

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

ENROLLED ACTUARIES PENSION EXAMINATION, SEGMENT B

MAY 2007 EA-2, SEGMENT B, EXAMINATION

LIMITS, TABLES AND FORMULAS
(Included with the 2007 EA-2 (Segment B) examination)

Compensation Limit IRC section 401(a)(17)	
<u>Year</u>	<u>Limit</u>
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
2005	210,000
2006	220,000
2007	225,000

Maximum Benefit Limit IRC section 415(b)	
<u>Year</u>	<u>Limit at SSRA</u>
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
<u>Year</u>	<u>Limit at 65</u>
2002-2003	160,000
2004	165,000
2005	170,000
2006	175,000
2007	180,000

Nondiscriminatory Classification Test IRC section 410(b)		
Nonhighly compensated employee		
<u>concentration percentage</u>	<u>Safe harbor percentage</u>	<u>Unsafe harbor percentage</u>
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 2007 EA-2 (Segment B) examination)

Permitted Disparity Tables IRC section 401(l)				
Annual factor in maximum excess allowance and maximum offset allowance percent				
Age at benefit <u>Commencement</u>	<u>SSRA 65</u>	<u>SSRA 66</u>	<u>SSRA 67</u>	Simplified <u>Table</u>
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	
<u>Year</u>	<u>Limit</u>
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
2005	90,000
2006	94,200
2007	97,500

Key Employee Compensation IRC section 416		
<u>Year</u>	<u>Officer</u>	<u>1% owner</u>
2003	130,000	150,000
2004	130,000	150,000
2005	135,000	150,000
2006	140,000	150,000
2007	145,000	150,000

Highly Compensated Employee Compensation IRC section 414(q)	
<u>Year</u>	<u>Limit</u>
1997-1999	80,000
2000-2001	85,000
2002-2004	90,000
2005	95,000
2006	100,000
2007	100,000

LIMITS, TABLES AND FORMULAS
(Included with the 2007 EA-2 (Segment B) examination)

Maximum PBGC Guaranteed Life-Only Annuity at Age 65	
<u>Year</u>	<u>Monthly Benefit</u>
1999	3,051.14
2000	3,221.59
2001	3,392.05
2002	3,579.55
2003	3,664.77
2004	3,698.86
2005	3,801.14
2006	3,971.59
2007	4,125.00

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

Commencement Age	
<u>Age</u>	<u>Factor</u>
75	3.04
74	2.76
73	2.48
72	2.21
71	1.93
70	1.66
69	1.49
68	1.34
67	1.21
66	1.10
65	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*	
<u>Years</u>	<u>Factor</u>
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.	

Age Difference For J&S Beneficiary		
<u>Difference</u>	<u>Younger</u>	<u>Older</u>
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

Form of Payment Joint & Contingent		
<u>Percent</u>	<u>Factor</u>	<u>Certain</u>
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	
<u>Percent</u>	<u>Factor</u>
50%	1.00
66 2/3 %	0.93
75%	0.90
100%	0.80

LIMITS, TABLES AND FORMULAS
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PBGC ADJUSTMENTS TO VESTED BENEFITS TO DETERMINE VARIABLE PREMIUM

$$VB_{adj} = VB_{pay} \times 0.94^{(RIR-BIR)} + \left[VB_{nonpay} \times 0.94^{(RIR-BIR)} \times ((100 + BIR) / (100 + RIR))^{(ARA-50)} \right]$$

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

2007

Data for Question 1 (1 point)

An employer has never sponsored a qualified plan.

Consider the following statement:

A new plan established by that employer may provide that service prior to the effective date is disregarded for vesting purposes.

Question 1

Is the above statement true or false?

(A) True

(B) False

2007

Data for Question 2 (1 point)

Distributions to a substantial owner from an underfunded plan:

1/1/2005	\$7,500
7/1/2006	7,500

Consider the following statement:

A reportable event has occurred under ERISA section 4043.

Question 2

Is the above statement true or false?

- (A) True
- (B) False

2007

Data for Question 3 (1 point)

Consider the following statement:

The Annual Funding Notice for multiemployer plans provided to plan participants, beneficiaries and other specified entities is not required for those multiemployer plans that have a funded current liability percentage of at least 100%.

Question 3

Is the above statement true or false?

- (A) True
- (B) False

2007

Data for Question 4 (1 point)

Normal retirement benefit: \$60 per year of participation with a maximum of 25 years.

Data for participant Smith:

Date of birth 1/1/1946

Date of hire 1/1/1979

Consider the following statement:

For purposes of IRC section 410(b) coverage, Smith is considered to benefit under the plan in 2007.

Question 4

Is the above statement true or false?

(A) True

(B) False

2007

Data for Question 5 (1 point)

An enrolled actuary may practice before the Internal Revenue Service with respect to issues involving IRC section 411 relating to minimum vesting standards.

Question 5

Is the above statement true or false?

- (A) True
- (B) False

2007

Data for Question 6 (1 point)

Consider the following statement:

When a qualified retirement plan has more than one form of joint and survivor annuity that satisfies the Qualified Joint and Survivor Annuity requirements, the joint and survivor annuity that pays the greatest percentage to the surviving spouse is deemed to be the Qualified Joint and Survivor Annuity.

Question 6

Is the above statement true or false?

- (A) True
- (B) False

2007

Data for Question 7 (1 point)

A plan sponsor elects to use the pre-participation phase-in to calculate current liability for purposes of the minimum funding standards.

Consider the following statement:

The election to use the pre-participation phase-in also applies to the calculation of the PBGC variable rate premium.

Question 7

Is the above statement true or false?

- (A) True
- (B) False

2007

Data for Question 8 (1 point)

Consider the following statement:

The excise tax under IRC section 4974 (relating to required minimum distributions) may be waived if the underpayment was due to reasonable error and reasonable steps are being taken to remedy the underpayment and to avoid future recurrences.

Question 8

Is the above statement true or false?

- (A) True
- (B) False

2007

Data for Question 9 (1 point)

An employer sponsors separate plans for union and non-union employees. Each plan contains at least one key employee.

Consider the following statement:

Both plans must be included in the required aggregation group to determine if the plans are top-heavy.

Question 9

Is the above statement true or false?

(A) True

(B) False

2007

Data for Question 10 (1 point)

Plan A has a funded current liability percentage of 110%.

Plan A is being spun off into Plans X, Y, and Z. None of these spinoffs are de minimis.

Plans X, Y, and Z will still be maintained within the same controlled group.

Consider the following statement:

As part of the spin off, excess assets, if any, are required to be allocated to X, Y, and Z in proportion to each plan's current liability as of the spin off date.

Question 10

Is the above statement true or false?

(A) True

(B) False

2007

Data for Question 11 (1 point)

Participant Smith commences distribution of benefits on December 1.

Consider the following statement:

The limitation under IRC section 415 on distributions to Smith for the initial month is $1/12^{\text{th}}$ of the annual limitation for that year.

Question 11

Is the above statement true or false?

- (A) True
- (B) False

2007

Data for Question 12 (1 point)

The actuarial value of assets is increased due to a change in the asset valuation method as of 1/1/2007.

Consider the following statement:

When determining the 2007 PBGC variable rate premium under the General Rule, the asset valuation method used to determine the value of assets is the same as that used for the 2006 plan year.

Question 12

Is the above statement true or false?

(A) True

(B) False

2007

Data for Question 13 (1 point)

Consider the following statement:

Under Title IV of ERISA, an amendment to increase participants' benefits may be adopted after the plan's termination date.

Question 13

Is the above statement true or false?

- (A) True
- (B) False

2007

Data for Question 14 (1 point)

Smith is a terminated vested participant. His calculated benefit under a defined benefit plan exceeds the dollar limit under IRC section 415(b) at the time he terminates his employment.

Consider the following statement:

The defined benefit plan may provide for increases in Smith's benefits based on the indexed dollar limit under IRC section 415(b), whether or not he has begun receiving plan benefits.

Question 14

Is the above statement true or false?

(A) True

(B) False

2007

Data for Question 15 (1 point)

A plan's contribution for the 2007 plan year is made on 2/1/2007.

Consider the following statement:

The above contribution is included in the fair market value of assets on 12/31/2006 for the purpose of determining whether a filing under ERISA section 4010 is necessary for the 2006 plan year.

Question 15

Is the above statement true or false?

- (A) True
- (B) False

2007

Data for Question 16 (1 point)

Smith is asked by a plan sponsor to perform an actuarial calculation that Smith believes will be used in a manner inconsistent with law.

Consider the following statement:

Under the Standards of Performance for Enrolled Actuaries, Smith may perform such calculation only if he informs the plan sponsor that the calculation may not be used to avoid any tax penalty under the Code.

Question 16

Is the above statement true or false?

(A) True

(B) False

2007

Data for Question 17 (4 points)

PBGC required interest rate as of 1/1/2007: 5.00%.

PBGC required interest rate as of 1/1/2006: 3.95%.

RPA '94 interest rate as of 1/1/2007: 6.00%.

RPA '94 interest rate as of 1/1/2006: 5.10%.

RPA '94 vested current liability reported on the 2006 Schedule B:

Retired and beneficiaries receiving payments	\$2,154,000
Terminated vested participants	878,000
Active participants	2,740,000

Actuarial value of assets on 1/1/2006 (including receivable contribution): \$5,234,000.

Contribution for 2005 plan year deposited on 7/1/2006: \$250,000.

Contribution for 2006 plan year deposited on 1/1/2007: \$330,000.

Number of participants during 2006 and 2007: 600.

Assumed retirement age: 65.

Question 17

In what range is the variable rate premium for 2007 using the Alternative Calculation Method?

- (A) Less than \$5,400
- (B) \$5,400 but less than \$8,100
- (C) \$8,100 but less than \$10,800
- (D) \$10,800 but less than \$13,500
- (E) \$13,500 or more

2007

Data for Question 18 (5 points)

An employer sponsors Plan A and Plan B.

Type of plan:

Plan A Defined benefit
Plan B Money purchase

Both plans were effective 1/1/2007.

Plans A and B are aggregated for nondiscrimination testing purposes.

Information for all employees as of 12/31/2007:

All employees were hired on 1/1/2007.

<u>Participant</u>	<u>Age as of 12/31/2007</u>	<u>2007 Compensation</u>	<u>Annual defined benefit accrual for 2007</u>	<u>Money purchase contribution for 2007</u>
HCE	55	\$400,000	\$8,000	\$25,000
NHCE #1	40	20,000	400	1,400
NHCE #2	42	30,000	475	2,000
NHCE #3	63	40,000	X	1,200

Selected annuity factor using standard mortality rates and interest at 8.5% per year:

$$\ddot{a}_{65}^{(12)} = 8.375$$

Question 18

In what range is the lowest value of X such that the combined plans satisfy the minimum allocation gateway requirements of section 1.401(a)(4) of the regulations?

- (A) Less than \$60
- (B) \$60 but less than \$110
- (C) \$110 but less than \$160
- (D) \$160 but less than \$210
- (E) \$210 or more

2007

Data for Question 19 (4 points)

Early retirement eligibility: Age 55 with 5 years of service.

Benefit formula: The sum of 1% of each year's compensation.

Normal form of benefit: Life annuity.

A plan amendment changing early retirement factors was adopted and effective 1/1/2002. The amendment was worded in such a way to provide the smallest early retirement benefit permitted under IRC section 411(d)(6).

Early commencement: Normal retirement benefit reduced by 4% for each year by which the
(pre-amendment) benefit commencement date precedes the normal retirement date.

Early commencement: Normal retirement benefit reduced by 5% for each year by which the
(post-amendment) benefit commencement date precedes the normal retirement date.

Data for participant Smith:

Date of birth	1/1/1947
Date of hire	1/1/1977
Date of retirement	1/1/2007
Monthly accrued retirement benefit as of 1/1/2002 payable at NRA	\$1,000
Compensation for each year after 2001	\$60,000

Question 19

In what range is Smith's monthly benefit payable in the plan's normal form as of his date of retirement?

- (A) Less than \$930
- (B) \$930 but less than \$950
- (C) \$950 but less than \$970
- (D) \$970 but less than \$990
- (E) \$990 or more

2007

Data for Question 20 (4 points)

Normal retirement eligibility: Age 65 with 5 years of service.

Early retirement eligibility: Age 55 with 5 years of service.

Early retirement benefit: Accrued benefit reduced 2% for each year the benefit commencement date precedes normal retirement date.

Pre-retirement death benefit: Minimum required by law, payable at the latest date permitted by law.

Joint and 50% survivor optional form conversion factor: 95%.

Data for participant Smith:

Date of birth	1/1/1957
Spouse's date of birth	1/1/1957
Date of employment	1/1/2000
Date of death	1/1/2007
Monthly accrued benefit	\$1,000

Selected actuarial factors:

Age x	$\ddot{a}_x^{(12)}$	D_{65}/D_x
50		0.3880
55	13.15	0.5253
65	10.87	1.0000

Smith has been married to his current spouse for over one year.

Smith's spouse elects to receive her death benefit as a life annuity at the earliest date allowed under the plan.

Question 20

In what range is the present value of the qualified pre-retirement death benefit payable for Smith as of 1/1/2007?

- (A) Less than \$30,000
- (B) \$30,000 but less than \$50,000
- (C) \$50,000 but less than \$70,000
- (D) \$70,000 but less than \$90,000
- (E) \$90,000 or more

2007

Data for Question 21 (2 points)

Pursuant to regulation 1.401(a)(4)-5(b)(3), a defined benefit plan may make an unrestricted distribution of all benefits payable to a restricted employee if:

- I. After the distribution, the value of the plan assets equals or exceeds 110% of the value of current liabilities.
- II. The benefit payable is less than 1% of the plan assets prior to distribution.
- III. The benefit payable does not exceed \$5,000.

Question 21

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.

2007

Data for Question 22 (4 points)

During 2006, Smith was a participant in a defined benefit plan and a 401(k) profit sharing plan sponsored by Smith's employer.

Plan year:

Defined benefit plan	7/1 to 6/30
401(k) profit sharing plan	Calendar year

Data for Smith:

Age on testing date 40

Plan year ending	<u>6/30/2006</u>	<u>12/31/2006</u>	<u>6/30/2007</u>
Compensation	\$80,000	\$75,000	\$68,000
Annual defined benefit accrual	1,500	N/A	2,300
Salary deferrals		5,000	
Catch-up salary deferrals		3,600	
Profit sharing allocation		7,200	

Testing methods and assumptions:

Testing date	12/31/2006
Standard interest rate	8.0%

Accrual rates for each plan are based on compensation paid during the applicable plan year.

Selected annuity factor:

$$\ddot{a}_{65}^{(12)} = 9.35$$

Question 22

In what range is Smith's benefit percentage for the average benefit percentage test for 2006 determined on an equivalent allocation basis?

- (A) Less than 12.50%
- (B) 12.50% but less than 16.75%
- (C) 16.75% but less than 21.00%
- (D) 21.00% but less than 25.25%
- (E) 25.25% or more

2007

Data for Question 23 (5 points)

Plan A is being spun off into Plan B and Plan C.

Information as of the date of spin off:

	<u>Plan A</u>	<u>Plan B</u>	<u>Plan C</u>
Assets:			
Market	\$100,000,000		
Actuarial	110,000,000		
Accrued liability	\$140,000,000	\$34,000,000	\$106,000,000
Termination liability:			
Category 1-3	\$60,000,000	\$18,000,000	\$42,000,000
Category 4	30,000,000	6,000,000	24,000,000
Category 5	40,000,000	3,000,000	37,000,000
Category 6	30,000,000	1,500,000	28,500,000
Outstanding balance of amortization bases in Plan A		\$45,000,000	
Credit balance in funding standard account		15,000,000	
Reconciliation account			0

The spin off calculations were performed using the methodology of Rev. Rul. 81-212.

Question 23

In what range is the outstanding balance of the funding standard account amortization bases allocated to Plan B?

- (A) Less than \$7,400,000
- (B) \$7,400,000 but less than \$8,400,000
- (C) \$8,400,000 but less than \$9,400,000
- (D) \$9,400,000 but less than \$10,400,000
- (E) \$10,400,000 or more

2007

Data for Question 24 (3 points)

Valuation and current liability interest rate for the 2006 plan year: 5%.

PBGC required interest rate as of 1/1/2007: 5%.

RPA '94 current liability as of 1/1/2006:

Active participants (vested)	\$600,000
Active participants (non-vested)	0
Inactive participants	0

Market and actuarial value of assets as of 12/31/2005: \$580,000.

Market and actuarial value of assets as of 12/31/2006: \$640,000.

The plan has been frozen since the 2004 plan year, and no additional plan benefits have been accrued since 2004.

No contributions and benefit distributions were made for or during the 2005 and 2006 plan years.

There were no gains or losses other than the asset gain for the 2006 year.

Question 24

In what range is the lowest amount of the variable rate premium due the PBGC for the 2007 plan year?

- (A) Less than \$500
- (B) \$500 but less than \$1,000
- (C) \$1,000 but less than \$1,500
- (D) \$1,500 or more
- (E) Cannot be determined from data given

2007

Data for Question 25 (4 points)

The benefit paid to Smith is the maximum allowable under IRC section 415.

Plan actuarial equivalence: 5.25% interest. There is no pre-retirement mortality. Post-retirement mortality based on the applicable mortality table.

Applicable interest rate on 1/1/2007: 5.50%.

Data for participant Smith:

Date of birth	1/1/1945
Date of hire	1/1/1995
Date of entry	1/1/1998
Date of retirement	1/1/2007
Average annual compensation	\$200,000
Son's date of birth	1/1/1967

Smith commences benefits on 1/1/2007 in the form of an annual joint and survivor annuity over the joint lives of Smith and his son.

Selected annuity factors:

<u>Interest rate</u>	<u>\ddot{a}_{62}</u>	<u>$\ddot{a}_{\overline{62:40}}$</u>
5.00%	13.14	18.13
5.25%	12.85	17.53
5.50%	12.58	16.98

Question 25

In what range is the annual benefit payable to Smith in 2007?

- (A) Less than \$119,000
- (B) \$119,000 but less than \$123,000
- (C) \$123,000 but less than \$127,000
- (D) \$127,000 but less than \$131,000
- (E) \$131,000 or more

2007

Data for Question 26 (5 points)

Employer A sponsors a defined benefit plan and a profit sharing plan, both covering only employees Smith and Jones.

Defined benefit plan:

Effective date	1/1/1990
Plan termination date	1/1/2006
Plan distribution date	1/1/2007
Optional form of benefit	Lump sum, which is elected by both participants
Plan normal retirement age	62
Plan assets on 1/1/2007	\$40,000

Plan provision for surplus assets effective 1/1/1990: Revert to employer.

Actuarial equivalence:

Pre-retirement interest	7%
Pre-retirement mortality	None
Post-retirement interest	7%
Post-retirement mortality	Applicable mortality table

Applicable interest rate for lump sum distributions during 2007: 5.5%.

Selected annuity values:

7.0% interest rate	$\ddot{a}_{62}^{(12)} = 10.01$
5.5% interest rate	$\ddot{a}_{62}^{(12)} = 10.49$

Amount of surplus assets transferred to profit sharing plan on 1/1/2007: \$8,000.

Data for participant:

	<u>Smith</u>	<u>Jones</u>
Date of birth	1/1/1962	1/1/1972
Monthly accrued benefit on 1/1/2006	\$328	\$254

Question 26

What is the amount of excise tax payable by Employer A on the reversion of assets?

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

2007

Data for Question 27 (5 points)

Type of plan: Multiemployer.

Method for determining withdrawal liability: “Rolling 5” with standard de minimis rule.

Valuation interest rate: 8% per year.

Employer X completely withdraws from Plan A on 9/30/2007. There have been no previous withdrawals from this plan since its inception.

<u>Year</u>	<u>Base units</u>		<u>Contributions</u> per unit	<u>Contributions</u>		<u>Year-end</u> <u>unfunded</u> <u>vested</u> <u>benefit value</u>
	<u>Total</u>	<u>Employer X</u>		<u>Total</u>	<u>Employer X</u>	
1996	1,200,000	30,000	0.38	\$456,000	\$11,400	\$7,850,000
1997	1,080,000	35,000	0.42	453,600	14,700	5,950,000
1998	1,350,000	45,000	0.37	499,500	16,650	5,250,000
1999	1,380,000	50,000	0.35	483,000	17,500	4,000,000
2000	1,500,000	60,000	0.36	540,000	21,600	4,950,000
2001	1,470,000	55,000	0.35	514,500	19,250	3,650,000
2002	1,410,000	42,000	0.36	507,600	15,120	4,250,000
2003	1,440,000	22,000	0.33	475,200	7,260	5,650,000
2004	1,530,000	24,000	0.30	459,000	7,200	4,450,000
2005	1,500,000	20,000	0.34	510,000	6,800	5,500,000
2006	1,455,000	21,000	0.33	480,150	6,930	6,150,000
2007	1,560,000	15,000	0.31	483,600	4,650	6,050,000

Question 27

In what range is the total of the payments Employer X will pay to Plan A until Employer X’s withdrawal liability is fully amortized?

- (A) Less than \$75,000
- (B) \$75,000 but less than \$80,000
- (C) \$80,000 but less than \$85,000
- (D) \$85,000 but less than \$90,000
- (E) \$90,000 or more

2007

Data for Question 28 (4 points)

Type of plan: Multiemployer.

Normal retirement benefit:

Effective 1/1/1997 (adopted 1/1/1997)	\$30 per month for each year of service
Effective 1/1/2002 (adopted 1/1/2003)	\$35 per month for each year of service
Effective 1/1/2007 (adopted 1/1/2006)	\$40 per month for each year of service

Data for all 50 participants as of 1/1/2007:

<u>Number of participants</u>	<u>Years of service</u>
10	30
40	10

All benefits are payable at age 65.

Question 28

In what range is the sum of monthly benefits guaranteed by the PBGC as of 1/1/2007?

- (A) Less than \$17,500
- (B) \$17,500 but less than \$20,000
- (C) \$20,000 but less than \$22,500
- (D) \$22,500 but less than \$25,000
- (E) \$25,000 or more

2007

Data for Question 29 (5 points)

Plan effective date: 1/1/2005.

Normal retirement age: Age 60 and 5 years of participation.

Normal retirement benefit: 11.5% of average salary per year of service.

Average salary: High three-year average salary.

There is no benefit forfeiture upon death of a participant.

Actuarial equivalence:

Interest	5%
Pre-retirement mortality	None
Post-retirement mortality	1983 GAM (female)

Data for participant Smith:

Date of birth	1/1/1953
Date of hire	1/1/1999
Salary in all years	\$50,000

Selected annuity factors:

<u>Interest Rate</u>	<u>Mortality</u>	$\ddot{a}_{60}^{(12)}$	$\ddot{a}_{62}^{(12)}$
5%	1983 GAM (female)	13.98	13.44
5%	Applicable table	13.25	12.68

The plan grants no more than five years of pre-participation service.

Question 29

In what range is Smith's monthly accrued benefit as of 12/31/2007?

- (A) Less than \$3,650
- (B) \$3,650 but less than \$3,800
- (C) \$3,800 but less than \$3,950
- (D) \$3,950 but less than \$4,100
- (E) \$4,100 or more

2007

Data for Question 30 (4 points)

An employer sponsors a profit sharing plan.

The general test is performed on a contributions basis.

Permitted disparity is imputed.

HCE/NHCE status, compensation, profit sharing allocations and allocation rates for all employees in 2006 are provided below:

<u>Employee</u>	<u>2006 compensation</u>	<u>2006 allocation</u>	<u>2006 unadjusted allocation rate</u>
HCE1	\$100,000	\$4,500	4.50%
HCE2	100,000	3,250	3.25%
HCE3	100,000	2,250	2.25%
HCE4	100,000	1,200	1.20%
NHCE1	50,000	2,500	5.00%
NHCE2	50,000	2,000	4.00%
NHCE3	50,000	1,750	3.50%
NHCE4	50,000	1,600	3.20%
NHCE5	50,000	1,500	3.00%
NHCE6	50,000	1,250	2.50%
NHCE7	50,000	560	1.12%
NHCE8	50,000	505	1.01%
NHCE9	50,000	425	0.85%
NHCE10	50,000	400	0.80%

Question 30

In what range is the rate group percentage for HCE4?

- (A) Less than 55%
- (B) 55% but less than 65%
- (C) 65% but less than 75%
- (D) 75% but less than 85%
- (E) 85% or greater

2007

Data for Question 31 (5 points)

Plan provisions:

Normal retirement benefit	1.6% of pay for each year of service
Mandatory employee contributions	6% of pay, paid on 12/31 each year
Vesting schedule	Statutory 3- to 7-year graded vesting schedule

Actuarial equivalence factors:

Pre- and post-retirement interest	Applicable interest
Pre-retirement mortality	None
Post-retirement mortality	Applicable mortality

Data for participant Smith:

Date of birth	1/1/1953
Date of hire	1/1/2001

Selected values:

<u>Year</u>	<u>Pay</u>	January <u>120% Federal</u> <u>Mid-term Rate</u>	<u>Applicable</u> <u>interest rate</u>	Lump sum annuity factor at <u>age 65</u>
2001	\$ 50,000	6.75%		
2002	50,000	5.40%		
2003	50,000	4.12%		
2004	50,000	4.23%		
2005	50,000	4.53%		
2006	0	5.39%	4.65%	12.15

Smith terminated on 1/1/2006 and received a single sum distribution of accumulated contributions on that date.

Question 31

In what range is Smith's employer-derived annual deferred annuity payable at age 65?

- (A) Less than \$100
- (B) \$100 but less than \$900
- (C) \$900 but less than \$1,700
- (D) \$1,700 but less than \$2,500
- (E) \$2,500 or more

2007

Data for Question 32 (5 points)

Benefit formula:

Prior to 7/1/2004 2.25% of final average compensation times years of service limited to 20 years.

After 6/30/2004 2.50% of final average compensation times years of service limited to 20 years.

Early retirement eligibility: Age 55 with 5 years of service.

Early retirement benefit: Accrued benefit reduced by 3% for each year the benefit commencement date precedes age 65.

Plan is terminated 12/31/2006.

Data for participant Smith:

Date of birth 12/31/1946
Date of hire 12/31/1986

Final average compensation as of 12/31/2006	\$ 80,000
Final average compensation as of 12/31/2005	75,000
Final average compensation as of 12/31/2004	70,000
Final average compensation as of 12/31/2003	65,000
Final average compensation as of 12/31/2002	60,000

Question 32

In what range is Smith's immediate monthly life only benefit attributed to priority category 4?

- (A) Less than \$905
- (B) \$905 but less than \$950
- (C) \$950 but less than \$995
- (D) \$995 but less than \$1040
- (E) \$1040 or more

2007

Data for Question 33 (4 points)

A company sponsors two qualified pension plans: Plan A covers employees in Division A and Plan B covers employees in Division B.

Plan A eligibility: No age or service requirements.

Plan B eligibility: Age 21 and 1 year of service.

No employee is in more than one plan.

Otherwise excludable employees are not tested separately.

Data for all employees:

Highly Compensated Employees (all non-union):	<u>Division A</u>	<u>Division B</u>
At least age 21 and 1 year of service	250	150
Under age 21 or less than 1 year of service	0	1
Non-Highly Compensated Employees:	<u>Division A</u>	<u>Division B</u>
Non-union: At least age 21 and 1 year of service	1,750	600
Non-union: Under age 21 or less than 1 year of service	350	75
Union: At least age 21 and 1 year of service	75	25
Union: Under age 21 or less than 1 year of service	25	10

Question 33

What is the NHCE concentration percentage?

- (A) Less than 80%
- (B) 80% but less than 82%
- (C) 82% but less than 84%
- (D) 84% but less than 86%
- (E) 86% or more

2007

Data for Question 34 (4 points)

A plan terminates with assets in excess of the present value of benefits. An amendment is adopted effective on the termination date that increases benefits for participants. The benefit increases for participants are sufficient to decrease the excise tax on the reversion from 50% to 20% under IRC section 4980.

All participants elect to receive benefits in the form of a lump sum.

Data for all participants of the plan as of the termination date:

	<u>Status</u>	<u>Type of employee</u>	<u>Lump sum prior to increase</u>	<u>Maximum lump sum under IRC section 415 of the Code</u>
Smith	Active	HCE	\$300,000	\$325,000
Jones	Active	NHCE	80,000	200,000
Brown	Active	NHCE	10,000	150,000
Green	Terminated	NHCE	400,000	450,000

All participants of the plan are “qualified participants.”

Market value of plan assets as of termination date: \$1,300,000.

Question 34

In what range is the minimum increase in the lump sum for Jones?

- (A) Less than \$10,000
- (B) \$10,000 but less than \$20,000
- (C) \$20,000 but less than \$30,000
- (D) \$30,000 but less than \$40,000
- (E) \$40,000 or more

2007

Data for Question 35 (3 points)

A company maintains Plan A for its employees in Location A and Plan B for its employees in Location B.

Eligibility for participation:

Plan A	Immediate
Plan B	2 years of service

All employees of the company work at least 1,000 hours each year.

Each plan will benefit at least 1 HCE.

Consider the following data for all employees of the company employed as of 1/1/2007:

	<u>Location A</u>	<u>Location B</u>
Number of employees hired prior to 1/1/2005	60	40
Number of employees hired on 1/1/2006	20	15

No employees terminated during 2007.

Question 35

In what range is the minimum number of employees that need to benefit in Plan B during 2007 in order to satisfy the requirements of IRC section 401(a)(26)?

- (A) Fewer than 22
- (B) 22 but fewer than 32
- (C) 32 but fewer than 42
- (D) 42 but fewer than 52
- (E) 52 or more

Data for Question 36 (2 points)

Consider the following statements:

- I. The tax on a prohibited transaction must be paid by any disqualified person who participates in the prohibited transaction (other than a fiduciary acting only as such), not by the plan.
- II. Any investment in qualified securities of the plan sponsor would be considered a prohibited transaction.
- III. A plan loan to a party-in-interest is always a prohibited transaction.
- IV. The initial excise tax required for a prohibited transaction is 10% times the amount involved for each year, or part of a year, that is included in the taxable period.

Question 36

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

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

2007

Data for Question 37 (3 points)

Data for participant Smith:

Date of birth	1/1/1945
Date of hire	1/1/1999
Date of participation	1/1/2006
Date of termination	12/31/2006
Annual compensation each year	\$ 8,000

Smith's accrued benefit is the maximum allowable under IRC section 415.

Smith commences benefits in the form of an annuity on 1/1/2007.

Smith's employer has never maintained another qualified plan.

Consider the following statements:

- I. The maximum annual benefit which may be paid as a single life annuity is \$6,400 per year.
- II. The maximum annual benefit which may be paid as a single life annuity may also be paid in the same amount as a 100% joint and survivor annuity with a survivor annuity for the life of Smith's spouse.
- III. The maximum annual benefit which may be paid to Smith would be reduced if Smith had previously been a participant in either a defined benefit plan or a defined contribution plan maintained by the employer.

Question 37

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.

2007

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2007 EA-2B EXAMINATION
ANSWER KEY

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