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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Conditions Generally Applicable to All EA-2 (Segment B) Examination Questions

If applicable, the following conditions should be considered a part of the data for each question, unless otherwise stated or implied.

For purposes of this examination, the "sunset" provisions of the Economic Growth and Tax Relief Reconciliation Act (EGTRRA) should be ignored.

For purposes of this examination, IRS, Treasury and PBGC releases granting disaster relief should be ignored.

General Conditions Regarding Plan Provisions

(1) "Plan" or "pension plan" means a defined benefit pension plan.

(2) The plan is qualified under IRC section 401. Thus, for example, any benefit formulas should be understood to be limited by other plan provisions required by the Code.

(3) The plan is sponsored by a single employer; the sponsoring employer is a taxable entity and is not a member of a controlled group.

(4) The plan is not established or maintained in connection with a collectively bargained agreement.

(5) The plan year, the employer's limitation year, and the employer's tax year are all the calendar year.

(6) The normal retirement age is 65.

(7) Retirement pensions commence at normal retirement age and are paid monthly for life at the beginning of each month.

(8) The plan covers all active employees of the employer; there is no age or service requirement for participation. Thus, when referring to active employees, the terms "employee" and "participant" are synonymous.

(9) There are no, and never have been, mandatory or voluntary employee contributions.

(10) Service for purposes of vesting and benefit accrual is credited on the basis of time elapsed since date of hire.

(11) When the normal retirement benefit is computed as a dollar amount, or as a percentage of compensation, for each year of service, the accrued benefit is defined likewise.

(12) Actuarial equivalence is based on the mortality table and interest rate assumed for funding purposes.

(13) Qualified joint and survivor annuities and qualified preretirement survivor annuities are provided in such manner that they result in no cost to the employer.

(14) The plan has not been top-heavy in any year.

(15) The plan has not been amended since its effective date.

General Conditions Regarding Funding

(16) Any actuarial valuation encompasses not only all active employees but also retired employees, beneficiaries, and former employees entitled to vested deferred pensions.

(17) The valuation date is the first day of the plan year; i.e., participant data, present values, asset values, etc. are as of that date. Also, normal costs are payable annually, the first being due on the valuation date.

(18) Unless otherwise specified, the assumed retirement age is the normal retirement age.

(19) The terms "actuarial value of assets" and "market value of assets" mean the values developed for purposes of IRC section 412, before being adjusted as required under funding methods of the aggregate type for items such as the existing credit balance or the outstanding balances of certain bases.

(20) All actuarial assumptions are deemed "reasonable" and meet the "best estimate" criterion.

(21) The adoption date of any plan or amendment is the same as its effective date.

(22) The term "minimum required contribution" means the smallest contribution for a plan year which will prevent a funding deficiency at the end of that plan year, without regard to the alternative minimum funding standard account. Amounts to be amortized are not combined or offset against one another.

(23) The employer is taxable, and all employer contributions for each prior plan year have been deducted by the employer for its tax year coincident with such plan year.

(24) The full funding limitation has never applied.

(25) The full funding limitations based on current liability shall be disregarded if sufficient information to determine such limitations is not provided.

(26) For purposes of determining the deductible limit, the unfunded current liability shall be disregarded if sufficient information to determine such liability is not provided.

(27) Unless separate current liabilities are provided, the current liability is the same for all purposes.

Miscellaneous General Conditions

(28) All plan provisions and funding comply with all temporary and final regulations under the Internal Revenue Code and ERISA, as amended through December 31, 2003.

(29) For multiemployer plans, disregard any industry-specific rules.

(30) The employer has never maintained a defined contribution plan. No employee has been covered by a defined contribution plan that is required to be aggregated with his employer's plans for purposes of IRC section 415.

(31) The terms "applicable mortality (table)" and "applicable interest (rate)" are as defined in IRC section 417(e)(3).

(32) For purposes of coverage testing under IRC section 410(b), “snapshot” testing is not used and permitted disparity is not imputed.

(33) Transition rules under Rev. Rul. 98-1 shall be disregarded unless there is specific reference to such rules.

(34) Where IRC section 401(a)(17) applies, compensations do not exceed these limits unless sufficient information to apply the limits is provided.

(35) Benefits do not exceed IRC section 415 limits unless sufficient information to apply these limits is provided.

(36) Unless otherwise specified, the plan is covered by the PBGC.

(37) All union plans are collectively bargained and all union employees are subject to collective bargaining.

(38) References to law and regulation section numbers are for clarity and can be assumed to be correct.

If applicable, the preceding conditions should be considered a part of the data for each question, unless otherwise stated or implied.

LIMITS, TABLES AND FORMULAS
(Included with the 2004 EA-2 (Segment B) examination)

Compensation Limit IRC section 401(a)(17)	
Year	Limit
1989	200,000
1990	209,200
1991	222,220
1992	228,860
1993	235,840
1994-1996	150,000
1997-1999	160,000
2000-2001	170,000
2002-2003	200,000
2004	205,000

Maximum Benefit Limit IRC section 415(b)	
Year	Limit at SSRA
1983-1987	90,000
1988	94,023
1989	98,064
1990	102,582
1991	108,963
1992	112,221
1993	115,641
1994	118,800
1995-1996	120,000
1997	125,000
1998-1999	130,000
2000	135,000
2001	140,000
Year	Limit at 65
2002-2003	160,000
2004	165,000

Highly Compensated Employee Compensation IRC section 414(q)	
Year	Limit
1997-1999	80,000
2000-2001	85,000
2002-2004	90,000

Nondiscriminatory Classification Test IRC section 410(b)		
Nonhighly compensated employee concentration percentage	Safe harbor percentage	Unsafe harbor percentage
0-60	50.00	40.00
61	49.25	39.25
62	48.50	38.50
63	47.75	37.75
64	47.00	37.00
65	46.25	36.25
66	45.50	35.50
67	44.75	34.75
68	44.00	34.00
69	43.25	33.25
70	42.50	32.50
71	41.75	31.75
72	41.00	31.00
73	40.25	30.25
74	39.50	29.50
75	38.75	28.75
76	38.00	28.00
77	37.25	27.25
78	36.50	26.50
79	35.75	25.75
80	35.00	25.00
81	34.25	24.25
82	33.50	23.50
83	32.75	22.75
84	32.00	22.00
85	31.25	21.25
86	30.50	20.50
87	29.75	20.00
88	29.00	20.00
89	28.25	20.00
90	27.50	20.00
91	26.75	20.00
92	26.00	20.00
93	25.25	20.00
94	24.50	20.00
95	23.75	20.00
96	23.00	20.00
97	22.25	20.00
98	21.50	20.00
99	20.75	20.00

LIMITS, TABLES AND FORMULAS
(Included with the 2004 EA-2 (Segment B) examination)

Permitted Disparity Tables IRC section 401(*l*)

Age at benefit Commencement	SSRA 65	SSRA 66	SSRA 67	Simplified Table
	Annual factor in maximum excess allowance and maximum offset allowance percent			
70	1.209	1.101	1.002	1.048
69	1.096	0.998	0.908	0.950
68	0.996	0.907	0.825	0.863
67	0.905	0.824	0.750	0.784
66	0.824	0.750	0.700	0.714
65	0.750	0.700	0.650	0.650
64	0.700	0.650	0.600	0.607
63	0.650	0.600	0.550	0.563
62	0.600	0.550	0.500	0.520
61	0.550	0.500	0.475	0.477
60	0.500	0.475	0.450	0.433
59	0.475	0.450	0.425	0.412
58	0.450	0.425	0.400	0.390
57	0.425	0.400	0.375	0.368
56	0.400	0.375	0.344	0.347
55	0.375	0.344	0.316	0.325

FICA Taxable Wage Base

Year	Limit
1992	55,500
1993	57,600
1994	60,600
1995	61,200
1996	62,700
1997	65,400
1998	68,400
1999	72,600
2000	76,200
2001	80,400
2002	84,900
2003	87,000
2004	87,900

Key Employee Compensation
IRC section 416

Year	Officer	10 Largest Owners	1% Owners
2000	67,500	30,000	150,000
2001	70,000	35,000	150,000
2002-2004	130,000	N/A	150,000

LIMITS, TABLES AND FORMULAS
(Included with the 2004 EA-2 (Segment B) examination)

Maximum PBGC Guaranteed Life-Only Annuity at Age 65	
Year	Monthly Benefit
1999	3,051.14
2000	3,221.59
2001	3,392.05
2002	3,579.55
2003	3,664.77
2004	3,698.86

FACTORS USED TO REDUCE MAXIMUM PBGC GUARANTEED BENEFITS FOR PAYMENTS OTHER THAN AS A SINGLE LIFE ANNUITY AT AGE 65

Commencement Age	
Age	Factor
65 & over	1.00
64	0.93
63	0.86
62	0.79
61	0.72
60	0.65
59	0.61
58	0.57
57	0.53
56	0.49
55	0.45
54	0.43
53	0.41
52	0.39
51	0.37
50	0.35
49	0.33
48	0.31
47	0.29
46	0.27
45	0.25

Form of Payment Certain & Life*	
Years	Factor
1	0.995
2	0.990
3	0.985
4	0.980
5	0.975
6	0.965
7	0.955
8	0.945
9	0.935
10	0.925

*Reduction decreases by 0.01 per year in excess of 10.

Form of Payment Joint & Contingent		
Percent	Factor	with 10 yr Certain
50%	0.900	× 0.960
66 2/3 %	0.867	× 0.970
75%	0.850	× 0.975
100%	0.800	× 0.990

Form of Payment Joint & Survivor	
Percent	Factor
50%	1.00
66 2/3 %	0.93
75%	0.90
100%	0.80

Age Difference For J&S Beneficiary		
Difference	Younger	Older
1	0.99	1.005
2	0.98	1.010
3	0.97	1.015
4	0.96	1.020
5	0.95	1.025
6	0.94	1.030
7	0.93	1.035
8	0.92	1.040
9	0.91	1.045
10	0.90	1.050

LIMITS, TABLES AND FORMULAS
(Included with the 2004 EA-2 (Segment B) examination)

PBGC ADJUSTMENTS TO VESTED BENEFITS TO DETERMINE VARIABLE PREMIUM

$$\mathrm{VB}_{adj} = \mathrm{VB}_{Pay} \times 0.94^{(RIR-BIR)} + \left[\mathrm{VB}_{Nonpay} \times 0.94^{(RIR-BIR)} \times ((100+\mathrm{BIR})/(100+\mathrm{RIR}))^{(ARA-50)}\right]$$

ARA = Assumed retirement age
RIR = Required interest rate
BIR = Current Liability interest rate
VB_{adj} = Adjusted vested benefits
VB_{pay} = Retiree vested benefits
VB_{nonpay} = All other vested benefits

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

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

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

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.

January 1, 2000	January 1, 2001	January 1, 2002	January 1, 2003	January 1, 2004
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

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

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

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

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

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:

Participant	Normal Accrual Rate	Most Valuable Accrual Rate
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

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:

Compensation Year	Annual Compensation
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:

Charges	Date Established	Amortization Amount
Initial liability	1/1/2002	$20,000
Loss	1/1/2003	$60,000
Credits		
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:

	Plan B	Plan C
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

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

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

Year	Hours worked	Contribution rate per hour worked
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

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

2004

<u>Data for Question 23</u> (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.

<u>Question 23</u>

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.

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

Compensation Year	Annual Compensation
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

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

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

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

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

2004

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

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	99,015,000
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

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:

Employee	SSRA	Covered Compensation	Average Annual Compensation	Normal Accrual Rate
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

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:

Employee	Age	Years of Service	Date of termination of employment
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

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

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.

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: $\ddot{a}_{\overline{x:15\rceil}}^{(12)}$	UP84: $\ddot{a}_{\overline{x:15\rceil}}^{(12)}$
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:

	Profit Sharing Account Balances		Defined Benefit Plan PVABs	
	12/31/2003	12/31/2004	7/1/2003	7/1/2004
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:

	HCEs	NHCEs
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	1	16
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:

Year-ending	Unfunded Vested Benefits	Employer A Contributions	Total Contributions
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

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

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

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