

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

Enrolled Actuaries Pension Examination, Segment B

EA-2, Segment B

Date: Tuesday, May 8, 2012

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, 2011.
 - This examination consists of 44 True and False or multiple-choice questions worth a total of 100 points. Questions 1-18 are True/False and Questions 19-44 are multiple-choice. 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 side 1 of the answer sheet, space is provided to write and to code candidate information. Complete Blocks A through G as follows:
- in Block A, print your name and the name of this test center;
 - in Block B, print your last name, first name and middle initial and code your name by blackening the ovals (one in each column) corresponding to the letters of your name; for each empty box, blacken the small rectangle immediately above the "A" oval;
 - write your candidate number in Block C (as it appears on your ticket of admission for this examination) and write the number of this test center in Block D (the supervisor will supply the number);
 - code your candidate number and center number by blackening the five ovals (one in each column) corresponding to the five digits of your candidate number and the three ovals (one in each column) corresponding to the three digits of the test center number, respectively. Please be sure that your candidate number and the test center number are coded correctly;
 - in Block E, code the examination that you are taking by blackening the oval to the left of "Course EA-2, Segment B."
 - in Block F, blacken the appropriate oval to indicate whether you are using a calculator; and
 - in Block G, sign your name and write today's date. If the answer sheet is not signed, it will not be graded.
- On side 2 of your answer sheet, space is provided at the top for the number of this examination book. Enter the examination book number, from the upper right-hand corner of this examination book, in the four boxes at the top of side 2 marked "BOOKLET NUMBER."
- 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-2B Spring 2012

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

****BEGINNING OF EXAMINATION****

Data for Question 1 (1 point)

Consider the following statement:

For annual filings with the PBGC under ERISA section 4010, the funding target should reflect all benefits earned or accrued under the plan as of the end of the plan year except ancillary benefits that are not protected by anti-cutback provisions.

Question 1

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 2 (1 point)

Data for participant Smith:

Age	65
Years of service	10
Average compensation for highest consecutive 3 years of participation	\$50,000

The plan provides the qualified joint and 100% survivor annuity on a fully subsidized basis.

Consider the following statement:

The maximum annual annuity Smith can receive in the form of a qualified joint and 100% survivor annuity is \$50,000.

Question 2

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 3 (1 point)

Plan effective date: 1/1/1990

Consider the following statement:

The plan administrator must provide a summary of material modifications to all participants affected by an amendment no later than 210 days after the close of the plan year in which the amendment modifying the plan was adopted.

Question 3

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 4 (1 point)

A plan sponsor borrows \$100,000 from the plan. The loan, plus a reasonable rate of interest, is repaid within 90 days.

Consider the following statement:

The loan is a prohibited transaction.

Question 4

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 5 (1 point)

An employer terminated its plan with excess assets.

Benefits in the terminated plan were not increased, but the employer transfers 45% of the excess assets to a replacement plan that covers 210 of the remaining 230 active participants previously covered under the terminated plan.

The remaining assets are reverted to the employer.

Consider the following statement:

The excise tax rate applicable to the excess assets reverted to the employer is 50%.

Question 5

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 6 (1 point)

A sponsor maintains Plan A and Plan B.

Information for the 2012 plan year:

	<u>FTAP</u>	<u>Unfunded vested benefits</u>
Plan A	75%	\$13,000,000
Plan B	84%	\$50,000,000

Consider the following statement:

Reporting under ERISA section 4010 is required for this sponsor for the 2012 plan year.

Question 6

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 7 (1 point)

A participant received an in-service distribution in 2008.

The participant terminated employment in 2010.

Consider the following statement:

The participant's distribution is not included in determining the top-heavy ratio for 2012.

Question 7

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 8 (1 point)

Funding balances at 1/1/2012: \$0

Normal retirement benefit: \$20 per year of service

On 2/1/2012, the 2012 AFTAP is certified at 75%

On 3/1/2012, the plan's benefit formula is amended to:

\$20 per month per year of service accrued through 2/29/2012, plus \$25 per month per year of service accrued after 3/1/2012.

No contributions are made during 2012.

Consider the following statement:

The amendment can take effect on 3/1/2012.

Question 8

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 9 (1 point)

A plan defines its qualified joint and survivor annuity as a joint and 75% survivor annuity.

Consider the following statement:

The qualified optional survivor annuity must be a joint and 50% survivor annuity.

Question 9

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 10 (1 point)

Consider the following statement:

The only circumstance that would allow for any portion of plan assets to be returned to a plan sponsor is a plan termination.

Question 10

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 11 (1 point)

An enrolled actuary prepares an actuarial report that states the actuarial costs of a pension plan.

In preparing this report, the actuary uses methods and assumptions prescribed by law and regulations.

Consider the following statement:

In the report, the actuary must document these prescribed actuarial methods and assumptions.

Question 11

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 12 (2 points)

Plan effective date: 1/1/2001

The plan uses the most restrictive vesting requirements and the 7-year graded vesting schedule.

An employee works over 1,000 hours in each year of employment.

Employee data:

Date of birth	1/1/1985
Date of hire	1/1/2002
Date of termination	12/31/2005
Date of rehire	1/1/2009

Consider the following statement:

The employee is 100% vested as of 1/1/2012.

Question 12

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 13 (1 point)

On 12/1/2011 a plan terminated in a distress termination.

The sponsor did not liquidate due to bankruptcy.

Consider the following statement:

The PBGC termination premium is equal to \$1,250 multiplied by the number of participants on the day prior to the plan termination date and is payable each year for three years after the termination.

Question 13

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 14 (1 point)

Consider the following statement:

Upon the plan administrator's request, an enrolled actuary must provide supplemental advice or explanation relative to an actuarial report certified by the enrolled actuary.

Question 14

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 15 (1 point)

Consider the following statement:

Benefit statements must be provided annually to participants and beneficiaries in defined benefit pension plans.

Question 15

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 16 (1 point)

A plan provides a pre-retirement death benefit equal to the minimum qualified pre-retirement survivor annuity under IRC section 417 plus a \$10,000 immediate lump sum. These benefits are provided at no charge to the participants.

Consider the following statement with regard to the PBGC Premium Funding Target:

The full value of the pre-retirement death benefit is included in the Premium Funding Target for each participant who has completed the plan's vesting requirements on the Unfunded Vested Benefit valuation date.

Question 16

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 17 (1 point)

Employer A is a member of a controlled group. Employer A sponsored a plan that terminated in a distress termination.

Consider the following statement:

All members of the controlled group are jointly and severally liable for the unfunded benefit liabilities in the plan.

Question 17

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 18 (1 point)

Plan effective date: 1/1/1990

Consider the following statement:

The plan administrator must provide each participant with a copy of the summary plan description no later than 90 days after an employee becomes a participant in the plan.

Question 18

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 19 (2 points)

Smith is an enrolled actuary. While in the process of preparing an actuarial valuation for the 2011 plan year, Smith discovers that the 2010 PBGC premium filing certification, which was due to be filed several months earlier, has not been filed.

Consider the following statements:

- I. If Smith signed the 2010 PBGC premium filing certification, Smith must report the non-filing to the PBGC.
- II. Regardless of which enrolled actuary signed the certification, Smith must report the non-filing to the Joint Board for the Enrollment of Actuaries.
- III. If a notice of non-filing is required, it must be in writing.

Question 19

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.

Data for Question 20 (4 points)

Normal retirement age: 62

Plan assumptions:

Interest	4.0%
Mortality	1994 GAR

Death benefit prior to retirement is the present value of accrued benefits.

Benefit at late retirement is the greater of continued accruals and an actuarial increase.

Selected data for Smith:

Date of birth	12/31/1942
Date of hire	1/1/2000
Date of participation	1/1/2006
Date of retirement	12/31/2012
Compensation for each year of service	\$225,000

Selected commutation functions:

x	<u>5% and applicable mortality</u>		<u>Plan assumptions</u>	
	$N_x^{(12)}$	D_x	$N_x^{(12)}$	D_x
62	598,284	46,091	1,466,321	82,769
65	470,592	38,961	1,232,637	72,900
70	301,642	28,773	904,410	58,535

Question 20

In what range is Smith's annual IRC section 415 limit as of 12/31/2012?

- (A) Less than \$175,000
- (B) \$175,000 but less than \$190,000
- (C) \$190,000 but less than \$205,000
- (D) \$205,000 but less than \$220,000
- (E) \$220,000 or more

Data for Question 21 (3 points)

As of 12/31/2011:

Active participants	26
Terminated vested participants	20
Retired participants	4

All participants are fully vested.

Information as of 1/1/2012:

Market value of assets	\$682,400
Actuarial value of assets	702,300
Standard Premium Funding Target	1,370,100

No election has been made to use the Alternative Premium Funding Target.

Question 21

In what range is the total PBGC premium for 2012?

- (A) Less than \$7,740
- (B) \$7,740 but less than \$7,840
- (C) \$7,840 but less than \$7,940
- (D) \$7,940 but less than \$8,040
- (E) \$8,040 or more

Data for Question 22 (4 points)

Employer A is a contributing employer to a multiemployer plan.

Method for calculating withdrawal liability: Rolling-5 with mandatory de minimis rule.

Employer A completely withdraws from the plan on 12/31/2011.

<u>Year</u>	<u>Total contributions all employers</u>	<u>Total contributions withdrawn employers</u>	<u>Total contributions Employer A</u>	<u>Total 12/31 unfunded vested benefits (all employers)</u>	<u>Outstanding claims*</u>
2005	\$19,600,000	\$500,000	\$760,000	\$0	\$0
2006	23,400,000	450,000	650,000	0	0
2007	25,300,000	350,000	870,000	0	0
2008	28,900,000	625,000	905,000	60,200,000	0
2009	29,100,000	800,000	805,000	70,900,000	1,200,000
2010	25,200,000	1,225,000	725,000	75,200,000	2,500,000
2011	27,800,000	1,500,000	225,000	78,000,000	2,750,000

* For withdrawal liability that can reasonably be expected to be collected with respect to employers who withdrew before the end of the plan year.

Question 22

In what range is the withdrawal liability for Employer A?

- (A) Less than \$2,100,000
- (B) \$2,100,000 but less than \$2,150,000
- (C) \$2,150,000 but less than \$2,200,000
- (D) \$2,200,000 but less than \$2,250,000
- (E) \$2,250,000 or more

Data for Question 23 (4 points)

Normal retirement benefit: 3% of average compensation times years of service

Vesting schedule: 7-year graded

The plan utilizes the most restrictive vesting and forfeiture requirements.

The following data applies to **both** Smith and Jones:

Date of birth 1/1/1949

Date of hire 1/1/2000

Date of termination 12/31/2002

Date of rehire 1/1/2008

The salary for both Smith and Jones was \$50,000 in every year of their employment.

Smith and Jones both terminate employment for a second time on 12/31/2012. Upon their normal retirement dates, both elect to receive monthly life annuity payments commencing on that date.

On 7/1/2003, Smith and Jones each received a lump sum in settlement of the full amount of their vested accrued benefit. On 7/1/2011, Smith repaid the lump sum to the plan in full, with interest; Jones did not.

X = the monthly amount of Smith's payment commencing at normal retirement date.

Y = the monthly amount of Jones's payment commencing at normal retirement date.

Question 23

In what range is $X - Y$?

- (A) Less than \$250
- (B) \$250 but less than \$500
- (C) \$500 but less than \$750
- (D) \$750 but less than \$1,000
- (E) \$1,000 or more

Data for Question 24 (2 points)

Data for a plan in 2012:

Location	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Number of employees	41	19	15	X

The plan covers all employees of locations B and D only.

Location C is collectively bargained.

No employees terminated during 2012 and none are statutorily excludable from the plan.

The plan covers at least one HCE.

Question 24

What is the minimum number of employees that must be in Location D so that the plan will pass the participation requirement of IRC section 401(a)(26)?

- (A) Less than 9
- (B) 9 but less than 14
- (C) 14 but less than 19
- (D) 19 but less than 24
- (E) 24 or more

Data for Question 25 (5 points)

Plan effective date: 1/1/1990

Normal retirement benefit:

Prior to 3/1/2009 1.5% of final average salary times years of service
On and after 3/1/2009 2.5% of final average salary times years of service

The plan terminates in a distress termination on 1/1/2012.

Terminated vested participants may commence benefits at age 55 if they have 10 years of service at termination. The reduction for early commencement is 3% per year prior to age 65.

Assets as of 1/1/2012: \$650,000

Data for all participants:

	<u>Smith</u>	<u>Jones</u>
Date of birth	1/1/1960	1/1/1960
Date of hire	1/1/1985	1/1/1990
Final average salary	\$125,000	\$80,000
Status	Active	Active

PBGC XRA: 58

Annuity factor using ERISA section 4044 assumptions for plan termination date:

$${}_6\ddot{a}_{52}^{(12)} = 10.55$$

X = the present value of the benefit Smith will receive from the PBGC based on ERISA section 4044 assumptions.

Question 25

In what range is X ?

- (A) Less than \$372,000
- (B) \$372,000 but less than \$377,000
- (C) \$377,000 but less than \$382,000
- (D) \$382,000 but less than \$387,000
- (E) \$387,000 or more

Data for Question 26 (3 points)

A defined benefit plan terminates with excess assets and is amended within the 60 day period prior to the plan termination date to provide a 5% pro-rata increase of participant benefits as of the termination date.

The plan sponsor establishes a defined contribution plan as a qualified replacement plan and transfers into this plan the minimum amount necessary to lower the excise tax rate on any reversion to less than 50%.

Selected data as of the asset distribution date:

Market value of assets	\$2,100,000
Termination liability prior to 5% pro-rata increase	\$1,600,000

X = the amount of the actual excise tax due from the employer.

Y = the amount of the excise tax that would have been due had the qualified replacement plan not been established.

Question 26

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

- (A) Less than \$132,000
- (B) \$132,000 but less than \$150,000
- (C) \$150,000 but less than \$168,000
- (D) \$168,000 but less than \$186,000
- (E) \$186,000 or more

Data for Question 27 (4 points)

During 2011, Smith and Jones were participants in both a defined benefit plan and a profit sharing plan that has employee deferrals and employer matching contributions.

Data for participants:	<u>Smith</u>	<u>Jones</u>
Date of birth	12/31/1950	12/31/1980
Date of hire	12/31/1989	12/31/2007
Compensation for 2011	\$400,000	\$60,000
Defined benefit annual accrual	\$15,000	\$4,000
Vesting in defined benefit plan	100%	0%
Salary deferrals	\$10,000	\$4,000
Employer matching contribution	\$5,000	\$2,000
Vesting in matching contributions	100%	80%
Profit sharing contributions	\$2,500	\$2,500
Vesting in profit sharing	100%	80%

Nondiscrimination testing methods and assumptions:

Snapshot date	12/31/2011
Standard interest rate	7.5%

Selected annuity factor, using testing assumptions:

$$\ddot{a}_{65}^{(12)} = 9.88$$

X = Smith's benefit percentage determined on an equivalent allocation basis for the average benefits test.

Y = Jones's benefit percentage determined on an equivalent allocation basis for the average benefits test.

Question 27

In what range is $X + Y$?

- (A) Less than 50%
- (B) 50% but less than 60%
- (C) 60% but less than 70%
- (D) 70% but less than 80%
- (E) 80% or more

Data for Question 28 (3 points)

Type of plan: Statutory hybrid plan
Account balance: The sum of pay credits and interest credits
Pay credits: 3% of annual pay, credited at the end of the year
Interest credits: Equal to the actual annual rate of return on plan assets multiplied by the beginning of year account balance
Vesting: The minimum vesting schedule allowed

Data for participant Smith:

Date of hire	1/1/2008
Date of termination	12/31/2011
Compensation (each year)	\$50,000

Historical returns on plan assets:

2008	8%
2009	6%
2010	2%
2011	-22%

The plan provides for a lump sum in the amount of the vested account balance.

Question 28

In what range is Smith's lump sum payable at 1/1/2012?

- (A) Less than \$3,650
- (B) \$3,650 but less than \$4,450
- (C) \$4,450 but less than \$5,250
- (D) \$5,250 but less than \$6,050
- (E) \$6,050 or more

Data for Question 29 (2 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	1/1/1964
Date of hire	1/1/2008

Compensation history:

2012	\$300,000
2011	275,000
2010	210,000

Question 29

In what range is Smith's annual accrued benefit as of 12/31/2012?

- (A) Less than \$95,000
- (B) \$95,000 but less than \$105,000
- (C) \$105,000 but less than \$115,000
- (D) \$115,000 but less than \$125,000
- (E) \$125,000 or more

Data for Question 30 (3 points)

An employer sponsors two plans: Plan A for Division A and Plan B for Division B

Plan A eligibility: 12 months of service

Plan B eligibility: 6 months of service

All employees are eligible to participate on the 1/1 or 7/1 coincident with or following the completion of eligibility requirements.

Plans A and B require 1,000 hours of service to benefit in the plan (however, eligibility is determined on an elapsed time basis).

Otherwise excludable employees are not tested separately.

No employee is in more than one plan and none are collectively bargained.

The plan sponsor does not aggregate Plans A and B for purposes of the coverage requirement of IRC section 410(b).

Data for all employees during 2011:

<u>Number of employees</u>	<u>Date of hire</u>	<u>Hours worked</u>	<u>Division</u>	<u>End of year status</u>	
20	1/1/2010	2,000	A	active	HCE
40	1/1/2010	2,000	A	active	NHCE
5	1/1/2010	250	A	terminated	NHCE
10	1/1/2010	2,000	B	active	HCE
25	1/1/2010	2,000	B	active	NHCE
15	9/1/2010	2,000	B	active	NHCE
10	1/1/2010	250	B	terminated	NHCE

Question 30

In what range is the ratio percentage for Plan A for the 2011 plan year?

- (A) Less than 72.00%
- (B) 72.00% but less than 79.00%
- (C) 79.00% but less than 86.00%
- (D) 86.00% but less than 93.00%
- (E) 93.00% or more

Data for Question 31 (2 points)

Consider the following statements:

- I. A conflict of interest exists if there is a significant risk that the representation of a client will be materially limited by the enrolled actuary's responsibilities to a former client.
- II. Where a conflict of interest exists, the enrolled actuary does not have to disclose such conflict of interest to the client if he determines that he can act in the best interest of the client.
- III. Where a conflict of interest exists, the enrolled actuary may represent a client if each affected client waives the conflict of interest and gives informed consent, even though the enrolled actuary has stated that he does not reasonably believe that he can provide competent and diligent representation to each affected client.

Question 31

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.

Data for Question 32 (4 points)

Type of plan: Multiemployer

Method for determining withdrawal liability: Rolling-5 with maximum permissible deductible under the optional de minimis rule

Employer A completely withdraws from the plan on 12/31/2011. No other employers have ever withdrawn from the plan.

<u>Year</u>	<u>Total base units all employers</u>	<u>Total contributions all employers</u>	<u>Total base units Employer A</u>	<u>Total contributions Employer A</u>	<u>Total 12/31 unfunded vested benefits (all employers)</u>
2004	2,025,000	\$13,162,000	37,000	\$240,000	\$0
2005	2,150,000	13,975,000	41,000	266,000	0
2006	2,300,000	16,100,000	45,000	315,000	0
2007	2,225,000	16,687,000	48,000	360,000	12,850,000
2008	2,150,000	17,200,000	47,000	376,000	16,200,000
2009	2,300,000	19,550,000	45,000	382,000	24,500,000
2010	2,350,000	21,150,000	41,000	369,000	10,750,000
2011	2,425,000	21,825,000	34,000	306,000	9,650,000

Question 32

In what range is the withdrawal liability for Employer A?

- (A) Less than \$137,500
- (B) \$137,500 but less than \$157,500
- (C) \$157,500 but less than \$177,500
- (D) \$177,500 but less than \$197,500
- (E) \$197,500 or more

Data for Question 33 (3 points)

On 3/15/2012, the enrolled actuary certifies the AFTAP as of 1/1/2012 to be 77.07%.

On 7/1/2012, the plan sponsor amends the plan to increase benefits.

Information as of 1/1/2012:

Prefunding balance and carryover balance	\$0
Actuarial value of plan assets	3,160,000
Annuity purchases for NHCEs in prior two years	0
Funding target prior to plan amendment	4,100,000
Increase in funding target due to the plan amendment	800,000
Effective interest rate	6.00%

The plan sponsor has chosen to make an IRC section 436 contribution on 7/1/2012 to allow the amendment to take effect. There are no other contributions made during 2012.

Question 33

In what range is the IRC section 436 contribution?

- (A) Less than \$730,000
- (B) \$730,000 but less than \$760,000
- (C) \$760,000 but less than \$790,000
- (D) \$790,000 but less than \$820,000
- (E) \$820,000 or more

Data for Question 34 (2 points)

A plan pays mandatory lump sums less than or equal to \$1,000.

Elective lump sums are allowed in any amount in excess of \$1,000.

The plan terminated in a standard termination.

Data for missing participant Smith, not in pay status, as of deemed distribution date:

Lump sum based on plan provisions	\$5,600
Present value based on PBGC lump sum assumptions	5,900
Present value based on PBGC missing participant annuity assumptions	5,500

Values do not include any expense loads.

Question 34

In what range is the Designated Benefit for Smith?

- (A) Less than \$5,610
- (B) \$5,610 but less than \$5,720
- (C) \$5,720 but less than \$5,830
- (D) \$5,830 but less than \$5,940
- (E) \$5,940 or more

Data for Question 35 (2 points)

Consider the following statements regarding fiduciary standards:

- I. If the plan actuary makes the final decision on plan document interpretation, the actuary becomes a plan fiduciary.
- II. Plans are required to have at least one fiduciary.
- III. Plan fiduciaries are required to choose the least expensive annuity that is guaranteed by an insurance company.

Question 35

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

- (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.

Data for Question 36 (4 points)

Data for the only nine participants that have ever been in the plan:

<u>Participant number</u>	<u>Stock ownership percentage</u>	<u>2012 compensation</u>	<u>Distributions</u>		<u>Present value of accrued benefit as of 12/31/2012</u>
			<u>2011</u>	<u>2012</u>	
1	50.0	\$200,000	\$0	\$50,000	\$200,000
2	0.5	200,000	0	0	30,000
3	3.0	160,000	0	0	80,000
4	3.0	125,000	0	0	50,000
5	6.0	100,000	0	0	60,000
6	0	70,000	40,000	20,000	20,000
7	0	50,000	0	40,000	40,000
8	0	30,000	0	0	30,000
9	0	0	0	0	100,000

Participant 9 terminated employment on 11/1/2011. All others were employed for the entire 2011 and 2012 plan years.

Participants 1 and 5 are the only officers.

The stock ownership percentages and officer statuses have never changed since the company's inception.

Present values of accrued benefits as of 12/31/2012 do not include the value of any distributions received. No distributions were ever paid from the plan prior to 2011.

Question 36

In what range is top-heavy ratio for 2013?

- (A) Less than 0.51
- (B) 0.51 but less than 0.56
- (C) 0.56 but less than 0.61
- (D) 0.61 but less than 0.66
- (E) 0.66 or more

Data for Question 37 (3 points)

Valuation date: 12/31/2011

Normal retirement benefit formula: 1% of final 3-year average compensation for each year of service

The plan provides the lowest top-heavy minimum allowable.

Data for non-key participant Smith:

Date of birth 1/1/1951
Date of hire 1/1/1998

<u>Year</u>	<u>Compensation</u>
1998	\$50,000
1999	55,000
2000	60,000
2001	62,000
2002	65,000
2003	68,000
2004	72,000
2005	72,000
2006	75,000
2007	65,000
2008	75,000
2009	68,000
2010	90,000
2011	90,000

The plan was determined to be top-heavy only for the 12 years 1998 through 2009.

Question 37

In what range is Smith's annual accrued benefit as of 12/31/2011?

- (A) Less than \$13,000
- (B) \$13,000 but less than \$14,500
- (C) \$14,500 but less than \$16,000
- (D) \$16,000 but less than \$17,500
- (E) \$17,500 or more

Data for Question 38 (3 points)

A plan provides a preretirement death benefit equal to the present value of the accrued benefit.

Plan's actuarial equivalence assumptions:

Interest rate	7.5%
Pre-commencement mortality table	None
Post-commencement mortality table	Applicable mortality under IRC section 417(e)

Early retirement benefit is based on plan actuarial equivalence.

Selected data for participant Smith:

Date of birth	12/31/1952
Date of hire	1/1/2005
Date of participation	1/1/2006
Date of retirement	12/31/2012
Compensation for each year	\$150,000
Form of benefit elected	Life annuity

Single life annuity factors based on the applicable mortality table at selected retirement ages and interest rates:

<u>Age</u>	<u>5.0%</u>	<u>7.5%</u>
60	13.56	10.84
62	12.98	10.50

Question 38

In what range is Smith's IRC section 415 limit as of 12/31/2012?

- (A) Less than \$118,000
- (B) \$118,000 but less than \$121,000
- (C) \$121,000 but less than \$124,000
- (D) \$124,000 but less than \$127,000
- (E) \$127,000 or more

Data for Question 39 (3 points)

Plan effective date: 1/1/1990

Normal retirement benefit:

Prior to 1/1/2007 \$50 per month for each year of service
On or after 1/1/2007 \$100 per month for each year of service

Early retirement provision: Age 55 and 20 years of service

Early retirement reduction: 5% per year prior to age 65

Vesting: 100% with 5 years of service

The plan sponsor files for bankruptcy on 1/1/2009.

The plan terminates in a distress termination while the sponsor is in bankruptcy on 1/1/2012.

Data for active participants:

	<u>Smith</u>	<u>Jones</u>
Date of birth	1/1/1955	1/1/1980
Date of hire	1/1/1990	1/1/2005

Question 39

In what range is the sum of the monthly guaranteed benefits at earliest retirement age for Smith and Jones?

- (A) Less than \$1,300
- (B) \$1,300 but less than \$1,500
- (C) \$1,500 but less than \$1,700
- (D) \$1,700 but less than \$1,900
- (E) \$1,900 or more

Data for Question 40 (4 points)

Information as of 1/1/2012:

Standard Premium Funding Target	\$100,000,000
Actuarial (market) value of assets before reflecting contributions receivable	76,000,000
Funding standard carryover balance	2,000,000
Prefunding balance	0

Contributions paid during 2012:

<u>Date paid</u>	<u>Amount</u>	<u>For plan year</u>
3/31/2012	\$800,000	2011
4/15/2012	1,000,000	2012
7/15/2012	1,000,000	2012
9/15/2012	4,500,000	2011
10/15/2012	1,000,000	2012

Effective interest rates:

Plan year 2011	6.25%
Plan year 2012	5.50%

The plan administrator has not made an election to use the Alternative Premium Funding Target.

Question 40

In what range is the PBGC Variable-rate premium for 2012?

- (A) Less than \$150,000
- (B) \$150,000 but less than \$160,000
- (C) \$160,000 but less than \$170,000
- (D) \$170,000 but less than \$180,000
- (E) \$180,000 or more

Data for Question 41 (2 points)

Consider the following statements regarding a notice of reduction in future benefit accruals:

- I. A 204(h) notice is not required if an amendment removes an early retirement benefit to which some participants may become eligible.
- II. A 204(h) notice must be provided to a beneficiary who is an alternate payee under a QDRO whose rate of future benefit accrual may be significantly reduced.
- III. The tax imposed for failure to provide a 204(h) notice is \$100 per day per applicable individual.

Question 41

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

- (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

Data for Question 42 (3 points)

Consider the following plans that are sponsored by four unrelated companies:

	<u>Non-excludable employees</u>		<u>Benefiting employees</u>	
	<u>HCE</u>	<u>NHCE</u>	<u>NCE</u>	<u>NHCE</u>
Plan I	5	100	1	40
Plan II	10	50	10	0
Plan III	5	95	5	35
Plan IV	50	100	0	40

Question 42

How many of these plans satisfy the participation requirement of IRC section 401(a)(26)?

- (A) 0
- (B) 1
- (C) 2
- (D) 3
- (E) 4

Data for Question 43 (4 points)

Plan effective date: 1/1/2000

The plan is amended to increase benefits during 2012. The amendment is effective 9/30/2012.

Valuation information as of 1/1/2012:

Market value assets	\$1,660,000
Actuarial value assets	1,655,000
Funding target before amendment	2,000,000
Increase in funding target due to amendment	200,000
Funding balances	0

Other information:

NHCE annuity purchases during 2009	\$39,000
NHCE annuity purchases during 2010	61,000
NHCE annuity purchases during 2011	0

Effective interest rates

Plan year 2011	6.10%
Plan year 2012	5.60%

Question 43

In what range is the amount that must be contributed by the plan sponsor on 9/30/2012 to allow the amendment to take effect?

- (A) Less than \$90,000
- (B) \$90,000 but less than \$92,300
- (C) \$92,300 but less than \$94,600
- (D) \$94,600 but less than \$96,900
- (E) \$96,900 or more

Data for Question 44 (3 points)

Eligibility: 1 year of service (elapsed time)
Entry dates: 1/1 and 7/1
Excluded employees: Hourly employees and non-resident aliens
Hours needed for accrual: 1,000

<u>Employee</u>	<u>Category</u>	<u>Date of hire</u>	<u>Date of termination</u>	<u>Hours in 2012</u>
1	Salaried	4/1/2010		1,000
2	Hourly	4/1/2010		1,000
3	Non-resident alien	4/1/2010		1,000
4	Salaried	4/1/2011		1,000
5	Salaried	9/1/2011		1,000
6	Salaried	4/1/2010	6/30/2012	1,000
7	Salaried	4/1/2010	6/30/2012	400
8	Hourly	4/1/2010	6/30/2012	1,000
9	Hourly	4/1/2010	6/30/2012	400

The simplified testing method is not used.

Question 44

How many employees may be treated as excludable for purposes of IRC section 401(a)(26) for 2012?

- (A) Fewer than 3
- (B) 3
- (C) 4
- (D) 5
- (E) 6 or more

****END OF EXAMINATION****