

AMERICAN SOCIETY OF PENSION PROFESSIONALS & ACTUARIES
JOINT BOARD FOR THE ENROLLMENT OF ACTUARIES
SOCIETY OF ACTUARIES

Enrolled Actuaries Pension Examination, Segment L

EA-2, Segment L

Date: Tuesday, May 2, 2017

Time: 1:00 p.m. – 3:30 p.m.

INSTRUCTIONS TO CANDIDATES

- Write your candidate number here _____. Your name must not appear.
- Do not break the seal of this book until the supervisor tells you to do so.
- Special conditions generally applicable to all questions on this examination are inserted in the front of this book.
- All questions should be answered in accordance with laws, rules and regulations in effect as of November 30, 2016.
- This examination consists of 45 True/False or multiple-choice questions worth a total of 100 points. The point value for each question is shown in parentheses at the beginning of each question.
- Your score will be based on the point values for the questions that you answer correctly. No credit will be given for omitted answers and no credit will be lost for wrong answers; hence, you should answer all questions even those for which you have to guess. Answer choices C, D, and E will be considered incorrect answers on True-False questions.
- A separate answer sheet is inside the front cover of this book. During the time allotted for this examination, record all your answers on side 2 of the answer sheet. **NO ADDITIONAL TIME WILL BE ALLOWED FOR THIS PURPOSE.** No credit will be given for anything indicated in the examination book but not transferred to the answer sheet. Failure to stop writing or coding your answer sheet after time is called will result in the disqualification of your answer sheet or further disciplinary action.
- Five answer choices are given with each question, each answer choice being identified by a key letter (A to E). For each question, blacken the oval on the answer sheet which corresponds to the key letter of the answer choice that you select.
- Use a soft-lead pencil to mark the answer sheet. To facilitate correct mechanical scoring, be sure that, for each question, your pencil mark is dark and completely fills only the intended oval. Make no stray marks on the answer sheet. If you have to erase, do so completely.
- Do not spend too much time on any one question. If a question seems too difficult, leave it and go on.
- While every attempt is made to avoid defective questions, sometimes they do occur. If you believe a question is defective, the supervisor or proctor cannot give you any guidance beyond the instructions on the exam booklet.
- Clearly indicated answer choices in the test book can be an aid in grading examinations in the unlikely event of a lost answer sheet.
- Use the blank portions of each page for your scratch work. Extra blank pages are provided at the back of the examination book.
- When the supervisor tells you to do so, break the seal on the book and remove the answer sheet.

On the front of the answer sheet, space is provided to write and code candidate information. Complete the information requested by printing in the squares and blackening the circles (one in each column) corresponding to the letters or numbers printed. For each empty box blacken the small circle immediately above the "A" circle. Fill out the boxes titled:
 - Name
(Include last name, first name and middle initial)
 - Candidate Number
(Candidate/Eligibility Number, use leading zeros if needed to make it a five digit number)
 - Test Site Code
(The supervisor will supply the number.)
 - Examination Part
(Code the examination that you are taking by blackening the circle to the left of "Exam EA-2L")
 - Booklet Number
(The booklet number can be found in the upper right-hand corner of this examination book. Use leading zeros if needed to make it a four digit number.)In the box titled "Complete this section only if instructed to do so", fill in the circle to indicate if you are using a calculator and write in the make and model number.

In the box titled "Signature and Date" sign your name and write today's date. **If the answer sheet is not signed, it will not be graded.**

Leave the boxes titled "Test Code" and "Form Code" blank.

On the back of the answer sheet fill in the Booklet Number in the space provided.
- After the examination, the supervisor will collect this book and the answer sheet separately. **DO NOT ENCLOSE THE ANSWER SHEET IN THE BOOK.** All books and answer sheets must be returned. **THE QUESTIONS ARE CONFIDENTIAL AND MAY NOT BE TAKEN FROM THE EXAMINATION ROOM.**

**Answer Key EA-2L Spring 2017
July 20, 2017**

Question	Answer		Question	Answer
1	A		29	A
2	B		30	Drop*
3	B		31	B
4	Drop*		32	B
5	A		33	B
6	B ¹		34	E
7	B		35	Drop*
8	C		36	B
9	B		37	B
10	C		38	B
11	C		39	A
12	B		40	B
13	D		41	A
14	B		42	B
15	B		43	Drop*
16	B		44	C
17	B		45	D & E
18	A			
19	E			
20	B			
21	B			
22	D			
23	A			
24	C			
25	A			
26	C			
27	B			
28	B			

*For purposes of scoring the examination papers, all candidates were given credit for dropped questions.

¹Because of an irregularity in the original answer key, candidates taking the May 2017 exam were given credit for both answers A and B. However B was determined to be the correct answer.

Data for Question 1 (1 point)

A plan has a reduction in active participants that meets the definition of an attrition event as of 12/31/2016 under PBGC Regulation 4043.23(a)(2). The plan does not qualify for a waiver of reporting.

Consider the following statement:

PBGC Form 10 (Post-Event Notice of Reportable Events) is due by the 2017 premium due date.

Question 1

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 2 (1 point)

A plan requires that a participant work at least 250 hours to accrue a benefit.

Data for participant Smith as of 1/1/2017:

Age	26
Years of service	3

Smith terminates employment in 2017 after completing 350 hours of service during the 2017 plan year.

Consider the following statement:

Smith is an excludable employee for purposes of coverage requirements under IRC section 410(b) for the 2017 plan year.

Question 2

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 3 (3 points)

Valuation date: 12/31/2016

Benefit formula: 1.25% of final 3-year average compensation for each year of service

Data for non-key participant Smith:

Date of birth 1/1/1955

Date of hire 1/1/2002

<u>Plan year</u>	<u>Compensation</u>
2002	\$70,000
2003	73,000
2004	75,000
2005	78,000
2006	82,000
2007	87,000
2008	91,000
2009	89,000
2010	90,000
2011	92,000
2012	93,000
2013	104,000
2014	94,000
2015	95,000
2016	93,000

The plan was top-heavy for the 2002 through 2012 plan years, and the plan provides the minimum required top-heavy benefit.

Question 3

In what range is Smith's accrued benefit as of 12/31/2016?

- (A) Less than \$17,900
- (B) \$17,900 but less than \$18,300
- (C) \$18,300 but less than \$18,700
- (D) \$18,700 but less than \$19,100
- (E) \$19,100 or more

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Data for Question 4 (3 points)

Unrelated companies A, B, and C each sponsored a plan (Plans A, B, and C respectively). On 1/1/2017, the three companies merged to create Company D, and the plans also merged to form Plan D. The three companies became divisions of Company D.

The merged plan is amended such that the transition rule of IRC section 401(a)(26) is not available.

There are no excludable employees.

Employee counts for the companies/divisions, for both 2016 and 2017:

	<u>A</u>	<u>B</u>	<u>C</u>
HCEs	25	0	5
NHCEs	0	40	110

X = the sum of the minimum number of participants necessary for Plans A, B, and C to satisfy the participation requirements of IRC section 401(a)(26) in 2016.

Y = the minimum number of participants necessary for Plan D to satisfy the participation requirements of IRC section 401(a)(26) in 2017.

Question 4

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

- (A) Less than 5
- (B) 5 but less than 10
- (C) 10 but less than 15
- (D) 15 but less than 20
- (E) 20 or more

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Data for Question 5 (1 point)

A plan charges participants for the cost of qualified pre-retirement survivor annuity (QPSA) coverage.

A married plan participant, age 45, waives the QPSA coverage with spousal consent during 2017.

Consider the following statement:

The participant may revoke the waiver later in 2017.

Question 5

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 6 (1 point)

X = the maximum monthly benefit payable to a participant under IRC section 415 as a life only annuity.

Y = the maximum monthly benefit payable to the same participant under IRC section 415 as a life annuity with 120 payments guaranteed.

Consider the following statement:

$$X > Y$$

Question 6

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 7 (3 points)

Selected information for 2017 Variable-rate premium determination:

Number of participants as of 12/31/2016	42
Number of employees as of 1/1/2017	24
PBGC premium funding target as of 1/1/2017	\$5,500,000
Market value of assets as of 1/1/2017	3,500,000
Actuarial value of assets as of 1/1/2017	3,850,000
Lookback Rule	Opted out

Question 7

What is the 2017 PBGC Variable-rate premium?

- (A) Less than \$8,000
- (B) \$8,000 but less than \$15,000
- (C) \$15,000 but less than \$22,000
- (D) \$22,000 but less than \$29,000
- (E) \$29,000 or more

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Data for Question 8 (3 points)

Type of plan: Hybrid (cash balance)

Interest crediting rate: 5.0%

Pay credit: 40% of plan year compensation credited at the end of the year

Monthly actuarial equivalence conversion factor at normal retirement date: 140.02

Data for participant Smith:

Date of birth	1/1/1990
Date of hire	1/1/2016
Date of plan entry	1/1/2017
2016 compensation	\$35,000
2017 compensation	40,000

Question 8

In what range is Smith's monthly accrued benefit at 12/31/2017?

- (A) Less than \$350
- (B) \$350 but less than \$500
- (C) \$500 but less than \$650
- (D) \$650 but less than \$800
- (E) \$800 or more

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Data for Question 9 (2 points)

Selected data as of 1/1/2016:

	In-service distributions <u>in 2015</u>	Present value of total <u>accrued benefits</u>
Key employees	\$5,000	\$225,000
Non-key employees	20,000	145,000

Consider the following statement:

The plan is top-heavy for 2017.

Question 9

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 10 (4 points)

Type of plan: Multiemployer

Method for withdrawal liability: Presumptive with mandatory de minimis rule

There were no unfunded vested benefits in any year prior to 2013.

Employer A completely withdraws on 12/31/2016.

Employer A had an obligation to contribute an additional \$200,000 during 2015. Employer A did not make these contributions, and they are not included in the table below.

<u>Year</u>	<u>Total 12/31 plan unfunded vested benefit</u>	<u>5-year sum of contributions</u>	
		<u>Total</u>	<u>Employer A</u>
2013	\$8,000,000	\$5,000,000	\$400,000
2014	7,300,000	6,000,000	600,000
2015	9,000,000	7,000,000	525,000
2016	9,500,000	8,000,000	450,000

Question 10

In what range is the withdrawal liability for Employer A?

- (A) Less than \$725,000
- (B) \$725,000 but less than \$750,000
- (C) \$750,000 but less than \$775,000
- (D) \$775,000 but less than \$800,000
- (E) \$800,000 or more

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Data for Question 11 (5 points)

Participant data for 2016:

Group	Count	HCE/ NHCE	Plan compensation	Covered compensation	Accrual for year
A	1	HCE	\$250,000	\$90,000	\$5,500
B	2	HCE	265,000	105,000	7,200
C	8	NHCE	60,000	90,000	1,800
D	15	NHCE	50,000	90,000	1,100
E	3	NHCE	40,000	90,000	950

All participants were born on or after 1/1/1976.

Amount of plan compensation shown is the same for current and all past years.

Testing is done on a current year benefits basis with permitted disparity imputed and using plan year compensation as testing compensation.

The most valuable accrual rate is equal to the normal accrual rate.

Question 11

In what range is the ratio percentage for the rate group defined by HCEs in Group B?

- (A) Less than 44%
- (B) 44% but less than 61%
- (C) 61% but less than 78%
- (D) 78% but less than 95%
- (E) 95% or more

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Data for Question 12 (1 point)

A terminated vested participant dies at age 42 with a benefit that has a present value of more than \$5,000. At death, that participant had been married for longer than a year.

Consider the following statement:

If the spouse remarries prior to age 55, any survivor annuity would no longer be payable to this spouse.

Question 12

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 13 (3 points)

Selected plan provisions:

Benefit formula	\$500 per year times years of service
Early retirement age	55 with 10 years of service
Early retirement benefit	Accrued benefit reduced by 4% for each year before normal retirement date
Vesting schedule	Statutory 7-year graded
Pre-retirement death benefit	Minimum qualified pre-retirement survivor annuity under IRC section 417 beginning no earlier than the date required by law and at no cost to the employee

Conversion factor from life annuity to joint and 50% survivor: 0.95

Select data for Smith, who was married for more than one year:

Date of birth	1/1/1965
Date of hire	1/1/2011
Date of death	1/1/2017

X = the annual benefit payable to Smith's spouse at the earliest commencement date allowed under the plan.

Question 13

In what range is X ?

- (A) Less than \$700
- (B) \$700 but less than \$900
- (C) \$900 but less than \$1,100
- (D) \$1,100 but less than \$1,300
- (E) \$1,300 or more

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Data for Question 14 (1 point)

Consider the following statement:

For purposes of the 80% FTAP gateway test for PBGC reporting under ERISA section 4010 for the 2016 Information Year, the funding target is determined using stabilized segment rates.

Question 14

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 15 (1 point)

It has been determined that a multiemployer plan has experienced a mass withdrawal. As a result of the mass withdrawal, Employer A is subject to withdrawal liability payments. Because of an administrative oversight, Employer A misses a payment.

Consider the following statement:

The interest rate that must be used in determining the interest adjusted missed payment is based on the stabilized first segment rate for the month in which the plan year begins.

Question 15

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 16 (1 point)

Consider the following statement:

A qualified replacement plan for purposes of IRC section 4980 must have an effective date no more than 12 months prior to the terminating plan's termination date.

Question 16

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 17 (1 point)

Consider the following statement:

An enrolled actuary may not advertise as an enrolled actuary in a solicitation related to the performance of actuarial services.

Question 17

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 18 (1 point)

A plan of a plan sponsor that has always had fewer than 100 employees includes a lump sum distribution as an optional form of benefit payment. The plan's definition of actuarial equivalence is 5.00% interest and the applicable mortality table. All the applicable rates for IRC section 417(e) are less than 5.00%.

Consider the following statement:

The maximum lump sum payable under IRC section 415 for this plan is determined using an interest rate of 5.50% and the applicable mortality table.

Question 18

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 19 (2 points)

Enrolled actuary Smith provides actuarial services for the plans of two unrelated clients, Companies A and B.

Company B tells Smith that it has initiated discussions to purchase Company A and asks Smith whether Company A's plan is adequately funded.

Company B is unaware of Smith's existing relationship with Company A.

Consider the following statements:

- I. Smith can provide the services requested by Company B without disclosing the assignment to Company A.
- II. If Company A waives any conflict of interest, Smith can provide the services requested by Company B.
- III. Smith can provide the services requested by Company B without a waiver of the conflict of interest from Company A, provided all of the information used is publicly available.

Question 19

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

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

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Data for Question 20 (4 points)

The plan actuary certifies the 2017 AFTAP for a plan on 3/31/2017.

The plan sponsor adopts a plan amendment with an effective date of 6/1/2017.

Selected information as of 1/1/2017:

Prefunding balance	\$90,000
Actuarial value of assets	690,000
Funding target before amendment	726,000
Increase in funding target due to amendment	105,000
NHCE annuity purchases during 2015	30,000
NHCE annuity purchases during 2016	0
Effective interest rate	5.10%

X = IRC section 436 contribution that the plan sponsor must make on 6/1/2017 for the amendment to take effect.

Question 20

In what range is X ?

- (A) Less than \$60,000
- (B) \$60,000 but less than \$65,000
- (C) \$65,000 but less than \$70,000
- (D) \$70,000 but less than \$75,000
- (E) \$75,000 or more

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Data for Question 21 (3 points)

Valuation date: 1/1

A company sponsors three plans.

Plans B and C are aggregated for purposes of coverage and nondiscrimination testing.

Plan A is collectively bargained.

No key employees have ever participated in Plan B.

There were no distributions during 2016. There have never been in-service distributions.

Present value of accrued benefits for:	<u>Plan A</u>	<u>Plan B</u>	<u>Plan C</u>
Key employees as of 1/1/2016	\$1,875,000	\$0	\$3,870,000
Non-key employees as of 1/1/2016	2,400,000	750,000	2,250,000
Key employees as of 12/31/2016	2,300,000	0	4,250,000
Non-key employees as of 12/31/2016	2,700,000	980,000	2,875,000
Key employees as of 1/1/2017	2,430,000	0	4,435,000
Non-key employees as of 1/1/2017	2,850,000	1,000,000	2,200,000

Question 21

In what range is the 2017 top-heavy ratio for the required aggregation group?

- (A) Less than 50%
- (B) 50% but less than 52%
- (C) 52% but less than 54%
- (D) 54% but less than 56%
- (E) 56% or more

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Data for Question 22 (3 points)

An employer terminated a plan that covered all of its employees.

There are no former employees entitled to current or future benefits from the plan.

A plan amendment was adopted 120 days before the plan terminated to provide a pro-rata benefit increase.

Selected data:

Plan assets prior to distribution	\$2,000,000
Benefit liabilities ignoring plan amendment	1,200,000
Benefit liability due to amendment	100,000

The plan allows for reversion of excess assets to the plan sponsor.

The plan transferred \$150,000 in assets to a replacement plan.

All active participants in the terminating plan will become active participants in the replacement plan.

X = the excise tax under IRC section 4980 payable on the reversion of plan assets to the employer.

Question 22

In what range is X ?

- (A) Less than \$120,000
- (B) \$120,000 but less than \$180,000
- (C) \$180,000 but less than \$240,000
- (D) \$240,000 but less than \$300,000
- (E) \$300,000 or more

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Data for Question 23 (3 points)

Normal retirement benefit: 10% of final 3-year average compensation for each year of service up to 10 years of service

Data for participant Smith:

Date of birth	1/1/1954
Date of hire	1/1/2012
2014 and prior compensations	\$250,000
2015 compensation	275,000
2016 compensation	300,000

X = Smith's annual accrued benefit as of 1/1/2017.

Question 23

In what range is X ?

- (A) Less than \$110,000
- (B) \$110,000 but less than \$120,000
- (C) \$120,000 but less than \$130,000
- (D) \$130,000 but less than \$140,000
- (E) \$140,000 or more

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Data for Question 24 (3 points)

A plan sponsor failed to provide a required 204(h) notice to 85 applicable individuals.

The failure was not corrected within 30 days of being discovered, and it is determined to be an unintentional failure.

There are 65 days in the noncompliance period.

Question 24

In what range is the tax amount imposed for the taxable year?

- (A) Less than \$400,000
- (B) \$400,000 but less than \$475,000
- (C) \$475,000 but less than \$550,000
- (D) \$550,000 but less than \$625,000
- (E) \$625,000 or more

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Data for Question 25 (1 point)

A plan is amended on 9/30/2016 to provide for a single sum optional form of benefit for employees who terminate from employment after 9/30/2016 but before 1/1/2017 and who have a particular disability at the time of termination of employment. The only employee who meets this disability requirement at the time of the amendment and thereafter through 12/31/2016 is an NHCE.

Consider the following statement:

The amendment is not discriminatory in availability of benefits, rights and features under IRC section 401(a)(4).

Question 25

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 26 (5 points)

Plan effective date: 7/1/2000

Plan year: 7/1-6/30

Normal retirement benefit: 1.00% of final 5-year average compensation for each of the first 10 years of service, plus 1.33% of the final 5-year average compensation for each additional year of service

Normal form: Life annuity

Optional form of payment: Joint and 100% survivor annuity equal to the benefit payable in normal form

Testing assumptions and methodologies:

Snapshot date	6/30/2017
Measurement period	Current and all prior years of service
Interest rate	8.50%
Testing age	65
Testing compensation	5-year average compensation

Selected data for Smith:

Date of birth	7/1/1952
Date of hire	7/1/2000
Plan compensation	\$300,000 for all years

Selected annuity factors at 65:

<u>Form of benefit</u>	<u>Actuarial equivalence factor</u>	<u>Testing assumptions</u>
Single life	12.18	7.95
Joint and 100% survivor	14.18	9.50

Question 26

In what range is Smith's most valuable accrual rate?

- (A) Less than 1.30%
- (B) 1.30% but less than 1.35%
- (C) 1.35% but less than 1.40%
- (D) 1.40% but less than 1.45%
- (E) 1.45% or more

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Data for Question 27 (1 point)

A plan's normal retirement age is the latest allowable under the law.

Data for participant Smith:

Date of birth	1/1/1955
Date of hire	1/1/2012
Date of participation	1/1/2013

Consider the following statement:

Smith's normal retirement date is 1/1/2018.

Question 27

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 28 (1 point)

Company A and Company B are members of a controlled group.

Smith participates in the Company A defined benefit plan.

The Company A defined benefit plan has the statutory 7-year graded vesting schedule.

Smith had 4 years of service with Company A when he transferred to Company B.

After working for 3 years for Company B, Smith terminates his employment.

Consider the following statement:

When Smith terminates employment with Company B, he is 40% vested in the Company A defined benefit plan.

Question 28

Is the above statement true or false?

(A) True

(B) False

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Data for Question 29 (2 points)

Consider the following statements regarding the allocation of accrued benefits between employee and employer contributions:

- I. The term “mandatory contributions” as defined in IRC section 411(c)(2) means amounts contributed to a plan by the employee that are required as a condition of employment, as a condition of participation in the plan, or as a condition of obtaining benefits under the plan attributable to employer contributions.
- II. If there are no employee voluntary contributions under a plan, the plan’s accrued benefit derived from contributions made by an employee as of any applicable date would be the amount equal to the employee’s accumulated mandatory contributions expressed as an annual benefit commencing at normal retirement age.
- III. The accrued benefit derived from contributions made by the employee can vest using either the statutory 5-year cliff vesting schedule or the statutory 7-year graded vesting schedule.

Question 29

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.

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Data for Question 30 (3 points)

The Alternative Premium Funding Target is being used to determine the PBGC Variable-rate premium.

Number of active participants as of 12/31/2016: 115

Selected data as of 1/1/2017:

Vested funding target using stabilized segment rates	\$3,050,000
Vested funding target not using stabilized segment rates	3,650,000
Market value of assets	1,000,000
Actuarial value of assets	850,000
Number of employees	115

X = the 2017 PBGC Variable-rate premium.

Question 30

In what range is X ?

- (A) Less than \$60,000
- (B) \$60,000 but less than \$70,000
- (C) \$70,000 but less than \$80,000
- (D) \$80,000 but less than \$90,000
- (E) \$90,000 or more

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Data for Question 31 (1 point)

Consider the following statement:

For PBGC premium purposes, the participant count includes all plan participants, even if they have no benefit liabilities.

Question 31

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 32 (1 point)

Consider the following statement:

All officers of an employer that sponsors a plan are fiduciaries of the plan.

Question 32

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 33 (3 points)

Selected plan provisions:

Benefit formula	1.25% of final 3-year average compensation per year of service
Normal retirement age	Age 65 with 5 years of participation service
Plan vesting schedule	5-year cliff
Top-heavy vesting schedule	Statutory 6-year graded

Data for non-key participant Smith:

Date of birth	1/1/1952
Date of hire	1/1/2013
<u>Year</u>	<u>Compensation</u>
2013	\$60,000
2014	64,000
2015	70,000
2016	67,000

The plan has been top-heavy for 2013 and all subsequent years.

Question 33

In what range is Smith's minimum annual vested accrued benefit as of 1/1/2017?

- (A) Less than \$2,300
- (B) \$2,300 but less than \$3,200
- (C) \$3,200 but less than \$4,100
- (D) \$4,100 but less than \$5,000
- (E) \$5,000 or more

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Data for Question 34 (3 points)

Plan year for profit sharing plan: 1/1-12/31

Plan year for defined benefit plan: 2/1-1/31

Defined benefit plan valuation date: 2/1

Selected data for all participants:

	<u>Profit sharing plan account balances</u>		<u>Defined benefit plan present value of accrued benefits</u>	
	<u>12/31/2015</u>	<u>12/31/2016</u>	<u>2/1/2015</u>	<u>2/1/2016</u>
Key employees	\$525,000	\$600,000	\$800,000	\$700,000
Non-key employees	475,000	450,000	400,000	550,000

In-service distributions to key employees of \$300,000 occurred on 1/1/2015. There have been no other distributions.

Question 34

In what range is the top-heavy ratio for the defined benefit plan year beginning 2/1/2016?

- (A) Less than 60%
- (B) 60% but less than 62%
- (C) 62% but less than 64%
- (D) 64% but less than 66%
- (E) 66% or more

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Data for Question 35 (5 points)

Plan effective date: 1/1/2009

The plan provides for lump sum distributions. Lump sums are calculated based on plan factors.

Selected other plan provisions:

Normal retirement age	Age 65
Early retirement eligibility	Age 55 and 10 years of service
Reduction for early retirement	No reduction at retirement on or after age 62
Benefit formula	2% of final 5-year average compensation per year of service

Data for participant Smith:

Date of birth	1/1/1955
Date of hire	1/1/1986
Final 5-year average compensation	\$135,800
Highest consecutive 3-year average compensation	\$144,000

Selected values for 2017:

<u>Mortality</u>	<u>Interest</u>	<u>$\ddot{a}_{65}^{(12)}$</u>
Plan	Plan	15.00
Applicable	5.50%	12.00
Applicable	Applicable	14.00

The plan sponsor had more than 100 employees who earned at least \$5,000 in the prior year.

The plan sponsor offers a retirement incentive program to all employees who are age 62 or older. The incentive increases the accrued benefit by 50%.

X = the increase in the lump sum benefit available to Smith if he retires under the retirement incentive program on 1/1/2017.

Question 35

In what range is X ?

- (A) Less than \$300,000
- (B) \$300,000 but less than \$400,000
- (C) \$400,000 but less than \$500,000
- (D) \$500,000 but less than \$600,000
- (E) \$600,000 or more

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Data for Question 36 (1 point)

A notice of intent to terminate has been issued for a distress termination, but the PBGC has not made a determination of plan sufficiency or insufficiency. All benefits are less than PBGC guaranteed benefits.

Consider the following statement:

The plan administrator may purchase irrevocable commitments to provide benefits from an insurer for participants who have separated from service as long as such purchases are consistent with prior plan practice.

Question 36

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 37 (3 points)

Plan effective and adopted: 1/1/2006

Normal form of benefit: 10-year certain and life

Early retirement reduction (per year): 5%

Date of plan termination: 1/1/2015

Selected data for participant Smith, a 10% owner of the company:

Date of birth	1/1/1955
Monthly accrued benefit payable at age 65	\$4,133
Form of payment elected	10-year certain and life

Question 37

In what range is Smith's PBGC guaranteed benefit payable as of the plan termination date?

- (A) Less than \$3,000
- (B) \$3,000 but less than \$3,350
- (C) \$3,350 but less than \$3,700
- (D) \$3,700 but less than \$4,050
- (E) \$4,050 or more

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Data for Question 38 (1 point)

Consider the following statement:

The actuary for a multiemployer plan can use his best estimate assumption of the projected industry activity without input from the plan sponsor for purposes of the annual certification.

Question 38

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 39 (1 point)

Smith, a CPA, prepares the financial statements of a plan. On 9/1/2016, Smith takes a loan from the plan to start a new business. Smith fully repays the loan in a single payment on 12/31/2017.

Consider the following statement:

Smith is subject to an excise tax on prohibited transactions for 2016 and 2017.

Question 39

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 40 (1 point)

An employee of a plan sponsor is also a 25% owner.

The employee's 19-year-old child provides administration services to the plan that are necessary for the operation of the plan.

The employee's child is not an employee of the plan sponsor but is compensated by the plan at the prevailing market rate for similar services.

Consider the following statement:

This payment of compensation to the child is a prohibited transaction.

Question 40

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 41 (2 points)

Selected information as of 1/1/2017:

2017 AFTAP prior to proposed amendment	82%
Funding target prior to proposed amendment	\$450,000
Funding target increase for proposed amendment	35,000
Discounted value of proposed IRC section 436 contribution	20,000

Consider the following statement:

The amendment can take effect once the proposed contribution is made.

Question 41

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 42 (1 point)

An association sponsors a multiple employer plan for its members. The employers are independent from each other. The only relationship among them is that they are in the same industry and are members of the association.

The top-heavy ratio is greater than 60% for only one of the employers.

Consider the following statement:

Each individual participating employer must provide the top-heavy minimum benefit.

Question 42

Is the above statement true or false?

- (A) True
- (B) False

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Data for Question 43 (2 points)

Consider the following statements for enrolled actuaries:

- I. An enrolled actuary shall provide written notification of the non-filing of any actuarial document he has signed upon the discovery of the non-filing to the IRS, DOL, or PBGC where such document should have been filed.
- II. For the 3-year enrollment cycle, when core subject matter hours are required, an individual must complete a minimum of 2 hours of continuing professional education credit relating to ethical standards, regardless of the total number of core hours required.
- III. It is necessary to have completed at least 12 hours of non-core subject matter in the 3-year enrollment cycle for renewal of enrollment.

Question 43

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 in (A), (B), (C), or (D) above.

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Data for Question 44 (4 points)

Consider the following history of AFTAP certifications for a plan:

<u>Plan year</u>	<u>Date</u>	<u>AFTAP</u>	<u>Certification type</u>
2011	9/1/2011	90%	Specific
2012	3/1/2012	80% or higher	Range
2012	12/1/2012	85%	Specific
2013	9/1/2013	65%	Specific
2014	9/1/2014	80% or higher	Range
2014	11/1/2014	85%	Specific
2015	3/1/2015	60% - 80%	Range
2015	12/1/2015	75%	Specific
2016	12/1/2016	90%	Specific

The plan does not provide for automatic restoration of benefit accruals when the plan is no longer subject to a benefit restriction.

X = the number of months from 2012 through 2016 in which the plan's benefit accruals were restricted.

Question 44

In what range is X ?

- (A) Less than 3
- (B) 3 but less than 6
- (C) 6 but less than 9
- (D) 9 but less than 12
- (E) 12 or more

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Data for Question 45 (4 points)

A defined benefit plan and profit sharing plan are aggregated for nondiscrimination testing.

Nondiscrimination testing methods and assumptions for the 2017 plan year:

Testing method	Contributions basis
Measurement period	Current plan year
Testing age	65
Interest rate	8.5%
Pre-retirement mortality	None

The qualified joint and survivor annuity (QJSA) is a joint and 50% survivor annuity that is 98% of the monthly accrued benefit in the form of a life annuity.

Selected data for Smith, a highly compensated employee:

Date of birth	1/1/1953
2017 compensation	\$150,000
Monthly benefit accrued in 2017	\$300

Smith participates only in the defined benefit plan.

Jones, 62, participates only in the profit sharing plan. Her compensation for 2017 is \$40,000.

Selected monthly annuity factors using testing assumptions at age 65:

<u>Life annuity</u>	<u>OJSA</u>
95.38	104.68

Question 45

In what range is the minimum 2017 profit sharing allocation to Jones that would allow her to be in Smith's rate group?

- (A) Less than \$5,000
- (B) \$5,000 but less than \$6,000
- (C) \$6,000 but less than \$7,000
- (D) \$7,000 but less than \$8,000
- (E) \$8,000 or more

****END OF EXAMINATION****

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