than \$70,000
- (D) \$70,000 but less than \$72,000
- (E) \$72,000 or more

2014

Data for Question 15 (2 points)

Valuation date: 1/1/2015.

The plan sponsor elected to apply \$200,000 in funding standard carryover balance on 1/1/2015 to offset the minimum required contribution for 2015.

The 2015 minimum required contribution was later determined to be \$180,000 as of 1/1/2015, so an excess election of \$20,000 exists for the 2015 plan year.

Consider the following statements regarding the excess funding balance usage:

- I. If such an excess election is not timely revoked, it has the same effect as an election to reduce the applicable balance to the extent of the excess.
- II. One of the conditions for the revocation of the excess election to be valid is that written notification of the revocation must be provided to the plan's enrolled actuary and the plan administrator.
- III. The revocation of the excess election must be completed on or before 9/15/2016 to be considered timely.

Question 15

Which, if any, of the above statements is (are) true?

- (A) I and II only
- (B) I and III only
- (C) II and III only
- (D) I, II, and III
- (E) The correct answer is not given by (A), (B), (C), or (D) above.

2014

Data for Question 23 (1 point)

Plan expenses are paid from the pension trust.

The plan requires mandatory employee contributions.

The plan has a funding shortfall.

Consider the following statement:

The target normal cost cannot be less than the present value of all benefits expected to accrue or be earned during the plan year.

Question 23

Is the above statement true or false?

- (A) True
- (B) False

2014

Data for Question 24 (1 point)

Consider the following statement:

Any funding standard carryover balance must be reduced to zero prior to using the prefunding balance to reduce the minimum required contribution.

Question 24

Is the above statement true or false?

- (A) True
- (B) False



## 2014

### Data for Question 26 (3 points)

Valuation segment rates for the 1/1/2011 valuation: {5.0%, 6.0%, 7.0% }.

Effective interest rate for 2011: 6.0%.

Shortfall amortization base established as of 1/1/2011: \$55,000.

In 2011 an election is made to use a 15-year alternative amortization schedule under the Pension Relief Act of 2010. The 2011 amortization schedule was not treated as fully amortized in any year from 2012-2015.

Extraordinary dividend and redemption payments for 2014: \$17,500.

There were no installment acceleration amounts before 2014.

$\$X$  is the required installment for the 2015 plan year with respect to the shortfall amortization base established 1/1/2011.

### Question 26

In what range is  $\$X$ ?

- (A) Less than \$6,100
- (B) \$6,100 but less than \$7,100
- (C) \$7,100 but less than \$8,100
- (D) \$8,100 but less than \$9,100
- (E) \$9,100 or more

2014

Data for Question 32 (1 point)

Valuation date: 1/1/2015.

Normal retirement benefit: \$48 per month for each year of service.

The plan sponsor adopts an amendment on 11/15/2014 to increase the benefit rate to \$60 per month for service completed after 5/31/2015, effective 6/1/2015.

No action is required under the provisions of IRC section 436 for the amendment to take effect.

Consider the following statement:

The amendment must be reflected in the 1/1/2015 target normal cost.

Question 32

Is the above statement true or false?

(A) True

(B) False

## 2014

### Data for Question 53 (3 points)

Funding standard carryover balance as of 1/1/2014: \$50,000.

Prefunding balance as of 1/1/2014: \$0.

Effective interest rate for 2014: 6.00%.

Actual rate of return on assets for 2014: 4.00%.

Minimum required contribution for 2014: \$150,000.

No quarterly installments are required for the 2014 plan year.

The plan sponsor elects to apply \$20,000 of the funding standard carryover balance as of 1/1/2014 to offset the minimum required contribution for 2014 on 7/1/2014.

The plan sponsor contributes \$200,000 on 7/1/2014 allocated toward the remaining minimum required contribution for 2014.

\$X is the maximum prefunding balance as of 1/1/2015.

### Question 53

In what range is \$X?

- (A) Less than \$66,250
- (B) \$66,250 but less than \$66,750
- (C) \$66,750 but less than \$67,250
- (D) \$67,250 but less than \$67,750
- (E) \$67,750 or more

2015

Data for Question 1 (2 points)

A plan with 150 active participants has expected administrative expenses for 2016 of \$5,000 payable by the trust.

The plan bases benefits on average compensation and service.

Assumed compensation increases: 3.0% per year.

Consider the following plan amendments adopted before 1/1/2016 with respect to the plan:

- I. Plan amendment I freezes service used in the plan formula on 12/31/2015.
- II. Plan amendment II freezes average compensation recognized under the plan formula as of 12/31/2015.
- III. Plan amendment III freezes all benefit accruals on 12/31/2015.

Question 1

Based on which, if any, of the above plan amendments may the 2016 target normal cost be greater than \$5,000?

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

2015

Data for Question 10 (1 point)

Consider the following statement regarding minimum funding for single employer plans:

In determining the funding balances for a plan year, the prior plan year's funding balances that were not applied to that prior plan year's minimum required contribution shall be adjusted to reflect the actual rate of return on plan assets for the prior plan year.

Question 10

Is the above statement true or false?

- (A) True
- (B) False

2015

Data for Question 11 (4 points)

Normal retirement benefit: 1% of the highest consecutive five-year average compensation per year of service.

Death benefit: Lump sum equal to the greater of the participant's annual accrued benefit at time of death or \$10,000.

No pre-retirement decrements other than death are assumed.

Deaths are assumed to occur at the beginning of the year.

Assumed compensation increases: 5.0% per year.

Selected data for participant Smith as of 1/1/2016:

Age	60
Service	10
Compensation for all prior years	\$60,000

$\$X$  is the death benefit used to determine the 2016 target normal cost with respect to death at age 64.

Question 11

In what range is  $\$X$ ?

- (A) Less than \$500
- (B) \$500 but less than \$600
- (C) \$600 but less than \$700
- (D) \$700 but less than \$800
- (E) \$800 or more

2015

Data for Question 23 (1 point)

Consider the following statement regarding minimum funding for single employer plans:

If the value of plan assets is less than the funding target for the plan year, the minimum required contribution for the plan year is the sum of any target normal cost, shortfall amortization charge and waiver amortization charge.

Question 23

Is the above statement true or false?

- (A) True
- (B) False

## 2015

### Data for Question 30 (4 points)

Funding standard carryover balance as of 1/1/2015: \$50,000.

Prefunding balance as of 1/1/2015: \$0.

Effective interest rate for 2015: 6.0%.

Actual rate of return on assets for 2015: 10.0%.

Minimum required contribution for 2015: \$250,000.

There are no required quarterly contributions for the 2015 plan year.

The plan sponsor elects on 1/1/2015 to apply \$20,000 of funding standard carryover balance to offset the minimum required contribution for 2015.

The plan sponsor contributes \$300,000 on 7/1/2016 for the 2015 plan year.

$\$X$  is the maximum permissible prefunding balance as of 1/1/2016.

$\$Y$  is the funding standard carryover balance as of 1/1/2016.

### Question 30

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

- (A) Less than \$15,000
- (B) \$15,000 but less than \$15,500
- (C) \$15,500 but less than \$16,000
- (D) \$16,000 but less than \$16,500
- (E) \$16,500 or more



2015

Data for Question 46 (4 points)

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

Selected information as of:

	<u>1/1/2014</u>	<u>1/1/2015</u>	<u>1/1/2016</u>
Prefunding balance			\$500
Actuarial (market) value of assets			10,000
Funding target			12,900
Target normal cost	\$150	\$200	250
Minimum required contribution	350	500	

The plan was exempt from establishing a shortfall amortization base in all plan years before 2014.

Question 46

In what range is the minimum required contribution for 2016?

- (A) Less than \$790
- (B) \$790 but less than \$820
- (C) \$820 but less than \$850
- (D) \$850 but less than \$880
- (E) \$880 or more

2015

Data for Question 51 (3 points)

Funding standard carryover balance as of 1/1/2015: \$300,000.

Prefunding balance as of 1/1/2015: \$300,000.

Selected results as of 1/1/2015:

Target normal cost	\$425,000
Shortfall amortization charge	75,000
Effective interest rate	6.0%

Rate of return on assets during 2015: 20.0%.

The plan sponsor contributes the **smallest amount that satisfies the minimum funding standard** on 12/31/2015.

**\$X** is the prefunding balance as of 1/1/2016.

Question 51

In what range is **\$X**?

- (A) Less than \$35,000
- (B) \$35,000 but less than \$75,000
- (C) \$75,000 but less than \$115,000
- (D) \$115,000 but less than \$155,000
- (E) \$155,000 or more

2015

Data for Question 54 (4 points)

Plan effective date: 1/1/1980.

Valuation date: 1/1/2015.

Normal retirement benefit: 6.5% of final three-year average compensation per year of service.

Assumed compensation increases: 0% per year.

No shortfall amortization bases were established prior to 2015.

Actuarial (market) value of assets: \$240,000.

Prefunding balance: \$0.

Selected valuation results as of 1/1/2015 (before reflecting 2015 increases, if any, in the IRC sections 401(a)(17) and 415 limits):

Funding target	\$240,000
Target normal cost	80,000

Selected data for sole participant Smith:

Date of birth	1/1/1952
Date of hire	1/1/2012
2012 compensation	\$290,000
2013 compensation	295,000
2014 compensation	300,000

7-year shortfall amortization factor for 2015: 5.9982.

The employer makes a single contribution of \$X on 1/1/2015 in the **smallest amount that satisfies the minimum funding standard** for the 2015 plan year.

Question 54

In what range is \$X?

- (A) Less than \$79,000
- (B) \$79,000 but less than \$80,500
- (C) \$80,500 but less than \$82,000
- (D) \$82,000 but less than \$83,500
- (E) \$83,500 or more

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## 2015

### Data for Question 56 (3 points)

Funding standard carryover balance as of 1/1/2015: \$150,000.

Prefunding balance as of 1/1/2015: \$100,000.

Selected information as of 1/1/2015:

Minimum required contribution	\$500,000
Required quarterly contribution	0
Effective interest rate	6.0%

The plan sponsor does not elect to apply the funding balances for the 2015 plan year.

Rate of return on plan assets during 2015: 12.0%.

The sole contribution for the 2015 plan year, made on 12/31/2015: \$750,000.

### Question 56

What is the prefunding balance on 1/1/2016?

- (A) Less than \$300,000
- (B) \$300,000 but less than \$315,000
- (C) \$315,000 but less than \$330,000
- (D) \$330,000 but less than \$345,000
- (E) \$345,000 or more