

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

**ENROLLED ACTUARIES PENSION EXAMINATION, SEGMENT B**

**MAY 2004 EA-2, SEGMENT B, EXAMINATION**

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2004

Data for Question 1 (1 point)

A plan is amended to eliminate the unreduced early retirement benefit that had been available to employees at least age 55 with 30 years of service.

The plan continues to provide early retirement benefits for employees at least age 55, but reduces such benefits by 5% for each year commencement precedes age 65.

Consider the following statement:

Only participants with 30 years of service on the effective date of the amendment need to have their accrued benefits as of that date reflect the unreduced early retirement benefit provisions.

Question 1

Is the above statement true or false?

- (A) True
- (B) False

2004

Data for Question 2 (1 point)

Consider the following statement:

All multiemployer plans are exempt from PBGC variable rate premiums.

Question 2

Is the above statement true or false?

- (A) True
- (B) False

2004

Data for Question 3 (1 point)

A pension plan provides that all excess assets will be distributed to plan participants upon plan termination.

Consider the following statement:

The plan sponsor may amend the plan to provide that excess assets be returned to the employer upon plan termination.

Question 3

Is the above statement true or false?

- (A) True
- (B) False

2004

Data for Question 4 (1 point)

Consider the following statement:

An enrolled actuary may not perform actuarial services where there is a conflict of interest, even if the existence of the conflict has been disclosed to all parties concerned.

Question 4

Is the above statement true or false?

- (A) True
- (B) False

2004

Data for Question 5 (1 point)

Consider the following statement:

In determining if a spinoff can be considered de minimis, one of the considerations is whether the assets spunoff are less than or equal to 5% of plan assets on at least one day of the plan year in which the spinoff occurs.

Question 5

Is the above statement true or false?

- (A) True
- (B) False

2004

Data for Question 6 (1 point)

Smith is an officer of Employer A.

Smith performs no duties with respect to the administration or management of the employee benefit plan except for recommending to the plan administrator the investment manager(s) of the employee benefit plan.

Consider the following statement:

Smith is a fiduciary with respect to the plan.

Question 6

Is the above statement true or false?

(A) True

(B) False



2004

Data for Question 7 (1 point)

For Plan A, a variable premium is owed to the PBGC for the 2003 and 2004 plan years. Shown below is a history of Plan A's funded current liability percentages calculated at the highest allowable current liability rates for its 2000 through 2004 plan years.

<u>January 1, 2000</u>	<u>January 1, 2001</u>	<u>January 1, 2002</u>	<u>January 1, 2003</u>	<u>January 1, 2004</u>
115%	98%	87%	81%	76%

Consider the following statement:

A participant notice is not required under ERISA Section 4011 for the 2004 plan year.

Question 7

Is the above statement true or false?

- (A) True
- (B) False

2004

Data for Question 8 (1 point)

Consider the following statement:

The latest time at which a corrective plan amendment can be adopted and implemented in order to pass the nondiscriminatory amount requirement for a given plan year is 2½ months after the close of the plan year.

Question 8

Is the above statement true or false?

- (A) True
- (B) False

2004

Data for Question 9 (1 point)

Consider the following statement:

A Schedule B does not need to be filed for a defined benefit plan described in IRC section 412(i) that is not top-heavy and is funded exclusively with insurance and annuity contracts.

Question 9

Is the above statement true or false?

- (A) True
- (B) False

2004

Data for Question 10 (1 point)

Plan effective date:	1/1/1999.
Eligibility:	Immediate participation.
Normal retirement age:	The latest possible statutory requirement.
Data for participant Smith:	
Date of birth	1/1/1938
Date of hire	1/1/1998

Consider the following statement:

Smith's normal retirement age is 65.

Question 10

Is the above statement true or false?

- (A) True
- (B) False

2004

Data for Question 11 (1 point)

Consider the following statement:

A successor fiduciary becomes liable for acts of a prior fiduciary even if action is taken to remedy such acts.

Question 11

Is the above statement true or false?

- (A) True
- (B) False

2004

Data for Question 12 (1 point)

Smith, a partially vested employee, terminates and elects a lump sum payment in 2001.

The plan is amended to eliminate the lump sum option with respect to benefits accruing after 2002.

Smith is rehired in 2004 and repays the original lump sum in accordance with IRC section 411(a)(7).

Consider the following statement:

The plan must retain the lump sum option for the benefit earned prior to Smith's original termination date.

Question 12

Is the above statement true or false?

- (A) True
- (B) False

2004

Data for Question 13 (1 point)

ABC Foundation was established in 1999 as a not-for-profit entity.

ABC Foundation has never paid any taxes.

Defined benefit plan effective date: January 1, 2004.

2004 deductible limit calculated under IRC section 404: \$200,000.

Contribution paid on January 1, 2004: \$250,000.

Consider the following statement:

An excise tax is owed by ABC Foundation due to the 2004 contribution.

Question 13

Is the above statement true or false?

(A) True

(B) False

2004

Data for Question 14 (1 point)

In December 2004, the enrolled actuary for Plan A discovers that the 2004 PBGC premium forms for Plan A had not been filed with the Pension Benefit Guaranty Corporation (PBGC). These forms did not require the enrolled actuary's certification.

Consider the following statement:

The enrolled actuary is not required to provide written notification to the Plan Administrator of the non-filing and is not required to send such written notification to the PBGC.

Question 14

Is the above statement true or false?

- (A) True
- (B) False



Data for Question 15 (2 points)

Plan A's normal retirement benefit is equal to (a) + (b) + (c) where:

- (a) is equal to 3% of average annual compensation times years of service up to 10,
- (b) is equal to 2% of average annual compensation times years of service exceeding 10 but not more than 20, and
- (c) is equal to 1% of average annual compensation times years of service exceeding 20 but less than 30.

A participant's accrued benefit under Plan A is determined by multiplying the normal retirement benefit times a fraction, the numerator of which is the participant's years of service as of the date of determination, and the denominator of which is the participant's years of service as of normal retirement age.

Consider the following statement:

Plan A satisfies the nondiscrimination requirements for safe harbor plans using the fractional accrual rule.

Question 15

Is the above statement true or false?

- (A) True
- (B) False

Data for Question 16 (3 points)

A pension plan testing for non-discrimination under IRC section 401(a)(4) uses grouping of accrual rates. One of the rate groups contains the following midpoint rates and uses the maximum allowable ranges:

Normal accrual rate	2.0%
Most valuable accrual rate	3.0%

Consider the following plan participants:

<u>Participant</u>	<u>Normal Accrual Rate</u>	<u>Most Valuable Accrual Rate</u>
Smith	2.20%	3.30%
Jones	2.14%	3.15%
Brown	1.91%	2.50%
Green	2.08%	2.65%

Question 16

Which of the above individuals may be assigned a normal accrual rate of 2.0% and a most valuable accrual rate of 3.0% through grouping of rates?

- (A) Smith only
- (B) Jones only
- (C) Brown only
- (D) Green only
- (E) The correct answer is not given by (A), (B), (C), or (D) above

2004

Data for Question 17 (2 points)

Average Annual Compensation for accrued benefits is defined as the highest five consecutive compensation years prior to retirement.

Data for participant Smith:

<u>Compensation Year</u>	<u>Annual Compensation</u>
1999	\$170,000
2000	175,000
2001	180,000
2002	190,000
2003	210,000

Question 17

In what range is the highest Average Annual Compensation that could be used in the calculation of Smith's accrued benefit as of 12/31/2003?

- (A) Less than \$176,000
- (B) \$176,000 but less than \$180,000
- (C) \$180,000 but less than \$184,000
- (D) \$184,000 but less than \$188,000
- (E) \$188,000 or more

2004

Data for Question 18 (4 points)

Plan A is split into Plans B and C on 1/1/2004.

Plan A uses the unit credit cost method.

Plan A valuation interest rate for all years: 7.5%

Amortization amount of outstanding bases as of 1/1/2004:

<u>Charges</u>	<u>Date</u> <u>Established</u>	<u>Amortization</u> <u>Amount</u>
Initial liability	1/1/2002	\$20,000
Loss	1/1/2003	\$60,000
<u>Credits</u>		
Gain	1/1/2004	\$20,000

The initial liability is attributable only to those participants transferred to Plan B.

Selected results and funding standard account items as of 1/1/2004:

	<u>Plan B</u>	<u>Plan C</u>
Normal cost	\$100,000	\$200,000
Actuarial (market) value of assets	774,127	715,000
Accrued liability	1,000,000	775,000
Credit balance	15,000	77,000
Current liability valued at gateway interest rate	800,000	600,000

Question 18

In what range is the minimum required contribution for Plan B for 2004 payable 12/31/2004?

- (A) Less than \$115,000
- (B) \$115,000 but less than \$125,000
- (C) \$125,000 but less than \$135,000
- (D) \$135,000 but less than \$145,000
- (E) \$145,000 or more

2004

Data for Question 19 (2 points)

As of 1/1/2004:

Market value of plan assets	\$1,780,000
Actuarial value of plan assets	\$1,800,000
Receivable contribution included in assets (deposited 7/1/2004)	\$400,000
Funding standard account credit balance as of 12/31/2003:	\$10,000
Plan asset valuation rate:	8.00%
Required interest rate:	5.00%
Current liability interest rate:	6.00%

Question 19

In what range is the adjusted value of plan assets when calculating the variable PBGC premium for the 2004 plan year under the General Rule?

- (A) Less than \$1,771,000
- (B) \$1,771,000 but less than \$1,776,000
- (C) \$1,776,000 but less than \$1,781,000
- (D) \$1,781,000 but less than \$1,786,000
- (E) \$1,786,000 or more

2004

Data for Question 20 (2 points)

Type of Plan: Multiemployer

Data for Employer A:

Date of withdrawal from multiemployer plan:	12/31/2004
Withdrawal liability:	\$100,000

<u>Year</u>	<u>Hours worked</u>	<u>Contribution rate per hour worked</u>
1992	120,000	\$0.23
1993	100,000	0.23
1994	110,000	0.24
1995	110,000	0.25
1996	120,000	0.27
1997	100,000	0.22
1998	140,000	0.23
1999	110,000	0.24
2000	130,000	0.24
2001	120,000	0.25
2002	110,000	0.26
2003	110,000	0.24
2004	140,000	0.25

Question 20

In what range is Employer A's annual withdrawal liability payment?

- (A) Less than \$28,550
- (B) \$28,550 but less than \$30,100
- (C) \$30,100 but less than \$31,650
- (D) \$31,650 but less than \$33,200
- (E) \$33,200 or more

2004

Data for Question 21 (3 points)

Corporation A sponsors a pension plan.

Subsidiaries X, Y and Z are participating employers in the plan.

Corporation A sells all of the stock of Subsidiary Z on June 30, 2004.

In connection with the sale, the plan is amended to cease benefit accruals for all employees of Subsidiary Z as of June 30, 2004.

Subsidiaries X, Y and Z have 20, 35 and 55 participants respectively.

Corporation A provides notice to plan participants that employees of Subsidiary Z will have no future benefit accruals after the sale. This notice is provided 30 days after the sale of Subsidiary Z.

Question 21

In what range is the excise tax, if any, imposed on Corporation A for failure to comply with ERISA section 204(h)?

- (A) \$0
- (B) \$1 but less than \$300,000
- (C) \$300,000 but less than \$600,000
- (D) \$600,000 but less than \$900,000
- (E) \$900,000 or more

# 2004

## Data for Question 22 (4 points)

Plan effective date: 1/1/1993.

Normal retirement age: Age 55.

Benefit formula: 10% of high 3-year average compensation for each year of benefit accrual service up to 10 years.

Pre-retirement death benefit: Present value of accrued benefit.

Actuarial equivalence:

Pre and post-retirement interest	5%
Pre-retirement mortality	None
Post-retirement mortality	1983 IAM Female

Applicable interest rate for 2004 plan year 4.93%.

Data for participant Smith:

Date of birth:	12/31/1949	Date of hire:	1/1/1995
Date of retirement:	12/31/2004	Compensation for all years:	\$104,000

Selected annuity factors:

Interest Rate	Mortality	$\ddot{a}_{55}^{(12)}$	$\ddot{a}_{62}^{(12)}$	$\ddot{a}_{65}^{(12)}$
5.00%	1983 IAM Female	15.31	13.64	12.80
5.00%	Rev. Ruling 2001-62	14.57	12.68	11.79
4.93%	Rev. Ruling 2001-62	14.68	12.76	11.86

## Question 22

In what range is the lump sum benefit payable to Smith as of 12/31/2004?

- (A) Less than \$1,488,000
- (B) \$1,488,000 but less than \$1,500,000
- (C) \$1,500,000 but less than \$1,512,000
- (D) \$1,512,000 but less than \$1,524,000
- (E) \$1,524,000 or more



Data for Question 23 (2 points)

Consider the following statements with respect to fiduciary standards of Title I of ERISA:

- I. A fiduciary of a plan may receive benefits as a participant in such plan.
- II. An attorney who drafts the plan document is not required to be a fiduciary of such plan.
- III. All plans covered by Title I of ERISA must identify at least one fiduciary.
- IV. One person may perform the duties of both trustee and administrator.

Question 23

Which, if any, of these statement(s) is (are) true?

- (A) All but I
- (B) All but II
- (C) All but III
- (D) All but IV
- (E) The correct answer is not given by (A), (B), (C), or (D) above

Data for Question 24 (2 points)

You have been the only enrolled actuary of a plan that has an effective date of January 1, 2000. It has come to your attention that your client has never filed any required PBGC Form 1, even though you have provided the appropriate PBGC Form 1 Schedule A attachment to your client each year, which you were required to sign. Your client continues to refuse to file such forms.

Consider the following actions:

- I. Cease actuarial services to the client.
- II. Notify the PBGC of the missed filings.
- III. Notify the DOL of the missed filings.

Question 24

As an enrolled actuary, which, if any, of the above actions must you perform?

- (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.

2004

Data for Question 25 (2 points)

Plan effective date: 1/1/1997

Data for participant Smith:

Date of birth: 1/1/1939  
Date of hire: 1/1/1989

<u>Compensation Year</u>	<u>Annual Compensation</u>
1999	\$155,000
2000	195,000
2001	215,000
2002	175,000
2003	185,000

The plan permits the use of the greatest compensation possible in the calculation of the accrued benefit.

Question 25

In what range is Smith's 100% of compensation limit as prescribed by IRC section 415(b)(1)(B) as of 1/1/2004?

- (A) Less than \$178,000
- (B) \$178,000 but less than \$185,000
- (C) \$185,000 but less than \$192,000
- (D) \$192,000 but less than \$199,000
- (E) \$199,000 or more

2004

Data for Question 26 (3 points)

Defined benefit plan accrued benefit: 1.5% of 3-year average compensation times years of participation.

Defined benefit plan valuation date: January 1, 2004

Profit sharing plan 2004 allocation: \$1,000 per plan participant.

Profit sharing plan allocation date: December 31, 2004

The defined benefit and profit sharing plans form a top-heavy aggregation group and are top-heavy for 2004.

The top-heavy minimum benefit will be provided in the defined benefit plan but will be offset by the annual additions in the profit sharing plan.

Actuarial equivalence factors for conversion of contributions and benefits:

Pre and post-retirement interest	7%
Annuity factor at age 65	9.70

Data for participant Smith, a non-key employee:

Date of birth	1/1/1949
Date of hire	1/1/2004
Date of participation	1/1/2004
Normal retirement date	1/1/2014
Annual compensation for 2004	\$ 50,000

Question 26

In what range is Smith's accrued benefit in the defined benefit plan as of 12/31/2004?

- (A) Less than \$600
- (B) \$600 but less than \$800
- (C) \$800 but less than \$1,000
- (D) \$1,000 but less than \$1,200
- (E) \$1,200 or more

## 2004

### Data for Question 27 (4 points)

Number of participants:	597
Estimated PBGC premium paid 2/29/2004:	\$17,043
Valuation interest rate:	8.00%
Current liability interest rate:	6.09%
Required interest rate:	4.93%
Contributions receivable as of 12/31/2002:	
1/15/2003	\$100,000
9/15/2003	\$200,000
Assumed retirement age:	65
Assets including 2002 plan year receivables at 1/1/2003:	
Market value:	\$2,600,100
Actuarial value:	\$2,518,000
RPA '94 current liability as of 1/1/2003 for:	
Retirees/beneficiaries	\$933,000
Other vested	1,821,000
Other non-vested	98,000

No contributions will be made for the 2003 plan year.

### Question 27

In what range is the total amount due the PBGC as of 10/15/2004 for the 2004 plan year premium using the alternative calculation method?

- (A) Less than \$2,300
- (B) \$2,300 but less than \$2,830
- (C) \$2,830 but less than \$3,360
- (D) \$3,360 but less than \$3,890
- (E) \$3,890 or more

2004

Data for Question 28 (3 points)

Plan effective date:	1/1/1980
Plan termination date:	10/1/2004
Normal retirement benefit:	\$110 per month times elapsed-time service
Normal form of benefit:	Life annuity
Early retirement benefit:	Unreduced at age 62
Data for substantial owner Smith:	
Date of birth	10/1/1942
Date of hire	1/1/1976
Date of benefit commencement:	10/1/2004

Question 28

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

- (A) Less than \$2,200
- (B) \$2,200 but less than \$2,400
- (C) \$2,400 but less than \$2,600
- (D) \$2,600 but less than \$2,800
- (E) \$2,800 or more

2004

Data for Question 29 (4 points)

Normal retirement benefit: 1% of average earnings times years of service.

Early retirement age: Age 60 with 25 years of service.

Early retirement factor: 1.5% reduction per year prior to age 65.

Normal form of payment: Life annuity if single;  
actuarially reduced 50% qualified joint and survivor annuity if married (QJSA).

Charge for qualified pre-retirement survivor annuity (QPSA): 0.2% per year for each year that the participant does not waive the QPSA. The plan provides for the longest waiver period permitted.

Information for participant Smith:

Date of birth	1/1/1955
Date of marriage	7/1/1978
Date of hire	1/1/1980
Date of death	1/1/2004
Average annual earnings	\$30,000
QJSA conversion factor	90%

Smith never waived the QPSA.

Question 29

In what range is the amount of the annual QPSA payable to Smith's spouse as of Smith's earliest retirement age?

- (A) Less than \$2,900
- (B) \$2,900 but less than \$3,000
- (C) \$3,000 but less than \$3,100
- (D) \$3,100 but less than \$3,200
- (E) \$3,200 or more

Data for Question 30 (3 points)

Consider the following plan changes effective July 1, 2004. Each plan has at least one participant who can reasonably be expected to be affected by the change described.

Defined Benefit Plans

Plan A – Change the early retirement reduction factor from 3% for each year retirement occurs prior to age 65 to 4% for each year retirement occurs prior to age 65.

Plan B – Change the benefit accrual from \$30 for all years of service to \$30 for each year of service up to 20 plus \$25 for each year of service after 20. No participant has over 15 years of service.

Plan C – Reduce the maximum amount of service used to determine benefits from 40 years to 30 years.

Plan D – Freeze final average compensation used to determine benefits.

Defined Contribution Plans

Plan E – Reduce employer match from 100% of the first 4% of pay that an employee defers to 50% of the first 4% of pay that an employee defers.

Plan F – Decrease employer contribution to money purchase pension plan from \$500 per month to \$450 per month.

Question 30

How many of the above plans are required to distribute ERISA section 204(h) notices for the plan changes that occurred?

- (A) Less than 2
- (B) 2
- (C) 3
- (D) 4
- (E) 5 or more



2004

Data for Question 31 (2 points)

An employer sponsors two defined benefit plans, Plan A and Plan B.

Plan Years:

Plan A                      2/1 to 1/31

Plan B                      11/1 to 10/31

An average benefit percentage test needs to be performed for Plan A's plan year beginning 2/1/2003.

Measurement period: Current plan year

Question 31

Over which period should the accruals under Plan B be determined for inclusion in the above-described average benefit percentage test?

- (A) 11/1/2002 to 10/31/2003
- (B) 2/1/2003 to 1/31/2004
- (C) 1/1/2003 to 12/31/2003
- (D) 11/1/2003 to 10/31/2004
- (E) Plan B accruals cannot be included in the average benefit percentage test because two plans with different plan years cannot be permissively aggregated.

2004

Data for Question 32 (3 points)

Normal retirement age: 65.

Lump sum actuarial equivalence: UP84 mortality and 4% interest.

Applicable interest rate: 4.60%.

Data for participant Smith, a highly compensated employee and one of the top 25 paid employees of the company:

Date of birth	1/1/1939
Date of termination	1/1/2004
Annual normal retirement benefit	\$100,000
Form of benefit elected	Lump sum

Select life annuity rates at age 65:

Interest rate	Applicable Mortality	1983 GAM	UP84
4.00%	12.87	11.56	10.82
4.60%	12.20	11.02	10.34

Current liability on 1/1/2004:

Smith	\$985,000
All others	<u>99,015,000</u>
Total	\$100,000,000

Assets were equal to the minimum amount sufficient to allow Smith to receive an unrestricted lump sum.

Question 32

In what range were the assets immediately prior to Smith's lump sum paid on 1/1/2004?

- (A) Less than \$108,000,000
- (B) \$108,000,000 but less than \$109,000,000
- (C) \$109,000,000 but less than \$110,000,000
- (D) \$110,000,000 but less than \$111,000,000
- (E) \$111,000,000 or more

2004

Data for Question 33 (5 points)

Employer A sponsors a defined benefit plan for all employees.

Early retirement benefits:                      None

Testing assumptions and parameters:

Measurement period	Current plan year
Testing age	65
Testing basis	Benefits basis
Permitted disparity	Maximum imputed (simplified table not used)

Consider the following data for all employees of Employer A:

<u>Employee</u>	<u>SSRA</u>	<u>Covered Compensation</u>	<u>Average Annual Compensation</u>	<u>Normal Accrual Rate</u>
HCE1	65	\$39,000	\$200,000	1.7%
HCE2	67	78,000	200,000	1.7%
NHCE1	65	39,000	80,000	0.8%
NHCE2	66	66,000	50,000	0.8%
NHCE3	67	78,000	50,000	0.8%

No employee has testing service of more than 35 years, and none has ever participated in another plan sponsored by Employer A.

Question 33

In what range is the result of the average benefit percentage test?

- (A)    Less than 65%
- (B)    65% but less than 68%
- (C)    68% but less than 71%
- (D)    71% but less than 74%
- (E)    74% or more

2004

Data for Question 34 (3 points)

Normal retirement benefit: \$30 per month times years of service

Normal retirement age: 65

Vesting: 3 to 7 year graded vesting

A partial termination is deemed to have occurred for all participants terminated on 1/1/2004.

As of 1/1/2004 the market value of plan assets are sufficient to cover all benefit liabilities.

As of 1/1/2004 the plan administrator has been asked to compute the present value of vested benefits for the following participants:

<u>Employee</u>	<u>Age</u>	<u>Years of Service</u>	<u>Date of termination of employment</u>
Smith	44	3	1/1/2003
Jones	44	5	1/1/2004
Brown	44	2	1/1/2004

Selected annuity value:

$${}_{21|}\ddot{a}_{44}^{(12)} = 6.00$$

Question 34

In what range is the total present value of vested benefits for the three participants as of 1/1/2004?

- (A) Less than \$9,500
- (B) \$9,500 but less than \$13,000
- (C) \$13,000 but less than \$16,500
- (D) \$16,500 but less than \$20,000
- (E) \$20,000 or more

2004

Data for Question 35 (2 points)

Normal form: Life annuity

Optional forms of payment:

Joint and 50% survivor annuity (QJSA)

Joint and 50% last survivor annuity

Lump sum

5-year certain only annuity

5-year certain and life annuity

Social Security level income option

Plan actuarial equivalence:

Interest rate                      8%

Mortality table                  UP84

Question 35

For how many of the optional forms of payment is the plan required to provide a benefit at least equal to the actuarial equivalent benefit using the applicable interest rate and applicable mortality table?

(A)    0

(B)    1

(C)    2

(D)    3

(E)    4 or more

2004

Data for Question 36 (2 points)

Consider the following regarding PBGC reportable events:

Plan I

Plan I has 130 active participants.

At the beginning of the plan year Plan I had 160 participants.

At the beginning of the prior plan year Plan I had 180 participants.

Plan I has variable rate PBGC premiums for the current and prior year.

Plan II

A lump sum distribution of \$1.6 million is paid from Plan II to a substantial owner in 2004.

Plan II has no variable rate premium due for 2004.

Plan III

As a result of the sale of a division to a separate company, Plan III transfers 40% of plan assets and 50% of plan liabilities to Plan IV in accordance with IRC section 414(l) using the assumptions under ERISA §4044.51 through §4044.57.

Question 36

Which, if any, of the plans have a reportable event requiring a notification to the PBGC?

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

2004

Data for Question 37 (5 points)

Plan effective date: 1/1/1998  
 Normal retirement age: 60  
 Accrued benefit: 11% times three year average salary times service  
 Early retirement age: 55  
 Early retirement reduction: 6% per year prior to age 60

Plan actuarial equivalence: 8.50% interest rate;  
 UP84 mortality (post-retirement only)

There is no benefit forfeiture upon death of a participant.

Benefits commence no later than age 60 regardless of employment status.

Data for participant Smith:

Date of birth 1/1/1949  
 Date of hire 1/1/1997  
 Three year average salary \$120,000  
 Date of retirement 1/1/2004  
 Form of benefit elected Life annuity with 15 years certain

Selected immediate life and life annuity with 15 years certain factors:

Interest rate	Age	Applicable Mortality: $\ddot{a}_x^{(12)}$	UP84: $\ddot{a}_x^{(12)}$	Applicable Mortality: $\ddot{a}_{x:15}^{(12)}$	UP84: $\ddot{a}_{x:15}^{(12)}$
5.00%	62	12.680	10.918	13.553	12.525
5.00%	60	13.251	11.496	13.964	12.866
5.00%	55	14.574	12.869	14.979	13.774
8.50%	62	9.525	8.486	10.156	9.656
8.50%	60	9.828	8.824	10.341	9.821
8.50%	55	10.487	9.584	10.776	10.239

Question 37

In what range is Smith's annual benefit?

- (A) Less than \$53,500
- (B) \$53,500 but less than \$56,000
- (C) \$56,000 but less than \$58,500
- (D) \$58,500 but less than \$61,000
- (E) \$61,000 or more

2004

Data for Question 38 (4 points)

Plan year for profit sharing plan: January 1 to December 31

Plan year for defined benefit plan: July 1 to June 30.

Brown was a key employee in 2001. After 2001, Brown is no longer a key employee.

Information for all participants:

	<u>Profit Sharing Account Balances</u>		<u>Defined Benefit Plan PVABs</u>	
	<u>12/31/2003</u>	<u>12/31/2004</u>	<u>7/1/2003</u>	<u>7/1/2004</u>
Key employee Smith	\$ 275,000	\$ 350,000	\$ 225,000	\$ 300,000
Key employee Jones	350,000	425,000	230,000	275,000
Brown	100,000	125,000	100,000	125,000
All Others (non-key)	625,000	650,000	700,000	750,000

There have never been any distributions from the profit sharing plan or defined benefit plan.

Question 38

In what range is the top-heavy ratio that will determine if the defined benefit plan is top heavy for the plan year beginning 7/1/2004?

- (A) Less than 44%
- (B) 44% but less than 46%
- (C) 46% but less than 48%
- (D) 48% but less than 50%
- (E) 50% or more



2004

Data for Question 39 (3 points)

A defined benefit plan offers an early retirement window beginning July 1, 2004 and ending December 31, 2004.

Early retirement window provision: Eligible participants may receive their benefit in the form of a lump sum.

Testing date (snapshot date): July 1, 2004.

Data for all non-excludable employees for 2004:

	<u>HCEs</u>	<u>NHCEs</u>
Participants eligible for the window on July 1, 2004	15	5
Participants becoming eligible for window after July 1, 2004	2	4
Participants not eligible for window	22	15
Non-benefiting employees	<u>1</u>	<u>16</u>
Total	40	40

Consider the following:

- I. The result of the ratio percentage for the plan.
- II. The ratio of the percentage of non-highly compensated employees over the percentage of highly compensated employees to whom this window may be currently available.
- III. The safe harbor percentage for the window provision to pass the current availability test requirements.

Question 39

Which of the following is true?

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

## 2004

### Data for Question 40 (5 points)

Plan type: Multiemployer.

Method of determining withdrawal liability: Rolling five.

The following is historical information for the past eleven years of the plan:

<u>Year-ending</u>	<u>Unfunded Vested Benefits</u>	<u>Employer A Contributions</u>	<u>Total Contributions</u>
12/31/1994	\$1,200,000	\$35,000	\$300,000
12/31/1995	1,100,000	45,000	375,000
12/31/1996	1,000,000	45,000	375,000
12/31/1997	800,000	45,000	375,000
12/31/1998	750,000	45,000	375,000
12/31/1999	700,000	45,000	375,000
12/31/2000	650,000	55,000	475,000
12/31/2001	800,000	55,000	475,000
12/31/2002	850,000	55,000	475,000
12/31/2003	900,000	60,000	500,000
12/31/2004	950,000	65,000	550,000

X = withdrawal liability for Employer A if withdrawal occurred in 2003

Y = withdrawal liability for Employer A if withdrawal occurred in 2004

No other employers have withdrawn from the plan, and all contributions are collected in the year they are due.

### Question 40

In what range is the absolute value of the difference between X and Y?

- (A) Less than \$8,000
- (B) \$8,000 but less than \$11,000
- (C) \$11,000 but less than \$14,000
- (D) \$14,000 but less than \$17,000
- (E) \$17,000 or more

Data for Question 41 (2 points)

The following statements pertain to 29 CFR 2509.95-1, relating to the fiduciary standards when selecting an annuity provider:

- I. Fiduciaries choosing an annuity provider for the purpose of making a benefit distribution are not required to purchase the safest annuity, if it is much more expensive than a competing annuity.
- II. In the case of a plan termination that may result in a reversion to the plan sponsor, the fiduciaries selecting the annuity provider will find themselves in a conflict of interest and therefore will need to obtain and follow independent expert advice to identify those insurers with the highest claims-paying ability willing to write the business.
- III. If a plan participant consents in writing, a fiduciary may be relieved of the responsibility to purchase a safe annuity for such participant.

Question 41

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

2004

Data for Question 42 (3 points)

Definition of plan compensation: Annual rate of pay.

2003 data for all employees of the employer:

	Annual Rate of Pay	Base Pay	Bonuses	Overtime
HCE 1	\$102,000	\$97,000	\$14,000	\$0
HCE 2	207,000	196,000	19,000	0
NHCE 1	25,000	24,000	0	3,000
NHCE 2	30,000	29,000	1,000	3,000
NHCE 3	50,000	47,000	7,000	0

None of the employees have any ownership in the employer.

Plan compensation is tested using 2003 data to determine if the plan discriminates in favor of highly paid employees using the individual method described in IRC section 414(s).

Question 42

In what range is the absolute value of the difference between the average percentages of compensation for highly compensated employees and non-highly compensated employees?

- (A) Less than 0.8%
- (B) 0.8% but less than 1.6%
- (C) 1.6% but less than 2.4%
- (D) 2.4% but less than 3.2%
- (E) 3.2% or more

2004

Data for Question 43 (2 points)

A prohibited transaction occurred when an employer borrowed \$1,000,000 from a plan on January 1, 2003.

On September 30, 2003, the employer repaid the \$1,000,000 with interest at a 6% annual rate of interest.

6% is a fair market rate of interest.

Question 43

In what range is the excise tax under IRC section 4975?

- (A) Less than \$5,500
- (B) \$5,500 but less than \$6,500
- (C) \$6,500 but less than \$7,500
- (D) \$7,500 but less than \$8,500
- (E) \$8,500 or more

## Course EA-2B, Spring 2004

### ANSWER KEY

<i>Question #</i>	<i># of Points</i>	<i>Answer</i>
<b>1</b>	<b>1</b>	<b>B</b>
<b>2</b>	<b>1</b>	<b>A</b>
<b>3</b>	<b>1</b>	<b>A</b>
<b>4</b>	<b>1</b>	<b>B</b>
<b>5</b>	<b>1</b>	<b>B</b>
<b>6</b>	<b>1</b>	<b>B</b>
<b>7</b>	<b>1</b>	<b>A</b>
<b>8</b>	<b>1</b>	<b>B</b>
<b>9</b>	<b>1</b>	<b>A</b>
<b>10</b>	<b>1</b>	<b>B</b>
<b>11</b>	<b>1</b>	<b>B</b>
<b>12</b>	<b>1</b>	<b>A</b>
<b>13</b>	<b>1</b>	<b>B</b>
<b>14</b>	<b>1</b>	<b>A</b>
<b>15</b>	<b>2</b>	<b>B</b>
<b>16</b>	<b>3</b>	<b>D</b>
<b>17</b>	<b>2</b>	<b>C</b>
<b>18</b>	<b>4</b>	<b>C</b>
<b>19</b>	<b>2</b>	<b>D</b>
<b>20</b>	<b>2</b>	<b>E</b>
<b>21</b>	<b>3</b>	<b>B</b>
<b>22</b>	<b>4</b>	<b>B</b>

<i>Question #</i>	<i># of Points</i>	<i>Answer</i>
<b>23</b>	<b>2</b>	<b>E</b>
<b>24</b>	<b>2</b>	<b>A</b>
<b>25</b>	<b>2</b>	<b>D</b>
<b>26</b>	<b>3</b>	<b>C</b>
<b>27</b>	<b>4</b>	<b>D</b>
<b>28</b>	<b>3</b>	<b>B</b>
<b>29</b>	<b>4</b>	<b>D</b>
<b>30</b>	<b>3</b>	<b>E</b>
<b>31</b>	<b>2</b>	<b>D</b>
<b>32</b>	<b>3</b>	<b>D</b>
<b>33</b>	<b>5</b>	<b>C</b>
<b>34</b>	<b>3</b>	<b>C</b>
<b>35</b>	<b>2</b>	<b>D</b>
<b>36</b>	<b>2</b>	<b>B</b>
<b>37</b>	<b>5</b>	<b>C</b>
<b>38</b>	<b>4</b>	<b>C</b>
<b>39</b>	<b>3</b>	<b>A</b>
<b>40</b>	<b>5</b>	<b>C</b>
<b>41</b>	<b>2</b>	<b>B</b>
<b>42</b>	<b>3</b>	<b>E</b>
<b>43</b>	<b>2</b>	<b>C</b>