

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 10, 2011

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, 2010.
- This examination consists of 45 True and False or multiple-choice questions worth a total of 100 points. Questions 1-20 are True/False and Questions 21-45 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 2011

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

****BEGINNING OF EXAMINATION****

Data for Question 1 (1 point)

Consider the following statement:

According to PBGC regulations, in a standard termination, a plan amendment that increases benefits and is adopted after the plan's termination date is taken into account with respect to a participant's plan benefits.

Question 1

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 2 (1 point)

The qualified optional survivor annuity is actuarially equivalent to the qualified joint and survivor annuity.

Consider the following statement:

The plan may allow a participant to elect the qualified optional survivor annuity without spousal consent.

Question 2

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 3 (1 point)

A plan purchased property from a disqualified person for \$60,000.

The fair market value of the property as of the date of the transaction was \$70,000.

Consider the following statement:

This is a prohibited transaction.

Question 3

Is the above statement true or false?

(A) True

(B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 4 (1 point)

A plan amendment increasing the liability of a plan is adopted in 2009 with an effective date of 2/1/2010.

On the effective date, the inclusive presumed AFTAP is less than 80% and the plan amendment is not permitted to take effect.

On 9/15/2010, the actuary certifies the 2010 AFTAP to be 82% after reflecting the amendment.

Consider the following statement:

The plan amendment cannot go into effect with an effective date prior to 9/15/2010.

Question 4

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 5 (1 point)

A plan trustee transfers money from the plan into his personal checking account. The trustee returns the full amount of the money transferred, along with 10% interest, to the plan within 30 days.

Consider the following statement:

A prohibited transaction has occurred.

Question 5

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 6 (1 point)

An employer terminates a pension plan and replaces it with a qualified defined contribution plan that covers 90% of the existing active participants. The employer transfers 30% of the excess assets to the replacement plan.

Consider the following statement:

The excise tax on the assets reverting to the employer is 50%.

Question 6

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 7 (1 point)

Consider the following statement:

A complete withdrawal from a multiemployer plan occurs when an employer permanently ceases to have an obligation to contribute to the plan.

Question 7

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 8 (1 point)

Companies A and B have always been members of the same controlled group.

On 1/1/1990, Company A established a pension plan for employees of Company A. Company B has never had a pension plan.

Smith was hired at age 18 by Company B on 1/1/1997.

He works for Company B until 1/1/2012, at which point he transfers to Company A.

Consider the following statement:

Smith must be 100% vested as of 1/1/2012 in Company A's pension plan.

Question 8

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 9 (1 point)

Smith is a participant who has made voluntary contributions to a defined benefit plan.

Consider the following statement:

Separate accounting is required for the portion of Smith's accrued benefit attributable to voluntary contributions.

Question 9

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 10 (1 point)

Consider the following statement:

All IRC section 436 limitations in effect immediately before the date of plan termination cease to apply once the plan is terminated.

Question 10

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 11 (1 point)

Plan A covers only salaried employees.

Plan B covers only hourly employees.

Plans A and B are not permissively aggregated for purposes of coverage testing.

Plan A requires that a participant work at least 1,000 hours in order to accrue a benefit.

Data for hourly employee Smith:

Age	30
Years of service	5

Smith terminates employment after completing 300 hours of service during the plan year in which he terminates.

Consider the following statement:

Smith is an excludable employee for purposes of coverage testing for Plan A.

Question 11

Is the above statement true or false?

(A) True

(B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 12 (1 point)

A plan owed Flat-rate Premiums for 450 participants for the 2009 plan year.

The plan submits its 2010 comprehensive premium filing to the PBGC on 10/15/2010, indicating that the Premium Funding Target is an estimate.

An election to use the Alternative Premium Funding Target was not made as part of the comprehensive premium filing for 2008, 2009 or 2010.

Consider the following statement:

The final Variable rate Premium may be determined using the Alternative Premium Funding Target by making this election when the filing is amended to reconcile the estimated Premium Funding Target with the actual Premium Funding Target.

Question 12

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 13 (1 point)

Plan sponsor: Employer A

Type of plan: Defined benefit

Market value of assets: \$8,500,000, including \$50,000 invested in Employer A's stock

The trust purchases an additional \$400,000 of Employer A's stock.

Consider the following statement:

This purchase constitutes a prohibited transaction.

Question 13

Is the above statement true or false?

(A) True

(B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 14 (1 point)

Plan effective date: 1/1/2008

Optional forms of payment include a lump sum.

The 2010 AFTAP of 50% was certified on September 30, 2010.

Consider the following statement:

A participant can be paid a lump sum of \$25,000 on 11/1/2010.

Question 14

Is the above statement true or false?

(A) True

(B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 15 (1 point)

Consider the following statement:

In a standard termination, on the plan's termination date, plan assets must be sufficient to cover benefit liabilities.

Question 15

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 16 (1 point)

A death benefit of \$1,200,000 was paid from a plan to the beneficiary of a substantial owner of a company.

Consider the following statement:

This is a reportable event.

Question 16

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 17 (1 point)

Normal retirement age:

Earlier of (a) or (b)

- (a) Later of age 62 or 10 years of service,
- (b) Later of age 64 or 4th anniversary of date of participation.

Consider the following statement:

This plan provision is an allowable definition of normal retirement age.

Question 17

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 18 (1 point)

A plan provides for the following accrued benefit formula:

2.0% of compensation for each of the first 5 years of service, plus
1.5% of compensation for all additional years of service.

Consider the following statement:

The plan benefit formula meets the safe harbor requirements of IRC section 401(a)(4).

Question 18

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 19 (1 point)

Consider the following statement:

An enrolled actuary can have his or her enrollment terminated for the use of abusive language in connection with matters before the Department of the Treasury.

Question 19

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 20 (1 point)

For the 2011 plan year the PBGC Variable rate Premium was determined using the Standard Premium Funding Target.

Consider the following statement:

For the 2012 plan year, the plan administrator may elect to determine the Variable rate Premium using the Alternative Premium Funding Target.

Question 20

Is the above statement true or false?

- (A) True
- (B) False

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 21 (3 points)

<u>Year</u>	<u>AFTAP</u>
2010	95%
2011	Not yet certified

Market value of assets as of 12/31/2010:	\$100,000
Funding standard carryover balance as of 1/1/2011:	0
Prefunding balance as of 1/1/2011:	0

A plan amendment is adopted on 5/1/2011 increasing liabilities.

The increase in the funding target as of 1/1/2011 is \$40,000.

X = the discounted value as of 1/1/2011 of the IRC section 436 contribution needed to allow the amendment to go into effect.

Question 21

In what range is X?

- (A) Less than \$19,500
- (B) \$19,500 but less than \$29,000
- (C) \$29,000 but less than \$38,500
- (D) \$38,500 but less than \$48,000
- (E) \$48,000 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 22 (2 points)

A terminated plan has surplus assets of \$1,000,000.

Consider the following statements regarding the excise tax on reversions:

- I. If \$1,000,000 reverts to the employer, the excise tax is \$500,000.
- II. If \$300,000 is used to increase benefits in accordance with IRC section 4980(d)(3) and \$700,000 reverts to the employer, the excise tax is \$200,000.
- III. If \$300,000 is transferred to a qualified replacement plan in accordance with IRC section 4980(d)(2) and \$700,000 reverts to the employer, the excise tax is \$140,000.

Question 22

Which, if any, of the above statement(s) 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

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 24 (3 points)

Early retirement reduction: 5% per year from normal retirement age.

Early retirement eligibility: Age 55 and 10 years of service.

The following are the only optional forms of payment available under the plan: joint and 50% survivor annuity and joint and 100% survivor annuity.

The plan specifies the following factors to convert the normal form of benefit to the following optional forms:

	Participant age	
	<u>55</u>	<u>65</u>
Joint and 50% survivor annuity	0.94	0.88
Joint and 100% survivor annuity	0.90	0.80

Data for participant Smith:

Age at hire	43
Age at termination	52
Age at death	53
Years of service at death	9

Vested accrued benefit: \$1,000

The plan's death benefit is the minimum qualified pre-retirement annuity under IRC section 417.

Question 24

In what range is the benefit payable to Smith's spouse at the earliest benefit commencement date allowed under the plan?

- (A) Less than \$100
- (B) \$100 but less than \$300
- (C) \$300 but less than \$500
- (D) \$500 but less than \$700
- (E) \$700 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 25 (3 points)

As of 12/31/2010:

Active vested participants	12
Active non-vested participants	12
Terminated vested participants	4
Retired participants	10

There were no changes in census data on 1/1/2011.

Information as of 1/1/2011:

Standard Premium Funding Target	\$2,180,000
Market value of plan assets	1,300,000
Actuarial value of plan assets	1,430,000

An election to use the Alternative Premium Funding Target was not made as part of the comprehensive premium filing for 2008, 2009, 2010, or 2011.

Question 25

In what range is the required PBGC premium for 2011?

- (A) Less than \$7,500
- (B) \$7,500 but less than \$8,000
- (C) \$8,000 but less than \$8,500
- (D) \$8,500 but less than \$9,000
- (E) \$9,000 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 26 (2 points)

Consider the following statements regarding a defined benefit plan covered by the PBGC:

- I. A plan funding notice must be provided only every third year to each plan participant and beneficiary.
- II. A plan funding notice must include a statement that the plan's FTAP for the plan year for which the notice applies and the two prior plan years is at least 100%. If any FTAP has not been at least 100%, the actual FTAP must be shown.
- III. A plan funding notice must include a statement of the plan's funding policy and the plan's asset allocation.

Question 26

Which, if any, of the above statement(s) 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.

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 27 (4 points)

Plan effective date: 1/1/1990.

Benefit formula:

Prior to 2008 \$50 per month times all years of service
After 2007 \$100 per month times all years of service

Early retirement eligibility: Age 55 with 20 years of service.

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

Vesting: 100% with 5 years of service.

The plan is amended to freeze benefit accruals on 1/1/2009.

Plan termination date: 1/1/2011.

Data for active participants, neither of whom is a majority owner:

	<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 27

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

- (A) Less than \$1,100
- (B) \$1,100 but less than \$1,300
- (C) \$1,300 but less than \$1,500
- (D) \$1,500 but less than \$1,700
- (E) \$1,700 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 28 (4 points)

Smith is a participant in a defined benefit plan and a 401(k) profit sharing plan sponsored by the same employer.

Normal retirement ages:

Defined benefit plan	65
401(k) profit sharing plan	60

The plans are aggregated for purposes of coverage and nondiscrimination testing.

The average benefits percentage test must be performed using normal accrual rates.

Coverage and nondiscrimination testing methods and assumptions:

Testing methods	Annual benefits basis
Measurement period	Current plan year
Standard interest rate	8.5%

Selected annuity factors for testing:

Age	$\ddot{a}_x^{(12)}$
60	9.62
65	8.83

Data for Smith for the plan year ending 12/31/2010:

Age on testing date	50
Testing compensation	\$100,000
Annual defined benefit accrual	2,000
Salary deferrals	16,500
Catch-up salary deferrals	5,500
Profit sharing allocation	5,000

Question 28

In what range is Smith's benefit percentage for the average benefits percentage test?

- (A) Less than 5.00%
- (B) 5.00% but less than 7.00%
- (C) 7.00% but less than 9.00%
- (D) 9.00% but less than 11.00%
- (E) 11.00% or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 29 (4 points)

Effective date: 1/1/2000

Selected information for a plan:

	<u>1/1/2009</u>	<u>1/1/2010</u>	<u>1/1/2011</u>
Carryover balance		\$0	\$0
Prefunding balance		80,000	
Actuarial (market) value of assets	\$750,000	790,000	750,000
Funding target	1,000,000	1,000,000	850,000
Effective rate		6.00%	

The 2010 AFTAP was certified on 3/1/2010.

The actuary calculates the 2010 rate of return as 20%.

No contributions for the 2010 plan year were made.

The plan pays lump sums.

The plan sponsor has never elected to reduce a carryover or prefunding balance.

Question 29

In what range is the 2011 AFTAP if the actuary certifies the AFTAP on 3/31/2011?

- (A) Less than 72.5%
- (B) 72.5% but less than 77.5%
- (C) 77.5% but less than 82.5%
- (D) 82.5% but less than 87.5%
- (E) 87.5% or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 30 (2 points)

As of January 1, 2011:

Active participants	
Hourly	50
Salaried	30
Inactive participants with deferred benefits	20
Inactive participants in pay status	20

There are no alternate payees entitled to plan benefits.

A plan amendment is adopted on October 1, 2010 that:

- (1) significantly reduces future benefit accruals for hourly employees AND
- (2) eliminates the early retirement subsidy on future benefit accruals for all employees.

The amendment is effective for accruals after January 1, 2011.

Question 30

Assuming all other factors satisfy the requirements, which of the following actions satisfies the 204(h) notice requirements?

- (A) Plan administrator sends 204(h) notice via email to all salaried employees and posts notice on bulletin board in area frequented by hourly employees on October 2, 2010.
- (B) Plan administrator sends 204(h) notice via 1st class mail to all hourly and salaried employees on October 5, 2010.
- (C) Plan administrator sends 204(h) notice via 1st class mail to all hourly employees on September 30, 2010.
- (D) Plan administrator sends 204(h) notice via 1st class mail to all plan participants on November 25, 2010.
- (E) None of the above.

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 31 (5 points)

Consider the following information for the plan:

Effective date 1/1/2005

Benefit formula \$2 per month, for each month of service

Plan year	Certification type	Date issued	Value
2008	Specific	2/1/2008	50%
2009	Specific	2/1/2009	82%
2010	Range	7/1/2010	60% - 80%
2010	Specific	2/1/2011	65%
2011	Specific	7/1/2011	63%
2012	Specific	4/1/2013	67%
2013	Range	9/1/2013	60% - 80%
2013	Specific	12/1/2013	72%

The plan does not provide for automatic restoration of benefit accruals in the event a restriction under IRC section 436 is lifted.

The plan has never had a carryover balance or prefunding balance.

Data for participant Smith:

Date of birth 1/1/1960

Date of hire 1/1/2005

Question 31

In what range is Smith's monthly accrued benefit as of 12/31/2013?

- (A) Less than \$153
- (B) \$153 but less than \$162
- (C) \$162 but less than \$171
- (D) \$171 but less than \$180
- (E) \$180 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 32 (2 points)

As of 12/31/2010:

Active vested participants	7
Active non-vested participants	4
Terminated vested participants	1
Retired participants	10

Unfunded vested benefits for premium purposes: \$330,000

The sponsor has 16 additional employees that are not participants in the plan as of 12/31/2010.

There were no changes in census data on 1/1/2011.

Question 32

In what range is the required PBGC premium for 2011?

- (A) Less than \$3,100
- (B) \$3,100 but less than \$3,600
- (C) \$3,600 but less than \$4,100
- (D) \$4,100 but less than \$4,600
- (E) \$4,600 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 33 (3 points)

Type of Plan: Multiemployer.

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

Employer A completely withdraws from the plan on 10/30/2010.

No other employers have ever withdrawn from the plan.

Unfunded vested benefit liability as of 12/31/2009:	\$6,500,000.
Unfunded vested benefit liability as of 12/31/2010:	6,000,000.
Sum of contributions for years 2005 to 2009 for Employer A:	\$90,000.
Sum of contributions for years 2006 to 2010 for Employer A:	75,000.
Sum of contributions for years 2005 to 2009 for all employers:	\$5,000,000.
Sum of contributions for years 2006 to 2010 for all employers:	5,500,000.

Question 33

In what range is the withdrawal liability attributable to Employer A?

- (A) Less than \$25,000
- (B) \$25,000 but less than \$55,000
- (C) \$55,000 but less than \$85,000
- (D) \$85,000 but less than \$115,000
- (E) \$115,000 or greater

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 34 (3 points)

A plan provides temporary supplements to participants who retire at or after age 55 but before age 62. The supplement is paid from a participant's actual retirement to age 62.

The employer has more than 25 employees.

Selected valuation results:

IRC section 430/ERISA section 303 Funding Target	<u>1/1/2010</u>	<u>1/1/2011</u>
Retirees and beneficiaries receiving payments	\$3,020,000	\$3,270,000
Vested terminated participants	2,000,000	2,500,000
Active participants' lifetime vested benefits	4,860,000	5,260,000
Active participants' lifetime non-vested benefits	500,000	550,000
Temporary supplement for vested active participants		
Currently eligible	700,000	750,000
Not currently eligible	<u>200,000</u>	<u>250,000</u>
Total	\$11,280,000	\$12,580,000
Actuarial value of assets	\$6,750,000	7,500,000
Market value of assets	6,250,000	6,900,000
Funding standard carryover balance	400,000	350,000
Prefunding balance	0	200,000

An election has been made to use the Alternative Premium Funding Target.

Question 34

In what range is the PBGC variable rate premium for 2011?

- (A) Less than \$40,000
- (B) \$40,000 but less than \$43,000
- (C) \$43,000 but less than \$46,000
- (D) \$46,000 but less than \$49,000
- (E) \$49,000 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 35 (2 points)

Consider the following statements regarding mandatory employee contributions:

- I. Contributions are projected at 120% of the federal midterm rate to normal retirement date to determine the portion of a participant's benefit attributable to employee contributions.
- II. Contributions are allocated to a separate account.
- III. Contributions must comply with applicable benefits rights and features nondiscrimination tests of IRC section 401(a)(4).

Question 35

Which, if any, of the above statement(s) 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

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 36 (2 points)

A plan terminates on 11/14/2011 in an involuntary termination.

Participant counts as of indicated date:

	<u>Retirees</u>	Terminated <u>vested</u>	Active <u>vested</u>	Active <u>non-vested</u>
12/31/2010	10	30	350	100
11/13/2011	8	20	325	73

Question 36

In what range is the total termination premium owed to the PBGC?

- (A) Less than \$1,300,000
- (B) \$1,300,000 but less than \$1,500,000
- (C) \$1,500,000 but less than \$1,700,000
- (D) \$1,700,000 but less than \$1,900,000
- (E) \$1,900,000 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 37 (4 points)

Effective date: 1/1/1985.

Normal retirement benefit: 2% of highest consecutive 3-year average compensation times years of service.

Early retirement age: 55 with 10 years of service.

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

The plan was amended on 1/1/2009 to change the multiplier to 2.06% (from 2%) for all participants.

The plan was terminated on 1/1/2011.

Data for participant Smith, who is not a majority owner:

Date of birth	1/1/1945
Date of hire	1/1/1985
Date of retirement	1/1/2010

<u>Year</u>	<u>Compensation</u>
2009	\$82,500
2008	75,000
2007	72,500
2006	65,000
2005	60,000
2004	55,000
2003	50,000

Question 37

In what range is the annual annuity benefit assigned to priority category 4 for participant Smith?

- (A) Less than \$10,475
- (B) \$10,475 but less than \$10,950
- (C) \$10,950 but less than \$11,425
- (D) \$11,425 but less than \$11,900
- (E) \$11,900 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 38 (4 points)

Plan effective date: 1/1/1990.
Plan termination date: 12/31/2010.

Normal retirement benefit:

Effective 1/1/1990 \$100 per month per each year of service
Effective 7/1/2007 \$140 per month per each year of service

Early retirement age: Age 62 with 30 years of service.
Plan early retirement factors: No reduction.

Data for participant Smith, who is not a majority owner:

Date of birth 1/1/1948
Date of hire 1/1/1978
Date of benefit commencement 1/1/2010

Annual compensation history:

<u>Year</u>	<u>Compensation</u>
2005	\$50,000
2006	52,000
2007	53,000
2008	53,000
2009	56,000

Question 38

In what range is Smith's monthly PBGC guaranteed benefit?

- (A) Less than \$3,400
- (B) \$3,400 but less than \$3,500
- (C) \$3,500 but less than \$3,600
- (D) \$3,600 but less than \$3,700
- (E) \$3,700 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 39 (3 points)

Effective date: 1/1/1994.
Vesting service: Plan years with at least 1,000 hours.
Vesting schedule: 3 to 7-year graded schedule.

The plan has the most restrictive method allowed under IRC section 411 for determining vesting service.

Consider the following employment history for a participant born in 1970:

<u>Plan year</u>	<u>Hours</u>
1996	1,200
1997	1,050
1998	800
1999	0
2000	0
2001	0
2002	0
2003	400
2004	950
2005	1,200
2006	1,450
2007	650
2008	250
2009	1,500
2010	1,750

Question 39

In what range is the sum of this participant's vesting service credits determined as of the end of 1998, 2004 and 2010?

- (A) Fewer than 5
- (B) 5 but fewer than 7
- (C) 7 but fewer than 9
- (D) 9 but fewer than 11
- (E) 11 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 40 (3 points)

Data for a plan:

Effective date	1/1/2008
Type of plan	Applicable defined benefit plan under which the present value of accrued benefit is the balance of a hypothetical account projected to normal retirement date
Interest crediting rate	5%
Early retirement date	Age 60 and 4 years of plan participation
Early retirement benefit	Actuarial equivalent of accrued benefit

Actuarial equivalence: 7.5% interest.

Data for participant Smith:

Date of birth	1/1/1951
Date of hire	1/1/1990
12/31/2010 hypothetical account balance	\$7,566

Selected annuity factors using actuarial equivalence:

x	\ddot{a}_x
60	9.46
61	9.27
62	9.07
63	8.87
64	8.67
65	8.46

X = Smith's monthly 12/31/2010 accrued early retirement benefit payable as a life annuity at Smith's earliest possible commencement date.

Question 40

In what range is X ?

- (A) Less than \$62.50
- (B) \$62.50 but less than \$70.83
- (C) \$70.83 but less than \$79.17
- (D) \$79.17 but less than \$87.50
- (E) \$87.50 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 41 (3 points)

Employees become participants on the 1/1 or 7/1 coincident with or next following the later of reaching age 21 and completing 1,000 hours during an employment year.

Participants accrue a benefit upon completion of 1,000 hours of service in any plan year.

The employer has elected to exclude all possible employees in accordance with IRC section 410(b).

Data for all employees for 2011:

<u>Number of employees</u>	<u>Date of birth</u>	<u>Date of hire</u>	<u>Date of termination</u>	<u>Date of rehire</u>	<u>2010 hours for each employee</u>	<u>2011 hours for each employee</u>
100	1/1/1971	1/1/2010			2,080	2,080
50	1/1/1971	1/1/2010			2,080	800
35	1/1/1971	1/1/2010	5/1/2011		2,080	800
25	1/1/1971	1/1/2010	3/1/2011		2,080	300
20	1/1/1971	1/1/2010			850	1,200
10	1/1/1981	1/1/2010	3/1/2011	12/1/2011	2,080	450
20	1/1/1991	1/1/2010			1,050	1,050

Question 41

In what range is the number of non-excludable employees for 2011?

- (A) Less than 170
- (B) 170 but less than 190
- (C) 190 but less than 210
- (D) 210 but less than 230
- (E) 230 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 42 (4 points)

Type of plan: Multiemployer

Method for withdrawal liability: Presumptive with mandatory de minimis rule.

Employer A completely withdraws from the plan on 4/30/2011. No other employers have ever withdrawn from the plan.

Prior to 2003 there were no unfunded vested benefits.

<u>Year</u>	Total contributions – <u>Employer A</u>	Total contributions – <u>all employers</u>	12/31 vested <u>benefit liability</u>	12/31 value of <u>assets</u>
2003	\$216,500	\$4,330,000	\$75,000,000	\$77,000,000
2004	205,500	4,110,000	80,000,000	83,000,000
2005	195,000	3,900,000	85,000,000	93,000,000
2006	185,500	3,710,000	90,000,000	103,000,000
2007	176,000	3,520,000	95,000,000	113,000,000
2008	167,000	3,340,000	100,000,000	96,000,000
2009	247,000	2,340,000	104,000,000	102,000,000
2010	250,000	1,870,000	108,000,000	95,000,000

Question 42

What is the withdrawal liability for Employer A?

- (A) Less than \$864,500
- (B) \$864,500 but less than \$879,000
- (C) \$879,000 but less than \$893,500
- (D) \$893,500 but less than \$908,000
- (E) \$908,000 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 43 (4 points)

Plan effective date: 1/1/1990.

Plan termination date: 1/1/2011.

Benefit formula before 10/1/2009: 1% of final average salary times years of service.

Benefit formula after 9/30/2009: 2% of final average salary times years of service.

Early retirement provisions:

Eligibility Age 55 with 10 years of service

Early retirement reductions before 7/1/2007 5% per year prior to age 65

Early retirement reductions after 6/30/2007 0% per year prior to age 65

Data for active participant Smith who is not a majority owner:

Date of birth 1/1/1955

Date of hire 1/1/1985

Final average annual salary \$100,000

Expected retirement age pursuant to regulations: 56.

Question 43

In what range is Smith's monthly PBGC guaranteed benefit at expected retirement age?

- (A) Less than \$1,400
- (B) \$1,400 but less than \$1,600
- (C) \$1,600 but less than \$1,800
- (D) \$1,800 but less than \$2,000
- (E) \$2,000 or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 44 (5 points)

Optional forms of benefit: Life annuity, lump sum, joint and 100% survivor annuity, joint and 75% survivor annuity, joint and 50% survivor annuity.

Qualified Joint and Survivor annuity: 50%.

Early retirement benefit: Actuarial equivalent.

Benefits may be paid at any time after termination of employment.

Information for Participant Smith:

Age on 12/31/2010	45
Compensation for 2010	\$300,000
Monthly accrued benefit as of 12/31/2009	3,000
Monthly accrued benefit as of 12/31/2010	3,500
Covered compensation	100,116
Permitted disparity factor	0.65%

Selected annuity values:

	<u>Plan assumptions (5.0%)</u>		<u>Testing assumptions (8.5%)</u>	
<u>Option</u>	<u>Age 45</u>	<u>Age 65</u>	<u>Age 45</u>	<u>Age 65</u>
Life only	15.24	10.04	10.74	7.95
Joint and 50% survivor	16.12	11.20	11.16	8.72
Joint and 100% survivor	17.00	12.39	11.57	9.50

Question 44

Using the annual testing method and imputing permitted disparity, what is Smith's most valuable accrual rate based on the benefit payable at age 45?

- (A) Less than 3.90%
- (B) 3.90% but less than 4.20%
- (C) 4.20% but less than 4.50%
- (D) 4.50% but less than 4.80%
- (E) 4.80% or more

USE THIS PAGE FOR YOUR SCRATCH WORK

EXTRA BLANK PAPER IS PROVIDED AT THE END OF THE EXAM BOOK

Data for Question 45 (3 points)

Employee data for the 2011 plan year:

<u>Employee</u>	<u>Ownership percentage</u>
Smith	50%
Spouse of Smith	0%
Child A of Smith	46%
Spouse of child A	0%
Son of child A	0%
Child B of Smith	4%
Spouse of child B	0%
Daughter of child B	0%
Child C of Smith	0%
Spouse of child C	0%
Daughter of child C	0%
Son of child C	0%
Unrelated employee D	Earned \$100,000 in 2010 and \$150,000 in 2011
Unrelated employee E	Earned \$120,000 in 2010 and \$140,000 in 2011

All employees satisfy the eligibility requirements. The only officers are Smith and child A. No family members are HCEs due to compensation.

The plan sponsor does not use the top 20% rule for determining HCE status in 2011.

Question 45

In what range is the NHCE concentration percentage for 2011?

- (A) Less than 21.5%
- (B) 21.5% but less than 29.0%
- (C) 29.0% but less than 36.5%
- (D) 36.5% but less than 44.0%
- (E) 44.0% or more

****END OF EXAMINATION****

USE THIS PAGE FOR YOUR SCRATCH WORK

USE THIS PAGE FOR YOUR SCRATCH WORK