Solutions to EA-2(B) Examination
Spring, 2004

Question 1

The ability to elect an early retirement benefit cannot be removed under IRC section 411(d)(6)(B)(i). This applies both to participants who are already eligible to elect early retirement, and those who have not yet satisfied those requirements, to the extent that they have already accrued a benefit. As of the date of the amendment, any participant (regardless of whether they currently have 30 years of service) must be allowed the unreduced early retirement benefit to the extent that they already accrued benefits.

Answer is B.

Question 2

This is a true statement. Multiemployer plans are only subject to a flat premium. This premium is $2.60 per participant for 2004. See ERISA section 4006(a)(3)(A)(ii).

Answer is A.

Question 3

Excess assets are not protected benefits, and the plan may be amended to provide for a return of excess assets to the employer upon plan termination. However, the plan must be amended to add this provision at least 5 years before the plan actually terminates. See ERISA section 4044(d)(2)(A).

Answer is A.

Question 4

The actuary can perform actuarial services after full disclosure of the conflict of interest. See Joint Board regulation 901.20(d).

Answer is B.

Question 5

The percentage of assets considered in the case of a deminimis spinoff should be 3% of the plan assets before spinoff, not 5%. See IRS regulation 414(l)-(1)(n)(2)(ii).

Answer is B.

Question 6

Smith is not a fiduciary of the plan since Smith has no discretionary authority over the plan or the plan's assets, and Smith offers no investment advice. The fact that Smith is an officer has no bearing on this. See IRC section 4975(e)(3), ERISA section 3(21), and ERISA regulation 2509.78-1, Q&A D-5.

Answer is B.

Question 7

The participant notice of ERISA section 4011 is not required for plans that are exempt from the additional funding charge (either in the current year or the immediately prior year) due to the Gateway percentage being at least 90%, or the Gateway percentage being at least 80% when the Gateway percentages for at least two consecutive out of the past three years are at least 90%.

The Gateway percentage for 2004 is 76%, and is not exempt from the additional funding charge. However, in 2003, the Gateway percentage was 81%, and the Gateway percentages in 2000 and 2001 were each at least 90%. Therefore, the plan was exempt from the additional funding charge in 2003.

The plan does not need to provide the participant notices under ERISA 4011 for 2004.

See ERISA regulation 4011.3(a) and (b).

Answer is A.

Question 8

The nondiscrimination corrective amendment must be adopted no later than 9 1/2 months after the plan year-end. See IRS regulation 1.401(a)(4)-11(g)(3)(iv)(A).

Answer is B.

Question 9

Fully insured plans under IRC section 412(i) are generally exempt from the minimum funding requirements of IRC section 412 (and the filing of a Schedule B). See IRC section 412(h)(2).

However, IRS regulation 1.416-1, Q&A M-17, states that a Schedule B may be required if the plan provides top-heavy minimum benefits. Since the plan in this question is not top-heavy, no Schedule B is required.

Answer is A.

Question 10

IRC section 411(a)(8)(B) requires that the normal retirement age cannot exceed the later of age 65 or 5 years of plan participation. Smith entered the plan in 1999 at age 61. Therefore, Smith's normal retirement age is 66.

Answer is B.

Question 11

A fiduciary is not liable for breaches of fiduciary duty made by a prior fiduciary under ERISA section 409(b).

Answer is B.

Question 12

The benefit cutback rules prohibit the removal of an optional form of benefit with regard to a benefit already accrued. Since the lump sum with regard to benefits accrued prior to 2002 is based upon benefits accrued prior to the 2002 amendment, Smith must be allowed to retain the lump sum option with regard to those benefits. See IRS regulation 1.411(d)-4, Q&A 2, section (a)(2)(iii).

Answer is A.

Question 13

Tax exempt corporations are exempt from excise taxes on contributions in excess of the deductible limit. See IRC section 4972(d)(1)(B).

Answer is B.

Question 14

There is only a requirement that the actuary provide notification of the non-filing of forms that the enrolled actuary has signed. Since the enrolled actuary did not sign these forms, there is no notification requirement. See ERISA regulation 901.20(h).

Answer is A.

Question 15

In order to satisfy the fractional rule safe harbor under IRS regulation 1.401(a)(4)-3(b)(4)(C)(1), it must be shown that no participant can accrue more than 133 1/3% of any other participant in a given year. (Potential and actual participants with more than 33 years of service can be excluded from this test.)

For a participant with 10 years of service at retirement, the annual accrual is clearly 3% of average annual compensation.

Next, consider a participant with 30 years of service at retirement. The normal retirement benefit as a percentage of average annual compensation is:

$(3\% \times 10 \text{ years}) + (2\% \times 10 \text{ years}) + (1\% \times 10 \text{ years}) = 60\%$

The annual accrual under the fractional rule is:

$60\% \times 1/30 = 2\%.$

The regulation is not satisfied since the 3% accrual for the participant with 10 years of service is 150% of the 2% accrual for the participant with 30 years of service.

Note that regulation 1.401(a)(4)-3(b)(4)(C) also provides two other options to satisfy the fractional rule safe harbor. Each of the options deals with the situation where the plan provides a flat benefit that requires a minimum of 25 years of service in order to receive an unreduced flat benefit. The given benefit formula clearly does not satisfy these options.

The statement is false.

Answer is B.

Question 16

Grouping of accrual rates is described in IRS regulation 1.401(a)(4)-3(d)(3)(ii). Grouping requires that the accrual rate be centered around a midpoint rate. Each participant with a normal accrual rate within 5% of the midpoint and a most valuable accrual rate within 15% of the midpoint is deemed to have an accrual rate equal to the midpoint.

The 5% range above and below the 2% normal accrual rate yields a range of 1.9% to 2.1%. Brown and Green are each deemed to have a normal accrual rate of 2%.

The 15% range above and below the 3% most valuable accrual rate yields a range of 2.55% to 3.45%. Smith, Jones, and Green are each deemed to have a most valuable accrual rate of 3%.

Only Green is assigned both the normal accrual rate of 2% and the most valuable accrual rate of 3%.

Answer is D.

Question 17

Each year's salary must be limited by IRC section 401(a)(17) before averaging. Revenue Notice 2001-56 allows for a plan to retroactively use the 401(a)(17) limit of $200,000 for years prior to 2002. It is not known what the effective date of the plan is, and since the general conditions of the exam provide that the plan has never been amended, it must be assumed that the plan has always contained this provision. Each year's salary must be limited to $200,000.

The salary as limited by 401(a)(17) is:

Compensation Year	Annual Compensation	401(a)(17) Limited Compensation
1999	$170,000	$170,000
2000	175,000	175,000
2001	180,000	180,000
2002	190,000	190,000
2003	210,000	200,000

The average salary is:

$$\frac{170{,}000 + 175{,}000 + 180{,}000 + 190{,}000 + 200{,}000}{5} = 183{,}000$$

Answer is C.

Question 18

The balance equation can be used to allocate the amortization of the outstanding bases to the plans under the spinoff. In an immediate gain method such as unit credit, the unfunded liability is equal to the accrued liability less the actuarial value of the assets. Recall that the balance equation is:

Unfunded liability = Outstanding balance – Credit balance
Accrued liability – Actuarial value of assets = Outstanding balance – Credit balance
Outstanding balance = Accrued liability – Actuarial value of assets + Credit balance

The following reflects the balance equation for each of Plans A, B, and C:

	Plan A	Plan B	Plan C
Accrued liability	$1,775,000	$1,000,000	$775,000
Actuarial value of assets	1,489,127	774,127	715,000
Credit balance	92,000	15,000	77,000
Outstanding balance	377,873	240,873	137,000

The amortization bases are allocated proportionately to the outstanding balances of the plans, under the rules of Revenue Ruling 81-212. For plan B, this ratio is 240,873/377,873 = 63.7444%.

The 2004 normal cost for Plan B is $100,000 (as of 1/1/2004) and the amortization charges (less credits) of the outstanding bases is $38,247 ([20,000 + 60,000 – 20,000] × .63444).

The 2004 minimum required contribution for Plan B as of 12/31/2004 is:

(100,000 + 38,247 – 15,000) × 1.075 = 132,491

Answer is C.

Question 19

The actuarial value of assets as adjusted for purposes of the General Rule in the calculation of the PBGC premium is equal to the actuarial assets that include the receivable contribution for 2003 discounted with interest from the date made to the prior plan year end using valuation interest (see instructions to PBGC Schedule A). Since the contribution was deposited on 7/1/2004, it is discounted with half of a year's interest (4%, which is half of the 8% valuation interest).

Adjusted value of plan assets = $1,800,000 - $400,000 + ($400,000/1.04) = $1,784,615

Answer is D.

Question 20

The annual withdrawal liability payment is equal to the high 3-year average of the hours worked during the last 10 years prior to the year of withdrawal (1998 through 2000 in the case of Employer A), multiplied by the highest contribution rate during the last 10 years ending in the year of withdrawal (the 1996 rate of .27 in this situation). For Employer A, this is:

$$\text{Annual withdrawal liability payment} = \frac{140{,}000 + 110{,}000 + 130{,}000}{3} \times .27 = 34{,}200$$

Answer is E.

See ERISA section 4219(c)(1)(C).

Question 21

ERISA section 204(h) requires notification of participants if a plan is amended to provide for a significant reduction in the future accrual of benefits. By ceasing benefit accruals, a significant reduction has occurred. The 204(h) notice must be provided no later than 15 days before the effective date of the amendment (note that this is an exception to the usual 45-day rule under regulation 54.4980F-1, Q&A9, part (d)(1) of the answer due to the disposition of Subsidiary Z).

The plan sponsor must pay an excise tax pursuant to IRC section 4980F of $100 per day that the notice is late per affected participant. Only the 55 participants from Subsidiary Z are affected. The notice is provided 45 days late. The excise tax is:

$100 × 55 × 45 days = $247,500.

Answer is B.

Question 22

Calculate the retirement benefit under the plan provisions without regard to the limitations of IRC section 415. Smith will have 10 years of service on the normal retirement date of 12/31/2004. The benefit under the plan formula is:

Plan benefit = 10% × 10 years of service × $104,000 = $104,000

The lump sum value of the plan benefit under IRC section 417(e)(3) is equal to the greater of the lump sum using plan equivalence (1983 IAM Female table with 5% interest) or the lump sum using the applicable mortality table (under Revenue Ruling 2001-62) and the applicable interest rate (4.93%). Examining the immediate annuity factors at age 55, the largest lump sum would be provided using the plan assumptions.

Plan lump sum = $104,000 × 15.31 = $1,592,240

Next, the limitation under IRC section 415(b) must be considered. The compensation limit is equal to 100% of the high consecutive 3-year average salary, reduced by 1/10 for each year of service less than 10 years. Smith will have 10 years of service, so the compensation limit is therefore $104,000.

The defined benefit dollar limitation is $165,000 for 2004. This is reduced for years of plan participation less than 10, as well as for retirement prior to age 62. Smith will have 10 years of plan participation, so there is no reduction due to plan participation. Smith's assumed retirement age is 55, so the $165,000 dollar limit must be reduced to age 55 from age 62. The reduced benefit is equal to the smaller of the benefit reduced using plan equivalence assumptions, or reduced using the applicable mortality table and a 5% interest rate. This is discussed in step 2 of Q&A 7 in Revenue Ruling 98-1.

The actuarial reduction using the plan actuarial equivalence assumptions (1983 IAM Female table with 5% interest) can be determined using the immediate life annuity factors. Since there is a pre-retirement death benefit, the reduction from age 62 to age 55 is discounted with interest only. This is:

$$\$165{,}000 \times \ddot{a}^{(12)}_{62@5\%} \times v^{7}_{5\%} \div \ddot{a}^{(12)}_{55@5\%} = \$165{,}000 \times 13.64 \times .710681 \div 15.31 = \$104{,}472$$

The actuarial reduction using the applicable mortality table and 5% interest from age 62 to age 55 can similarly be determined. This is:

$$\$165{,}000 \times \ddot{a}^{(12)}_{62@5\%} \times v^{7}_{5\%} \div \ddot{a}^{(12)}_{55@5\%} = \$165{,}000 \times 12.68 \times .710681 \div 14.57 = \$102{,}051$$

The dollar limitation is therefore the smaller of these amounts, $102,051. This is the overall IRC section 415 limit for Smith since it is less than the compensation limit.

The maximum lump sum payable under IRC section 415 is equal to the smaller of the lump sum equivalent of the 415 limit using plan assumptions or the applicable mortality table and applicable interest rate. Examining the immediate annuity factors at age 55, the smaller factor is the one based upon the applicable mortality table and applicable interest rate. The IRC section 415 lump sum limit is:

$102,051 × 14.68 = $1,498,109

This is the lump sum payable to Smith since it is less than the lump sum due to Smith without regard to IRC section 415.

Answer is B.

Question 23

All four statements are true.

I. See ERISA section 408(c)(1).
II. See ERISA section 402(b)(3).
III. See ERISA section 402(a)(1).
IV. See ERISA section 402(c)(2).

Answer is E.

Question 24

Statements I and II are true.

I. ERISA regulation 901.20(b) requires that an enrolled actuary not perform services to a client who is utilizing their services in a fraudulent manner or in a manner inconsistent with the law.
II. ERISA regulation 901.20(h) requires that an enrolled actuary provide notification of any non-filing of any actuarial document that they have signed.
III. ERISA regulation 901.20(h) requires notification only to the government agency where the document should have been filed. Therefore, it is not necessary to notify the DOL of a non-filing with the PBGC.

Answer is A.

Question 25

The compensation limit under IRC section 415(b)(1)(B) is equal to 100% of the high consecutive 3-year average annual compensation over all years of service, reduced by 1/10 for years of service less than 10. For this purpose, salary need not be limited by the compensation limit of IRC section 401(a)(17). Smith has more than 10 years of service as of 1/1/2004, so there is no reduction applied. The compensation limit for Smith is:

(195,000 + 215,000 + 175,000)/3 = 195,000

Answer is D.

Question 26

The accrued benefit under the defined benefit formula for Smith is:

AB = 1.5% × 1 year of service × $50,000 = $750

The top-heavy minimum benefit in the defined benefit plan is:

TH minimum = 2% × 1 year of top-heavy plan participation × $50,000 = $1,000

The top-heavy minimum is offset by the accumulated profit sharing annual addition. The annual addition for Smith in the profit sharing plan is $1,000. Accumulating to age 65 and converting to a life annuity:

Profit sharing equivalent benefit = $1,000 × $1.07^9 \div 9.70$ = $190

The offset top-heavy minimum benefit in the defined benefit plan is:

Offset TH minimum = $1,000 - $190 = $810

The accrued benefit for Smith is equal to the larger of the plan accrued benefit and the top-heavy minimum (after offset). This is $810.

Answer is C.

Question 27

The flat premium is equal to $19 per participant. This is:

Flat premium = $19 × 597 = $11,343

Under the Alternative Calculation Method, the PBGC variable premium is calculated by first determining the difference between the adjusted value of vested benefits under current liability assumptions as of the first day of the prior year and the adjusted value of plan assets as of the first day of the prior year. The difference is then increased with interest for one year using the current year PBGC required interest rate. The result is then rounded up to the next thousand dollars, and multiplied by .9%.

In this question, the current liability is provided as of 1/1/2003 for each of the following categories of participants: retired, other vested, and other non-vested. The adjustment factors apply to the vested benefits only (the current liability associated with the non-vested benefits is ignored), and are given in the instructions to the PBGC premium form (Schedule A), as well as in an attachment to the exam.

The adjustment factor for retired participants is:

$.94^{(RIR - BIR)}$

The adjustment factor for the active and terminated participants is:

$.94^{(RIR - BIR)} \times ((100 + BIR)/(100 + RIR))^{(ARA - 50)} \times 1.07$

In the above formulas, RIR is the required interest rate for the PBGC premium year, BIR is the current liability interest rate for the PBGC premium year, and ARA is the assumed retirement age. Note that the 7% increase for the active and terminated participants represents an estimate of the increase in accrued benefit for the year (in this case the 2003 year).

The adjusted value of vested benefits for the retired participants as of 1/1/2003 is:

$933{,}000 \times .94^{(4.93 - 6.09)} = 1{,}002{,}428$

The adjusted value of vested benefits for the non-retired participants as of 1/1/2003 is:

$1{,}821{,}000 \times .94^{(4.93 - 6.09)} \times (106.09/104.93)^{(65 - 50)} \times 1.07 = 2{,}468{,}807$

The adjusted value of plan assets must be determined as of 1/1/2003 by subtracting contributions receivable and adding back all contributions for each year prior to the current year, each discounted with interest at the PBGC required interest rate from the date they were deposited to 1/1/2003. Note that the given asset value includes the receivable contribution for 2002. Since no contributions were made for 2003, there are no contributions added back for that year. The adjusted value of the plan assets (using actuarial value of assets) is:

$2{,}518{,}000 - 300{,}000 + 100{,}000/1.0493^{0.5/12} + 200{,}000/1.0493^{8.5/12} = 2{,}511{,}097$

Adjusted $UVB_{1/1/2004} = (1{,}002{,}428 + 2{,}468{,}807 - 2{,}511{,}097) \times 1.0493 = 1{,}007{,}473$

2004 variable premium = $1,008,000 × .009 = $9,072

Total 2004 premium = $11,343 + $9,072 = $20,415

Balance due on 10/15/2004 = $20,415 - $17,043 = $3,372

Answer is D.

Question 28

The monthly vested accrued benefit for Smith as of the plan termination date is:

AB = $110 × 28 3/4 years of service = $3,162.50.

This must be limited by the PBGC maximum guaranteeable benefit. The PBGC monthly maximum guaranteeable benefit for 2004 is $3,698.86, payable as a life annuity at age 65. Since Smith's date of benefit commencement is at age 62, the maximum guaranteeable benefit must be reduced to age 62. The reduced benefit (reduced at the rate of 7% per year prior to age 65 pursuant to the PBGC reduction factors found in ERISA section 4022 and the attachment to the exam) is:

PBGC maximum guaranteeable benefit = $3,698.86 × .79 = $2,922

Since Smith is a substantial owner, his vested accrued benefit (limited by the maximum guaranteeable benefit) is phased in pro-rata over 30 years from entry into the plan. Smith entered the plan on 1/1/1980, and has completed 24 full years of participation as of the plan termination date of 10/1/2004 (note that partial years of participation are not included). The guaranteed monthly benefit for Smith is:

$2,922 × 24/30 = $2,338

Answer is B.

Question 29

The date at which the pre-retirement survivor annuity is to be paid is the earliest date that Smith would have been eligible to retire (see IRC section 417(c)(1)(A)(ii)). This is the date that Smith would have reached age 65 (Smith completed only 24 years of service upon death, and does not meet the early retirement eligibility conditions), which is 1/1/2020.

Smith's accrued benefit as of the date of death (1/1/2004) is:

$30,000 × .01 × 24 years of service = $7,200

Converting this to the optional QJSA annuity:

$7,200 × .9 = $6,480

The qualified pre-retirement survivor annuity (QPSA) can be waived at any time before retirement, beginning at age 35 (see IRC section 417(a)(6)(B)). The charge for the qualified pre-retirement survivor annuity is .2% per year that the participant did not waive the annuity. Since Smith died at age 49, there were 14 years during which the annuity could have been waived. The percentage charge for the QPSA is:

.2% × 14 years = 2.8%

The spouse is entitled to 50% of the participant's QJSA accrued benefit, reduced for the expense charge. The monthly spousal benefit payable beginning 1/1/2020 is:

$6,480 × 50% × 97.2% = $3,149

Answer is D.

Question 30

IRC section 4980F and ERISA section 204(h) each deal with the notice requirements to affected plan participants when a plan is amended to reduce future benefit accruals. IRS regulation 54.4980F-1 provides regulations dealing with the notice requirements.

In the regulation, Q&A 3 indicates that the notice requirement only applies to a qualified defined benefit plan or a defined contribution plan subject to the minimum funding standards of IRC section 412. Therefore, Plan E is not required to distribute an ERISA section 204(h) notice, since it is a 401(k) plan.

In the regulation, Q&As 6 and 7 describes the type of amendment that would require an ERISA 204(h) notice to be issued. In general, the amendment must reduce the rate of future benefit accrual.

Plan A increases the early retirement reduction factor, so it in effect reduces the rate of future benefit accrual with respect to an early retirement benefit.

Plan B reduces the rate of future benefit accrual for participants with more than 20 years of service. Even though no participant currently is affected by the amendment, it could affect future accruals for either current participants or future participants.

Plan C further limits the service cap, possibly reducing future accruals for participants who will have more than 30 years of service.

Plan D limits compensation such that future compensation increases are not used to determine the future benefit accruals.

Plan F reduces the amount of employer contribution to the money purchase plan, which is subject to IRC section 412.

All of plans A, B, C, D, and F are required to distribute ERISA section 204(h) notices.

Answer is E.

Question 31

The average benefit percentage must include all plans of the employer, regardless of whether they have the same plan year (see IRS regulation 1.410(b)-5(d)(5)(ii)). Note that for all other nondiscrimination purposes, the plans cannot be aggregated (see IRS regulation 1.410(b)-7(d)(5)). For plan years that differ, the period used should be based upon the plan year that ends in the same calendar year as the plan being tested (IRS regulation 1.410(b)-5(d)(3)(ii)).

The testing year for Plan A (the plan being tested) ends in 2004 (on 1/31/2004). Therefore, the period to be used from Plan B would be from 11/1/2003 through 10/31/2004.

Answer is D.

Question 32

The lump sum paid to Smith is equal to the greater of the lump sum using plan equivalence (UP84 table with 4% interest) or the lump sum using the applicable mortality table and the applicable interest rate (4.60%). Examining the immediate annuity factors at age 65, the largest lump sum would be provided using the applicable mortality table and the applicable interest rate.

Lump sum = $100,000 × 12.20 = $1,220,000

The rules relating to restrictions on distributions to the 25 highest-paid HCEs under IRS regulation 1.401(a)(4)-5(b)(3) state that there is no restriction if the value of the plan assets immediately after the distribution does not exceed 110% of the current liability immediately after the distribution.

110% of current liability after distribution = 110% × $99,015,000 = $108,916,500

The assets prior to the distribution must be equal to that amount, plus the distribution.

Assets prior to distribution = $108,916,500 + $1,220,000 = $110,136,500

Answer is D.

Question 33

In order to impute disparity in accrual rates (IRS regulation 1.401(a)(4)-7(c)), the participants must be divided into two groups: those with compensation less than or equal to covered compensation, and those with compensation greater than covered compensation. The imputed accrual rate for those participants with compensation less than or equal to covered compensation is equal to the smaller of:

(i) 2 × accrual rate without imputing disparity, or
(ii) Accrual rate without imputing disparity + maximum permitted disparity factor

The imputed accrual rate for those participants with compensation greater than covered compensation is equal to the smaller of:

(i) $\dfrac{\text{annual accrual}}{\text{average annual compensation} - \frac{1}{2}\text{covered compensation}}$, or

(ii) $\dfrac{\text{annual accrual} + (\text{maximum disparity factor} \times \text{covered compensation})}{\text{average annual compensation}}$

The maximum permitted disparity factor is the permitted disparity that could be used under IRC section 401(l) based upon the testing age and the Social Security Retirement Age (SSRA) for the individual participant.

The average benefit percentage test of IRC section 410(b) uses the normal accrual rates. We must determine the imputed normal rate for each participant.

HCE1

Average compensation for HCE1 is greater than covered compensation. The annual accrual must be determined in order to impute disparity.

Annual accrual = 1.7% × $200,000 = $3,400

The maximum disparity factor is generally .75% (at retirement age 65 with an SSRA of 65). Note that this factor can be found in the permitted disparity tables in IRS regulation 1.401(l)-3(e)(3).

The imputed normal accrual rate is the smaller of:

(i) $\dfrac{3{,}400}{200{,}000 - \frac{1}{2}(39{,}000)} = 1.8800\%$, or

(ii) $\dfrac{3{,}400 + (.0075)(39{,}000)}{200{,}000} = 1.8463\%$

This is 1.8463%.

HCE2

Average compensation for HCE2 is greater than covered compensation. The annual accrual must be determined in order to impute disparity.

Annual accrual = 1.7% × $200,000 = $3,400

The maximum disparity factor (at retirement age 65 with an SSRA of 67) is .65%. Note that this factor can be found in the permitted disparity tables in IRS regulation 1.401(l)-3(e)(3).

The imputed normal accrual rate is the smaller of:

(i) $\dfrac{3{,}400}{200{,}000 - \frac{1}{2}(78{,}000)} = 2.1100\%$, or

(ii) $\dfrac{3{,}400 + (.0065)(78{,}000)}{200{,}000} = 1.9535\%$

This is 1.9535%.

The average of the normal accrual rates for the HCEs is:

$$\frac{1.8463\% + 1.9535\%}{2} = 1.8999\%$$

NHCE1

Average compensation for NHCE1 is greater than covered compensation. The annual accrual must be determined in order to impute disparity.

0.8% × $80,000 = $640

The maximum disparity factor is .75% (at retirement age 65 with an SSRA of 65). Note that this factor can be found in the permitted disparity tables in IRS regulation 1.401(l)-3(e)(3).

The imputed normal accrual rate is the smaller of:

(i) $\dfrac{640}{80{,}000 - \frac{1}{2}(39{,}000)} = 1.0578\%$, or

(ii) $\dfrac{640 + (.0075)(39{,}000)}{80{,}000} = 1.1656\%$

This is 1.0578%.

NHCE2

Average compensation for NHCE2 is less than covered compensation. The maximum disparity factor is .7% (at retirement age 65 with an SSRA of 66). Note that this factor can be found in the permitted disparity tables in IRS regulation 1.401(l)-3(e)(3).

The imputed normal accrual rate is the smaller of:

(i) $2 \times .8\% = 1.60\%$, or
(ii) $.8\% + .7\% = 1.50\%$

This is 1.50%.

NHCE3

Average compensation for NHCE3 is less than covered compensation. The maximum disparity factor is .65% (at retirement age 65 with an SSRA of 67). Note that this factor can be found in the permitted disparity tables in IRS regulation 1.401(l)-3(e)(3).

The imputed normal accrual rate is the smaller of:

(i) $2 \times .8\% = 1.60\%$, or
(ii) $.8\% + .65\% = 1.45\%$

This is 1.45%.

The average of the normal accrual rates for the NHCEs is:

$$\frac{1.0578\% + 1.50\% + 1.45\%}{3} = 1.3359\%$$

The average benefit percentage is the ratio of the average of the normal accrual rates for the NHCEs to the average of the normal accrual rates for the HCEs.

Average benefit percentage = 1.3359%/1.8999% = 70.31%

Answer is C.

Question 34

A partial termination results in the full vesting of the affected plan participants. Participants who have terminated employment prior to the date of partial termination are not affected participants. Therefore, Smith is not subject to full vesting, but Jones and Brown do become fully vested on 1/1/2004.

The vested percentage for Smith under the 3 to 7 year graded vesting schedule is 20% with 3 years of service.

The present value of the vested accrued benefits are:

Smith: \$30 × 3 years of service × $12\,{}_{21|}\ddot{a}_{44}^{(12)}$ × 20% = \$1,296

Jones: \$30 × 5 years of service × $12\,{}_{21|}\ddot{a}_{44}^{(12)}$ = \$10,800

Brown: \$30 × 2 years of service × $12\,{}_{21|}\ddot{a}_{44}^{(12)}$ = \$4,320

Total = \$1,296 + \$10,800 + \$4,320 = \$16,416

Answer is C.

Question 35

This question is addressing the restriction of cash-out rules under IRC section 417(e)(3). Distributions paid in a form of benefit other than an annuity that does not decrease during the life of the participant (other than a decrease of not more than 50% due to the death of the non-participant survivor, or due to a reduction in a Social Security supplement or qualified disability benefit) are subject to these requirements. See IRS regulation 1.417(e)-1(d)(6).

Examining the given optional forms of payment, the only forms that are subject to the rules of IRC section 417(e)(3) are:

Lump sum
5-year annuity certain
Social Security level income option

Answer is D.

Note that the Social Security level income option is not a Social Security supplement. It is an annuity that reduces to the participant by the amount of Social Security payments upon commencement of the Social Security payments. Since the benefit paid by the plan is reduced at that point, this constitutes a decrease under 417(e)(3).

Question 36

Plan I: A reportable event occurs if the number of active participants in a plan falls below 80% of the number of active participants on the first day of the year, or below 75% of the number of active participants on the first day of the prior year (see ERISA section 4043(c)(3)). 75% of the number of active participants as of the first day of the prior year equals 135 (75% of 180). Therefore, since there are only 130 active participants, a reportable event has occurred. ERISA regulation 4043.23(c)(2)(i) provides for an exemption of the notification requirement if the plan has no variable rate premiums due for the current year. Since the plan does have variable rate premiums due, the notification to the PBGC is required.

Plan II: A reportable event generally occurs if a distribution is made to a substantial owner greater than or equal to $10,000 (see ERISA section 4043(c)(7)). A reportable event has occurred since the distribution is $1.6 million. ERISA regulation 4043.27(c)(2)(i) provides for an exemption of the notification requirement if the plan has no variable rate premiums due for the current year. Since the plan does not have variable rate premiums due, the notification to the PBGC is not required.

Plan III: A reportable event generally occurs if a transfer of more than 3% of the benefit liabilities of a plan are transferred to another plan sponsored by an employer that is not part of the same controlled group (see ERISA section 4043(c)(12)). A reportable event has occurred since the liability transfer is 50%. ERISA regulation 4043.32(c)(3) provides for an exemption of the notification requirement if the transfer follows the rules of IRC section 414(l). Since the transfer complied with IRC section 414(l), the notification to the PBGC is not required.

Answer is B.

Question 37

Smith has retired at age 55, with 7 years of service and 6 years of plan participation, and has elected the optional life annuity with 15 years certain. The accrued benefit payable at normal retirement age 60 is:

11% × 7 years of service × $120,000 = $92,400

This benefit must be reduced for early retirement and for the optional form elected under the terms of the plan (using actuarial equivalence based upon the UP84 mortality table and an 8.5% interest rate). The early retirement reduction is 6% per year for 5 years, which is 30%. The reduced early retirement benefit is:

$$\$92{,}400 \times (1 - .3) \times \frac{\ddot{a}_{55}^{(12)}}{\ddot{a}_{\overline{55:15}|}^{(12)}} = \$92{,}400 \times .7 \times (9.584/10.239) = \$60{,}542$$

This must be compared to the IRC section 415(b) limit. The compensation limit is equal to 100% of the high-consecutive 3-year average salary, reduced by 1/10 for each year of service less than 10. The compensation limit is:

$120,000 × 7/10 = $84,000

The defined benefit dollar limitation is $165,000 for 2004. This is reduced for years of plan participation less than 10, as well as for retirement prior to age 62. Smith has 6 years of plan participation, so there is a 4/10 reduction, reducing the dollar maximum to $99,000. Smith has retired at age 55, so the $99,000 dollar limit must be reduced to age 55 from age 62. The reduced benefit is equal to the smaller of the benefit reduced using plan equivalence assumptions (or the plan tabular values), or reduced using the applicable mortality table and a 5% interest rate. Since the tabular factor is used to determine the early retirement benefit under the plan, that factor is also used to adjust the IRC section 415(b) dollar limit.

The reduced dollar limitation based upon the early retirement factor is:

$99,000 × .7 = $69,300

The actuarial reduction using the applicable mortality table and 5% interest from age 62 to age 55 can be determined using the immediate life annuity factors. Since there is a pre-retirement death benefit (no forfeiture upon death), the reduction from age 62 to age 55 is discounted with interest, but not mortality. The reduction is always done using the single life annuity factors, regardless of the form of benefit elected. This is:

$$\$99{,}000 \times \ddot{a}_{62}^{(12)} \times v^7 \div \ddot{a}_{55}^{(12)} = \$99{,}000 \times 12.680 \times .7107 \div 14.574 = \$61{,}214$$

The smaller of the benefit reduced using the plan tabular factors, or reduced using the applicable mortality table and a 5% interest rate, is $61,214.

There is an additional adjustment to the IRC section 415(b) dollar limitation for a life annuity with 15 years certain form of benefit. The adjusted dollar limit is equal to the smaller of the equivalent benefit using plan actuarial equivalence (UP84 mortality and 8.5% interest) and the applicable mortality table with a 5% interest rate.

Using plan equivalence, the adjusted dollar limit is:

$$\$61{,}214 \times \frac{\ddot{a}_{55}^{(12)}}{\ddot{a}_{\overline{55:15}|}^{(12)}} = \$61{,}214 \times (9.584/10.239) = \$57{,}298$$

Using the applicable mortality table with a 5% interest rate, the adjusted dollar limit is:

$$\$61{,}214 \times \frac{\ddot{a}_{55}^{(12)}}{\ddot{a}_{\overline{55:15}|}^{(12)}} = \$61{,}214 \times (14.574/14.979) = \$59{,}559$$

The overall IRC section 415(b) limit is $57,298. Since this is less than the plan benefit, $57,298 is Smith's annual benefit.

Answer is C.

Question 38

All plans of an employer with a key employee must be aggregated for purposes of determining whether the plans are top heavy (see IRC section 416(g)(2)(A)(i)(I)). For plans with different plan years, the aggregation is based upon the determination dates that end within the same calendar year (see example in IRS regulation 1.416-1, Q&A 23). The determination date for each plan is the last day of the prior plan year (see IRC section 416(g)(4)(C)). The present value of accrued benefit is determined on the latest valuation date during the 12-month period ending on the determination date (see IRS regulation 1.416-1, Q&A 24 and 25).

The defined benefit plan and the profit sharing plan must be aggregated for purposes of determining whether the plans are top heavy since they each have at least one key employee. The determination date for the defined benefit plan year beginning 7/1/2004 is 6/30/2004 (with a valuation date of 7/1/2003). The determination date for the profit sharing plan that occurs in the same calendar year as the defined benefit plan determination date is 12/31/2004 (with a valuation date of 12/31/2004). Therefore, the present value of accrued benefits used for the top-heavy determination for the defined benefit plan year beginning on 7/1/2004 is based upon the defined benefit 7/1/2003 valuation and the profit sharing 12/31/2004 valuation.

Finally, the present value of accrued benefits for Brown are ignored since Brown is a former key employee (see IRC section 416(g)(4)(B)).

The top-heavy ratio is:

$$\frac{225{,}000 + 350{,}000 + 230{,}000 + 425{,}000}{225{,}000 + 350{,}000 + 230{,}000 + 425{,}000 + 700{,}000 + 650{,}000} = 47.7\%$$

Answer is C.

Question 39

I. The ratio percentage is equal to the ratio of the benefiting NHCEs as a percentage of the non-excludable NHCEs to the benefiting HCEs as a percentage of the non-excludable HCEs. (See IRC section 410(b)(1).) There are 39 benefiting HCEs and 24 benefiting NHCEs. The ratio percentage is:

(24/40)/(39/40) = 61.54%

II. IRS regulation 1.401(a)(4)-4(b) describes the current availability rules. All participants who are eligible to elect the early retirement window benefit during the plan year are considered to be employees to whom the benefit is currently available. There are 17 HCEs and 9 NHCEs to whom the window benefit is currently available. The ratio percentage is:

(9/40)/(17/40) = 52.94%

III. The non-highly compensated employee concentration percentage (the number of non-excludable non-highly compensated employees as a percentage of all non-excludable employees) is 50% (40/80). The safe harbor percentage associated with this (from the table in IRS regulation 1.410(b)-4(c)(4)(iv) and the attachment to the examination) is 50%.

I > II > III

Answer is A.

Question 40

If Employer A withdraws in 2003, the withdrawal liability is based upon Employer A's share of unfunded vested benefits (UVBs) as of 12/31/2002 (the last day of the year before withdrawal). Under the rolling five withdrawal liability method, the UVBs are reduced by the liability expected to be collected by previously withdrawn employers. In this case, there are no previously withdrawn employers.

The UVB as of 12/31/2002 must be multiplied by the ratio of the employer contributions for Employer A for the five-year period ending on 12/31/2002 to the ratio of the contributions for all employers for the same period. This ratio is:

$$\frac{45{,}000 + 45{,}000 + 55{,}000 + 55{,}000 + 55{,}000}{375{,}000 + 375{,}000 + 475{,}000 + 475{,}000 + 475{,}000} = .117241$$

Employer A's share of the UVBs is:

$$\$850{,}000 \times .117241 = \$99{,}655$$

The de minimis rule of ERISA section 4209(a) must be applied. (Note that there is an optional method under ERISA section 4209(b) for which the plan may be amended. Since there is no mention of this method, it must be assumed that the mandatory method of 4209(a) is to be used.) When the mandatory de minimis credit is applied, a credit against Employer A's share of the UVBs is determined, equal to the smaller of $50,000 or .75% of the total UVB (before reduction for amounts expected to be collected from previously withdrawn employers). The smaller of the two is:

$$.0075 \times \$850{,}000 = \$6{,}375$$

The de minimis credit is phased out dollar-for-dollar for every dollar that Employer A's share of the UVBs exceeds $100,000. Since the share of the UVBs is under $100,000, there is no phase-out of the de minimis credit. The withdrawal liability (X) for Employer A is:

$$X = \$99{,}655 - \$6{,}375 = \$93{,}280$$

If Employer A withdraws in 2004, the withdrawal liability is based upon Employer A's share of unfunded vested benefits (UVBs) as of 12/31/2003 (the last day of the year before withdrawal).

The UVB as of 12/31/2003 must be multiplied by the ratio of the employer contributions for Employer A for the five-year period ending on 12/31/2003 to the ratio of the contributions for all employers for the same period. This ratio is:

$$\frac{45{,}000 + 55{,}000 + 55{,}000 + 55{,}000 + 60{,}000}{375{,}000 + 475{,}000 + 475{,}000 + 475{,}000 + 500{,}000} = .117391$$

Employer A's share of the UVBs is:

$900,000 × .117391 = $105,652

Applying the de minimis rule, the smaller of $50,000 or .75% of the total UVB is:

.0075 × $900,000 = $6,750

The de minimis credit is phased out dollar-for-dollar for every dollar that Employer A's share of the UVBs exceeds $100,000. Employer A's share of the UVBs exceeds $100,000 by $5,652. The credit is $1,098 ($6,750 - $5,652). The withdrawal liability (Y) for Employer A is:

Y = $105,652 - $1,098 = $104,554.

Y – X = $104,554 - $93,280 = $11,274

Answer is C.

Question 41

I. A fiduciary is not required to purchase the safest annuity in certain situations. One situation is when the annuity being considered is only marginally safer than another annuity, but disproportionately expensive in comparison. See regulation 2509.95-1(d). The statement is true.

II. A fiduciary does not necessarily have a conflict of interest in possible reversion situations, depending upon their relationship with the sponsoring employer. See regulation 2509.95-1(e). The statement is false.

III. Written participant consent does not relieve a fiduciary of liability. Note that this is not listed as a consideration in regulation 2509.95-1(d). The statement is false.

Answer is B.

Question 42

The calculation of average percentages of salary is described in IRS regulation 1.414(s)-1(d)(3)(iv). The regulation describes the individual percentages to be equal to the ratio of the salary used for plan purposes to the total salary for the participant. In this question, the total salary includes base pay, bonuses, and overtime. Note that salary must be limited to the IRC section 401(a)(17) compensation limit of $200,000 for 2003.

The individual percentages for each employee are:

HCE1: 102,000/(97,000 + 14,000) = 91.89%
HCE2: 200,000/min{(196,000 + 19,000); 200,000} = 100%
NHCE1: 25,000/(24,000 + 3,000) = 92.59%
NHCE2: 30,000/(29,000 + 1,000 + 3,000) = 90.91%
NHCE3: 50,000/(47,000 + 7,000) = 92.59%

The averages for the HCEs and NHCEs are:

HCE average = (91.89% + 100%)/2 = 95.95%
NHCE average = (92.59% + 90.91% + 92.59%)/3 = 92.03%

Difference = 95.95% - 92.03% = 3.92%

Answer is E.

Question 43

The prohibited transaction rules are described in IRC section 4975. There is a 15% excise tax on the amount of the prohibited transaction for each taxable year (or part of a year) that the transaction exists.

The amount of the prohibited transaction in this case is the interest paid on the loan of $1,000,000. Since the loan was repaid after 9 months, the interest paid on the loan was:

$$\$1,000,000 \times .045 = \$45,000$$

The amount of the excise tax is:

$\$45,000 \times 15\% = \$6,750$

Answer is C.