Solutions to EA-2(B) Examination
Spring, 2006

Question 1

The IRC section 415(b)(1)(A) dollar limit is not adjusted for form of benefit if the form is payable as either a life annuity or a qualified joint and survivor annuity (where the survivor portion is between 50% and 100%, which is the definition of a qualified J&S annuity under IRC section 417). Therefore, the statement is true. See IRC sections 415(b)(2)(A) and (B).

Answer is A.

Question 2

The special schedule of benefits does not need to be physically prepared provided that enough information is kept so that the schedule can be created should the merged plan terminate within 5 years of the merger date. See IRS regulation 1.414(l)-1(i)(1).

Answer is A.

Question 3

The estimated flat premium paid in the first filing must use a participant count of at least the smaller of 90% of the participant count for the current year or 100% of the participant count for the prior year in order to avoid penalties. Since the plan files the 2006 PBGC Form 1-ES using the prior year (2005) participant count, there is no penalty when the additional flat premium is paid with the final filing. However, there is an interest charge on the late payment of the flat premium. See the instructions for PBGC Form 1, section B.7.

Answer is B.

Question 4

An enrolled actuary must report the non-filing of any actuarial document that they have signed to the appropriate government agency. See ERISA regulation 901.20(h).

Answer is A.

Question 5

Plans that are not subject to the rules of the PBGC may terminate even though they do not have assets sufficient to pay for all of the benefits accrued as of the termination date. Therefore, it is acceptable for each participant to receive less than 100% of their accrued benefit in that situation.

Answer is A.

Question 6

Excise taxes are paid by the prohibited party, not necessarily the plan. See IRC sections 4975(a) and 4975(e)(2).

Answer is B.

Question 7

IRC section 401(a)(26) requires that a defined benefit plan benefit at least the lesser of 50 **employees** (not NHCEs) of the employer or the greater of 40% of the **employees** (not NHCEs) or 2 employees (1 if there is only one employee)..

Answer is B.

Question 8

IRS regulation 1.410(a)-7(d) describes the rules governing the use of the elapsed time method of determining years of service for vesting. The number of hours worked is irrelevant in determining vesting years of service under the elapsed time method. Therefore, it is possible for an employee not to be credited with a year of service even though they work 1000 or more hours.

Answer is A.

Question 9

IRS regulation 1.415-5(a)(2) states that increases in the dollar limit become effective on 1/1/ of a calendar year and for limitation years **ending** (not beginning) with or within that calendar year.

Answer is B.

Question 10

IRC section 417(c)(1) states that the qualified pre-retirement survivor annuity (QPSA) must provide payments to the spouse that are not less than those under the qualified joint and survivor annuity (QJSA). Since the QJSA only provides for a 75% survivor annuity, it is acceptable for the QPSA to pay a 100% survivor annuity to the spouse.

Answer is A.

Question 11

The minimum top heavy vesting schedules under IRC section 416(b) provide for either 100% vesting after 3 years of service (3-year cliff) or 20% per year vesting for each year of service beginning with the 2nd year (2-20 vesting). Since the given schedule does not provide for 100% vesting after the third year, the 3-year cliff schedule is not satisfied.

However, the 2-20 vesting schedule is satisfied at each year since the given schedule is more generous after each year of service.

Answer is A.

Question 12

The statement in this question is describing the $10,000 annual de minimis IRC section 415 benefit of IRC section 415(b)(4). IRC section 415(b)(4)(B) states that this de minimis benefit is not available to participants who have ever participated in a defined contribution plan of the employer. Therefore, the participants who were in the previously maintained defined contribution plan could not receive a $10,000 annual benefit if their high consecutive 3-year average compensation were less than $10,000, since they would be limited by IRC section 415(b)(1)(B).

Answer is B.

Question 13

The participant count for the 2006 year is taken as of the last day of the prior year (12/31/2005). This includes active participants as well as terminated participants with a vested liability. Since the assistant is not paid a distribution until 1/15/2006, there are two participants for 2006 PBGC premium purposes, and a premium is due.

During 2006, the plan covers only a substantial owner, and the plan ceases to be covered by the PBGC (see ERISA section 4021(b)(9)). However, the PBGC Form 1 instructions state that the premium must be paid for years through and **including** the year in which the plan ceases to be covered (see section about "Who Must File" in PBGC Form 1 instructions). There is no provision to pro-rate the premium

Answer is B.

Question 14

ERISA section 4208(a) describes rules for a reduction of the partial withdrawal liability in certain circumstances. In particular, if in any two consecutive years after the partial withdrawal the employer has base units that are at least 90% of the base units for the high base year prior to the partial withdrawal, then the partial withdrawal payments are no longer required beginning in the next year.

90% of 325,000 = 292,500

Since the base units in 2004 and 2005 are at least as large as 292,500, Employer A no longer has partial withdrawal liability requirements beginning in 2006.

Answer is A.

Question 15

IRC section 4980(b)(4) states that the excise tax due to asset reversion must be paid by the end of the month following the month in which the reversion occurs.

Answer is B.

Question 16

An enrolled actuary must report the non-filing of any actuarial document that they have signed to the appropriate government agency. See ERISA regulation 901.20(h). The PBGC Form 1 is not a form that has been signed by the enrolled actuary, so there is no requirement to notify the PBGC. (Note that an un-filed schedule A would result in a requirement for the enrolled actuary to notify the PBGC, since that is a form signed by the enrolled actuary.)

Answer is B.

Question 17

The reportable event dealing with a reduction in active participants (see ERISA section 4043(c)(3)) occurs when the number of active participants in the current year is either less than 80% of the number of participants at the beginning of the plan year or less than 75% of the number of participants at the beginning of the prior year.

75% of the active participants on 1/1/2005 (12/31/2004) = 75% × 800 = 600
80% of the active participants on 1/1/2006 (12/31/2005) = 80% × 650 = 520

Therefore, there can be as few as 600 participants (the greater of the above-calculated numbers) and still not have a reportable event occur for 2006.

Answer is C.

Question 18

IRC section 415(b)(11) states that the IRC section 415(b) compensation limitation does not apply to a multiemployer plan. In addition, IRC section 415(f)(1)(A) states that, in general, all defined benefit plans of the employer must be combined for purposes of IRC section 415(b) limits. However, IRC section 415(f)(3) and Revenue Ruling 2001-51, Q&A 8 provide an exception to this rule stating that no multiemployer plan is to be combined with any other multiemployer plan for purposes of IRC section 415(b), and that no multiemployer plan is to be combined with any single employer plan for purposes of determining the IRC section 415(b) compensation limit for the single employer plan.

This would then imply that the benefits from a single employer plan would need to be taken into account in determining the 415 dollar limit for a multiemployer plan. In addition, only the dollar limit applies to the multiemployer plan.

The annual IRC section 415 dollar limit for 2006 is $175,000. This is not reduced for retirement at age 62. The annual accrued benefit from the single employer plan is $27,000, and this must be used to reduce the IRC section 415 dollar limit available for Plan A. (Note that the benefit from Plan B is ignored since that is a multiemployer plan, and is not to be combined with any other multiemployer plan for purposes of IRC section 415.)

Dollar limit available to Plan A = $175,000 - $27,000 = $148,000

Answer is D.

Question 19

IRS regulation 1.401(a)(4)-5(b)(3) provides for rules restricting certain distributions to the top-25 paid HCEs or former HCEs. Since the employer only has 5 employees, Smith is certainly one of the top 25 paid HCEs. In general, the restricted amount is any amount in excess of a life annuity.

The lump sum can be paid provided that one of three conditions are met (see IRS regulation 1.401(a)(4)-5(b)(3)(iv)):

1. The value of the plan assets after the distribution is taken is at least equal to 110% of the OBRA'87 current liability that remains after the distribution,
2. The distribution is less than 1% of the OBRA'87 current liability before the distribution, or
3. The distribution does not exceed $5,000.

Option 3 is not met (the distribution exceeds $5,000). In addition, option 2 is not met since 1% of the current liability is also only $13,500.

The first option must be tested. The market value of assets after the proposed distribution would be $425,000 ($1,375,000 - $950,000). 110% of current liability after the proposed distribution would be $467,500 (($1,350,000 - $925,000) × 1.1). This option also fails.

The only distribution option for Smith in 2006 would be to receive a life annuity payment. Annualizing his monthly accrued benefit, the maximum amount payable to Smith in 2006 is:

$7,000 × 12 = $84,000.

Answer is A.

Question 20

IRC section 417(d) provides that there are no spouse benefits that must be provided by a qualified plan if the participant and spouse are married for less than one year as of the date of death of the plan participant. The question states that the plan provides only the minimum possible pre-retirement survivor annuity. Since the participant and the spouse were only married for 6 months as of the date of death, no benefit is payable to the spouse.

Answer is A.

Question 21

IRS regulation 1.401(a)(4)-4(b)(2) describes the determination of current availability with respect to a benefit, right or feature of a qualified plan. Each benefit, right or feature must satisfy coverage under IRC section 410(b). Since the early retirement window is offered only for a specific time period, the only participants who are benefiting would be the participants eligible to retire during the window period. All participants would be deemed non-excludable.

The only participants eligible for the window benefit are those currently age 54 with 19 years of service (they will be 55 and have 20 years before the window expires), and those currently age 55 with 20 years of service. There are 50 HCEs in each of these categories, for a total of 100 HCEs benefiting. There are 100 NHCEs age 54 with 19 years, and 25 NHCEs age 55 with 20 years, for a total of 125 NHCEs benefiting. There are 200 HCE participants in total, and 800 NHCE participants.

$$\text{Ratio percentage} = \frac{125/800}{100/200} = 31.25\%$$

Answer is C.

Question 22

Employer A has purchased Employer B and terminates Plan B. IRC section 414(a)(2) requires that service with Employer B must generally be taken into account for purposes of Plan A. So, the hours worked for both employers are combined for 2002, giving Smith 1,250 hours worked in 2002.

Smith was age 22 at hire, so all years of service must be included for vesting (years before age 18 could be excluded under IRC section 411(a)(4)(A)). Since Smith worked at least 1000 hours in each year of service, Smith has 6 years of vesting service at the end of 2006.

Answer is E.

Question 23

The plan benefit for Smith is \$8,000 (100% of the highest 3-year average compensation). This must be limited under IRC section 415. Clearly, the dollar limitation will not apply, since the annual dollar limit for 2006 is \$175,000. However, the compensation limit is 100% of the highest 3-year average compensation, reduced by 1/10 for each year of service less than 10 years. As of 1/1/2006, Smith has only 4 years of service. Therefore, the IRC section 415 compensation limit is:

$$\$8{,}000 \times 4/10 = \$3{,}200$$

Answer is C.

Note that the \$10,000 de minimis 415 limit does not apply since Smith has a profit sharing account balance, implying that he participates in a defined contribution plan of the employer. The de minimis limit does not apply to any participant who has ever participated in a defined contribution plan of the employer.

Question 24

IRC section 411(a)(4)(A) allows exclusion of service for vesting of years prior to attaining age 18. Therefore, years before 1999 can be excluded for Smith.

In addition, IRC section 411(a)(4)(C) allows exclusion of service for vesting of years prior to the effective date of the plan, unless there was a predecessor plan. A predecessor plan is defined in IRS regulation 1.411(a)-5(b)(3)(v)(ii) as a plan that terminates within 5 years before the establishment of the new plan. Since the prior profit sharing plan terminated one day before the new defined benefit plan was established, the profit sharing plan is a predecessor plan, and service cannot be excluded prior to the defined benefit plan effective date of 1/1/2003. However, service can be excluded prior to 1/1/2000, which is the effective date of the predecessor plan.

In years after 1999, Smith worked 1000 hours in 2000, 2001 and 2006. Smith has 3 years of vesting service as of the end of 2006.

Answer is B.

Question 25

The benefit for Smith in category 4 is Smith's guaranteed benefit, to the extent that it is not already paid for in prior categories.

In order to calculate Smith's guaranteed benefit, the accrued benefit must be determined as of the plan termination date using the benefit structure in effect 5 years before the plan termination date. This means that the early retirement reduction factor of 6% per year is used. Smith was age 59 at retirement, so the reduction factor is .64 (1.00 – (.06 × 6 yrs)).

$$\text{AB using original plan} = 2\% \times \frac{65{,}000 + 70{,}000 + 75{,}000}{3} \times 26 \text{ years} \times .64 = 23{,}296$$

This is 1,941.33 per month.

The maximum monthly PBGC guaranteeable benefit for 2006 is $3,971.59. This is payable as a life annuity at age 65. Since the actual benefit is payable at age 59 (on the date of plan termination), the maximum must be reduced using the factors in ERISA regulation 4022.23 (they are also included in the table of factors provided with the exam). The factor to reduce from age 65 to age 59 is .61.

PBGC maximum at age 59 = 3,971.59 × .61 = 2,422.67

Next, the accrued benefit using the revised early retirement factor must be determined. This factor is .88 ((1.00 – (.02 × 6 yrs)).

$$\text{AB using revised plan} = 2\% \times \frac{65{,}000 + 70{,}000 + 75{,}000}{3} \times 26 \text{ years} \times .88 = 32{,}032$$

This is 2,669.33 per month. It exceeds the PBGC maximum, so it must be limited to 2,422.67.

The increase in the revised benefit is phased in over 4 years (it has been 4 years as of the termination date since the amendment became effective). The phase-in is at 20% per year.

Phased-in benefit = (2,422.67 – 1,941.33) × 80% = 385.07

Total guaranteed monthly benefit = 1,941.33 + 385.07 = 2,326.40

Smith had satisfied the early retirement provisions 3 years before the plan termination date, so Smith could have retired and has a category 3 benefit. This benefit is the amount Smith would have received had he actually retired 3 years before the termination date, using salary history and service through that date, and the least valuable plan provisions in effect during the 5-year period before the termination date. That means that the 6% early retirement reduction is used for the category 3 benefit. Since Smith was age 56 three years before the termination date, the reduction factor is .46 (1.00 – (.06 × 9 yrs)).

$$\text{Category 3 benefit} = 2\% \times \frac{45{,}000 + 50{,}000 + 55{,}000}{3} \times 23 \text{ years} \times .46 = 10{,}580$$

This is 881.67 per month.

The category 4 benefit is the difference, if any, between the guaranteed benefit and the category 3 benefit.

Category 4 benefit = 2,326.40 – 881.67 = 1,444.73 per month, or 17,337 per year.

Answer is B.

Question 26

IRS regulation 1.401(a)(4)-9(b)(2)(v) describes three requirements, only one of which must be satisfied, in order for aggregated plans that include a defined contribution plan to be general tested on a benefits basis.

The first requirement is that the aggregated plans are primarily defined benefit in nature. It is given in this question that is not the case.

The second requirement is that the plans are broadly available. Again, it is given in the question that this is not the case.

The final requirement, which now must be satisfied, states that the plans must satisfy the minimum allocation gateway. This gateway states that each NHCE must receive an allocation at least equal to one-third of the highest HCE allocation rate, or 5% (whichever is smaller). The highest HCE allocation rate is 27%, so that would imply a 5% gateway requirement. However, if the highest HCE allocation rate exceeds 25%, then the gateway requirement is increased by 1% for each 5 percentage points (or less) that the HCE allocation exceeds 25%. Therefore, the NHCE allocations must be a minimum of 6% (5% + 1%).

Answer is D.

Question 27

An ERISA 4010 filing is avoided if the combined unfunded vested benefits of all defined benefit plans of an employer (other than those with no unfunded vested benefits) are no more than \$50,000,000. The unfunded vested benefits are equal to the difference between the vested current liability (using the PBGC required interest rate) and the actuarial value of the plan assets (adjusted for receivable contributions). See ERISA regulation 4010.4(b).

Based upon the information provided, the unfunded vested benefits for the two plans are:

Plan A: 300,000,000 – 240,000,000 = 60,000,000
Plan B: 50,000,000 – 53,000,000 = (3,000,000)

Plan B is ignored for purposes of the \$50,000,000 threshold since it does not have an under-funding. The potential under-funding for Plan A is \$60,000,000. That means an additional \$10,000,000 must be contributed as of 12/31/2005 in order to avoid the ERISA section 4010 filing requirement.

Receivable contributions are included in the actuarial value of assets as described in ERISA regulation 4006.4. That regulation requires that receivable contributions be discounted with interest, generally at the valuation rate. Since the actual contribution is to be deposited on 4/15/2006, it must be discounted with interest for 3.5 months.

$10{,}000{,}000 = 4/15/2006 \text{ contribution} \div 1.08^{3.5/12}$
4/15/2006 contribution = 10,227,008

Answer is C.

Notes: This question is peculiar in that it does not provide the valuation date (simply valuation results as of 12/31/2005), nor the method of determining the PBGC variable premium. General condition 17 for the exam indicates that the assumption is that the valuation date is the first day of the year. That is important since the actuarial value of assets are used regardless of the variable premium method if the valuation date is the first day of the year (market value is used if the premium method is the General Method and the valuation date is not the first day of the year – see PBGC technical update 96-03, Q&A 12). The above solution assumed that the premium method was the General Method. If the premium method were the Alternative Method, the contribution would have been discounted using the PBGC required interest rate in the last step:

$10{,}000{,}000 = 4/15/2006 \text{ contribution} \div 1.0425^{3.5/12}$
4/15/2006 contribution = 10,122,136

This is still in the same answer range.

Question 28

Smith has retired at age 54. Under the terms of the plan, his annual benefit is:

$$25\% \times 40{,}400 = 10{,}100$$

Note that since Smith has at least 25 years of service, the benefit is not reduced for early retirement.

The benefit must be limited under the rules of IRC section 415.

The IRC section 415(b)(1)(B) compensation limit is 100% of the high consecutive three-year average salary, which is 40,400.

The IRC section 415(b)(1)(A) dollar limit for 2006 is \$175,000. It must be reduced by 1/10 for each year of plan participation for Smith less than 10 years. Smith only participated in the plan for one year. Therefore, the reduced dollar limit is:

$$175{,}000 \times 1/10 = 17{,}500$$

The dollar limit must be further reduced from age 62 to the early retirement age of 54. The reduced amount is equal to the smaller of the reduced benefit if the plan's tabular early retirement factors were applied, and the reduced benefit determined actuarially using an interest rate of 5% and the applicable mortality table (these assumptions are what is referred to in the question as the mandated assumptions).

Since there is no reduction to the benefit using the plan's tabular early retirement factors, it should be clear that the reduced dollar limit is determined using the mandated assumptions. Since there is a pre-retirement death benefit, the reduction between ages 62 and 54 must be based upon interest only. The equivalency is on a life only basis. The adjusted dollar limit is:

$$17{,}500 \times \ddot{a}_{62}^{(12)} \times v_{5\%}^{8} \div \ddot{a}_{54}^{(12)} = 17{,}500 \times 12.68 \times 0.6768 \div 14.82 = 10{,}134$$

The dollar limit must be further adjusted to reflect the payment in the form of a life annuity with 20 years certain (both the dollar limit and the compensation limit are adjusted if the form of benefit is other than a life annuity or a qualified joint and survivor annuity – but the compensation limit can be ignored since it is clearly larger than the dollar limit and will not apply in this situation). This adjusted limit is determined as the smaller of the equivalent benefit using the plan's actuarial equivalence or using the mandated assumptions. Since the plan's equivalence is not given in this question, it must be assumed that the mandated assumptions will give the smaller result. The equivalent benefit in the form of a life annuity with 20 years certain is:

$$10{,}134 \times \ddot{a}_{54}^{(12)} \div \ddot{a}_{\overline{\overline{54:20|}}}^{(12)} = 10{,}134 \times 14.82 \div 15.50 = 9{,}689$$

Therefore, the IRC section 415 dollar limit is 9,689. However, this is not the overall 415 limit. Since Smith has never participated in a defined contribution plan of the employer, the de minimis limit under IRC section 415(b)(4) of $10,000 per year is available. This would be reduced if Smith had fewer than 10 years of service with the employer. In this case, the $10,000 is not reduced and is Smith's overall 415 limit. Note that the de minimis 415 limit is **not** adjusted for form of benefit.

The maximum annual benefit payable to Smith is the smaller of the plan benefit or the 415 limit, which is $10,000.

Answer is C.

Note: Question 28 was excluded from grading. Although there does not appear to be an error in the question, the reason for the exclusion may be that it is the proposed IRC section 415 regulation 1.415(b)-1(f) that clarifies the fact that the $10,000 de minimis amount is not subject to adjustment for form of benefit. This had not been previously described in the regulations under IRC section 415, and the proposed regulations were not part of the syllabus for the 2006 EA-2B exam.

Question 29

There are three steps involved in allocating items for purposes of a spin-off:

1. Allocate the market value of assets
2. Allocate the credit balance
3. Allocate the outstanding balance of the amortization bases

In Plan A, the market value of the assets is less than the plan termination liability. In that case, Revenue Ruling 81-212 indicates that the assets are to be allocated by PBGC priority category. Since the market value of the assets is $4,000,000, there is enough money to pay for the entire $1,100,000 in category 3 and $2,900,000 of the category 4 present values. The money left for category 4 must be allocated proportionately to the plan participants:

	Plan A	Plan B	Plan C
Category 3	$1,100,000	$1,000,000	$100,000
Category 4	4,000,000	3,000,000	1,000,000
Cat 4 assets*	2,900,000	2,175,000	725,000
Total**	4,000,000	3,175,000	825,000

* Category 4 assets allocated proportionately to the total category 4 PVAB
** Total equals Category 3 present value plus total from category 4

Next, the credit balance must be allocated. Revenue Ruling 81-212 also indicates that the credit balance is allocated by first allocating the difference between the market value of assets and the credit balance in the same manner as the market value of assets was allocated. Since the credit balance is $1,000,000, the difference between the market value and the credit balance is $3,000,000. Allocating as above,

	Plan A	Plan B	Plan C
Category 3	$1,100,000	$1,000,000	$100,000
Category 4	4,000,000	3,000,000	1,000,000
Cat 4 assets (less CB)	1,900,000	1,425,000	475,000
Total assets less CB	3,000,000	2,425,000	575,000

The credit balance allocation is equal to the difference between the market value of assets allocated and the allocated assets less the credit balance:

	Plan A	Plan B	Plan C
Market value	$4,000,000	$3,175,000	$825,000
Total assets less CB	3,000,000	2,425,000	575,000
CB***	1,000,000	750,000	250,000

***Difference between Market value and Total assets less CB

Also according to Revenue Ruling 81-212, the actuarial value of the assets is allocated proportionately to the market value of assets:

	Plan A	Plan B	Plan C
Market value	$4,000,000	$3,175,000	$825,000
Actuarial value	3,700,000	2,936,875	763,125

Recalling the balance equation from EA-2A, and assuming that the cost method is an immediate gain method (the problem cannot be solved without this assumption),

> Unfunded liability = Outstanding balance – credit balance
> AL – actuarial assets = Outstanding balance – credit balance
> Outstanding balance = AL – actuarial assets + credit balance

The last equation above will allow for the allocation of the total outstanding balance between the spun-off plans.

	Plan A	Plan B	Plan C
Accrued liability	$5,000,000	$3,000,000	$2,000,000
Actuarial value	3,700,000	2,936,875	763,125
CB	1,000,000	750,000	250,000
Outstanding balance	2,300,000	813,125	1,486,875

The outstanding balance in Plan C immediately after the spin-off is $1,486,875.

Answer is C.

Question 30

The most valuable accrual rate is equal to the ratio of the normalized most valuable accrual to the testing compensation. In this situation, the early retirement benefit is clearly the most valuable optional benefit since it is equal to the unreduced accrued benefit (fully subsidized). In order to normalize this benefit, it must be accumulated using the testing interest rate from the early retirement age to the testing age of 65, and converted to a life annuity.

As of the testing date of 1/1/2006, Smith is age 64 and Jones is age 34. Smith's early retirement age would be the current age of 64, and Jones' early retirement age would be 63. The early retirement benefits would be payable in the 50% QJSA normal form. The normalized increase in each of their accrued benefits is:

Smith: $10{,}500 \times 8.89 \times 1.085 \div 7.95 = 12{,}740$
Brown: $4{,}500 \times 9.06 \times 1.085^2 \div 7.95 = 6{,}037$

The most valuable accrual rate is the ratio of the normalized accruals to the average compensation (assumed to be testing compensation in this question).

Smith: 12,740/80,000 = 15.925%
Brown: 6,037/50,000 = 12.074%

Total = 15.925% + 12.074% = 27.999%

Answer is D.

Question 31

I. A qualified pre-retirement survivor annuity notice is required to be given to all participants. See IRC section 417(a)(3)(B)(i) and IRS regulation 1.401(a)-20, Q&A 35. Statement is false.

II. ERISA section 204(h) notices are required when a defined benefit plan is amended to significantly reduce the rate of future benefit accrual. IRC section 4980F(f)(3) indicates that and elimination or reduction of an early retirement benefit or retirement-type subsidy is deemed to have the effect of reducing the rate of future benefit accruals. ERISA section 204(h) notices would be required in this circumstance. Statement is false.

III. ERISA section 4011 provides for an exemption from providing under-funding notices for small plans (those with less than 100 participants) in certain circumstances. Specifically, these plans must satisfy the DRC exception test described in ERISA regulation 4011.4(b). The statement is false since it is not true for all small plans.

Answer is E.

Question 32

ERISA regulation 4006.5(a)(5) provides that a plan is exempt from the PBGC variable rate premium if it satisfies the PBGC full funding exemption. This exemption applies if the contribution for the prior year is at least as large as the full funding limitation for the prior year (determined without subtracting any credit balance from the plan assets). PBGC Technical Update 00-4 clarified that, in light of the RPA full funding limit, which never utilizes the plan's credit balance, the contribution needed to satisfy the full funding exemption would be an amount which, when added to the credit balance, is at least equal the full funding limitation as determined under IRC section 412(c)(7). This includes an adjustment to the assets by the credit balance for purposes of the ERISA full funding limit.

The ERISA full funding limit (FFL) is equal to the accrued liability plus the normal cost, less the smaller of the actuarial or market value of assets (reduced by any credit balance in the funding standard account), all increased with interest at the valuation rate to the end of the plan year. Benefit payments can be ignored since they decrease both the liabilities and assets by an identical amount.

$$\begin{aligned}\text{2005 ERISA FFL} &= (5{,}100{,}000 + 450{,}000 - (5{,}100{,}000 - 250{,}000)) \times 1.075 \\ &= 752{,}500\end{aligned}$$

The RPA full funding limit is equal to 90% of the current liability (including the expected increase in current liability for the year), increased with interest at the current liability rate to the end of the plan year, less the actuarial value of assets (**not** reduced by the credit balance), increased with interest at the valuation rate to the end of the plan year. Benefit payments must reduce both the liabilities (before multiplying by 90%) and assets before interest adjustment since they are increased at different rates of interest.

$$\begin{aligned}\text{2005 RPA FFL} &= [0.9 \times (6{,}100{,}000 + 550{,}000 - 450{,}000) \times 1.061] \\ &\qquad - [(5{,}100{,}000 - 450{,}000) \times 1.075] \\ &= 921{,}630\end{aligned}$$

The overall 2005 full funding limit is equal to the greater of the ERISA and RPA full funding limitations. This is 921,630.

The additional contribution necessary is an amount that, when added to the 315,000 already contributed and the 250,000 credit balance (including valuation interest on the credit balance for the 2005 year), is equal to at least 921,630.

$$\text{Contribution} + 315{,}000 + (250{,}000 \times 1.075) = 921{,}630$$
$$\text{Contribution} = 337{,}880$$

Answer is B.

Question 33

Since the plans are being aggregated for 2006, the accrual rates or contribution rates must be combined for the two plans for each participant. Since allocation rates are provided in this question, it must be assumed that the plans are being tested on a contributions basis.

The average benefit percentage is equal to the ratio of the average of the normal allocation rates for the NHCEs to the average of the normal allocation rates for the HCEs. Since there is only one HCE, the average of the allocation rates for the HCEs is 8.40%.

There are 5 NHCEs. NHCE 5 must be included in the test despite terminating employment during 2006.

In order to satisfy the average benefit percentage test, the average benefit percentage must be at least 70%. Let C% be the profit sharing allocation percentage (including the 1.30% already allocated).

$$\frac{(2.10\% + 3.85\% + 9.10\% + 1.65\% + C\% + 8.40\% + 1.65\%)/5}{8.40\%} = 70\%$$

C% = 2.65%

The additional contribution must produce an additional allocation rate of 1.35% (2.65% - 1.30% = 1.35%). The contribution must be equal to 1.35% of the testing compensation for NHCE3.

Additional contribution = 1.35% × \$50,000 = \$675

Answer is C.

Question 34

All plans of an employer that include at least one key employee must be aggregated for purposes of determining the top-heavy ratio (see IRC section 416(g)(2(A)(i)). In addition, plans that must be aggregated in order to satisfy the rules of either IRC section 410(b) or IRC section 401(a)(4) must be aggregated for purposes of determining the top-heavy ratio (see IRC section 416(g)(2(A)(ii)).

In this case, Plan B does not include any key employees, and the plans do not need to be aggregated in order to satisfy IRC section 410(b) and 401(a)(4). Therefore, only Plans A and C must be aggregated for purposes of determining the top heavy ratio.

IRS regulation .1416-1, Q&A T-23 states that when the plan years are different for two or more plans that must be aggregated, the top heavy ratio is determined based upon the determination date for each plan that falls within the same calendar year. The determination date for a plan is defined to be the last day of the prior plan year (IRC section 416(g)(4)(C)), and the present value of accrued benefits or account balances are determined as of the most recent valuation date that falls during the 12 month period ending on the determination date (IRS regulation .1416-1, Q&As T-24 and 25).

The question is asking about the top heavy ratio for the 12/31/2006 plan year end for Plan A. The determination date for Plan A is 12/31/2005, and the account balances from the valuation date during the 12 month period ending on 12/31/2005 are the 12/31/2005 account balances.

The determination date for Plan C (which ends on 9/30 each year) that falls within calendar year 2005 (the same calendar year as the determination date for Plan A) is 9/30/2005. The valuation date during the 12 month period ending on 9/30/2005 is 10/1/2004. Therefore, the present value of accrued benefits as of 10/1/2004 are to be used in the top heavy ratio for Plan A's determination date of 12/31/2005.

The top heavy ratio is the ratio of the present value of accrued benefits (or account balances) for the key employees to the present value of accrued benefits (or account balances) for all employees.

In-service distributions are included in the top heavy ratio if they were paid during the 5-year period ending on the determination date (IRC section 416(g)(3)(B)). Therefore, it would appear that the in-service distribution of $75,000 paid on 7/1/2003 to Smith would be included in the top heavy ratio. However, benefits paid to terminated employees are not taken into account if they were terminated in a year prior to the 12-month period ending on the determination date (IRC section 416(g)(3)(E)). Since Smith was paid a benefit on 3/31/2004 due to a separation from service, Smith clearly terminated on or before that date. The big question here is – what about the in-service distribution that Smith received? Is that still included? There doesn't appear to be a clear answer (although IRC section 416(g)(3)(E) would seem to indicate that no accrued benefit for the terminated participant would be taken into account, meaning that the in-service distribution would be ignored), and based upon the answer key to the exam, it appears that the question writer's interpretation would be to include the in-service distribution.

$$\text{TH ratio} = \frac{900{,}000 + 500{,}000 + 75{,}000}{900{,}000 + 500{,}000 + 75{,}000 + 400{,}000 + 400{,}000} = 64.84\%$$

Answer is C.

An alternative solution would ignore all payments to Smith under the other interpretation described above. In that case,

$$\text{TH ratio} = \frac{900{,}000 + 500{,}000}{900{,}000 + 500{,}000 + 400{,}000 + 400{,}000} = 63.64\%$$

Note that this would put the answer in range B, which is not listed on the official answer key. However, the question was ignored for purposes of the grading process for this exam, due to the lack of clarity in the regulations as to whether the in-service distributions for the terminated participant should be included in the top-heavy ratio.

Question 35

The annual accrued benefit under the terms of the plan for each participant is:

Smith: $2,400 × 15 years of service = $36,000
Jones: $2,400 × 15 years of service = $36,000
Brown: $2,400 × 1 year of service = $2,400

Each accrued benefit must be limited under IRC section 415(b), if applicable. The IRC section 415(b)(1)(A) annual dollar limit for 2006 is $175,000. This is phased in over the first 10 years of plan participation. Since the plan became effective on 1/1/2004, Smith and Jones each have 2 years of plan participation, and Brown has one year of plan participation. The dollar limit for each participant is:

Smith: $175,000 × 2/10 = $35,000
Jones: $175,000 × 2/10 = $35,000
Brown: $175,000 × 1/10 = $17,500

At this point, the benefits for Smith and Jones would be limited to $35,000, and Brown's benefit is not limited as yet. Next, the IRC section 415(b)(1)(B) compensation limit must be determined. This is 100% of the high consecutive 3-year average compensation, phased in over the first 10 years of service with the employer. Smith and Jones are fully phased in since they have more than 10 years of service. It must be assumed that the given average compensation is a 3-year average. The compensation limit for each participant is:

Smith: $30,000
Jones: $195,000
Brown: $7,500 × 1/10 = $750

Smith's benefit is limited to the compensation limit of $30,000 (since that is the overall 415 limit and less than the plan benefit).

Jones' benefit is limited to the dollar limit of $35,000 (since that is the overall 415 limit and less than the plan benefit).

It would initially appear that Brown's benefit is limited to the compensation limit of \$750 (since that is the overall 415 limit and less than the plan benefit). However, since there is no mention of a defined contribution plan (and the general conditions for the exam state that there has never been another plan), the IRC section 415(b)(4) de minimis benefit of \$10,000 per year can apply. This must be phased in over the first 10 years of service. The 415 de minimis benefit for Brown is:

$\$10,000 \times 1/10 = \$1,000$

Therefore, Brown's annual accrued benefit is \$1,000.

The total annual accrued benefit for the three participants is:

$\$30,000 + \$35,000 + \$1,000 = \$66,000$

Answer is B.

Question 36

The average benefit percentage is generally equal to the ratio of the average of the normal accrual rates for the NHCEs to the average of the normal accrual rates for the HCEs. However, there are special requirements under certain circumstances in IRS regulation 1.410(b)-5(d)(7) for plans that provide for early retirement benefits. The exception applies when the average actuarial reduction during the first 5 years prior to normal retirement is less than 4%. Plan A has an early retirement reduction of only 3%, and there are HCEs in that plan. Therefore, rather than using the normal accrual rates for the average benefit percentage, the most valuable accrual rates must be used.

Note that there is also an exception to the above rule, described in IRS regulation 1.410(b)-5(d)(7)(ii). The exception states that the normal accrual rates are used regardless of the early retirement reduction provided that the percentage of NHCEs benefiting in the plan with the actuarial reduction of less than 4% is at least 70% of the percentage of HCEs who are benefiting in that plan. This exception does not apply in this question, since there are both 10 HCEs and NHCEs in Plan A (out of 100 NHCEs and 20 HCEs in total), meaning that the ratio percentage of NHCEs to HCEs benefiting under the 3% early retirement reduction is:

$$\frac{10/100}{10/20} = 20\%$$

Since the exception is not satisfied, the overall average benefit percentage (which must incorporate the benefits from both plans per IRS regulation 1.410(b)-7(e)(1)) must utilize the most valuable accrual rates. The average benefit percentage is:

$$\frac{[(2.5\% \times 10) + (2.0\% \times 90)]/100}{[(3.4\% \times 10) + (2.4\% \times 10)]/20} = 70.69\%$$

Answer is B.

Question 37

Employer A withdraws during 2004, so 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). 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 12/31/2003 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:

$$\frac{30{,}000 + 35{,}000 + 35{,}000 + 40{,}000 + 45{,}000}{350{,}000 + 350{,}000 + 400{,}000 + 450{,}000 + 450{,}000} = .0925$$

Employer A’s share of the UVBs is:

$$\$3{,}000{,}000 \times .0925 = \$277{,}500$$

The de minimis rule of ERISA section 4209(a) must be applied. 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:

$$.0075 \times \$3{,}000{,}000 = \$22{,}500$$

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 exceeds \$100,000 by \$177,500, the de minimis credit is completely phased out. The withdrawal liability (X) for Employer A is \$277,500.

Answer is B.

Note: ERISA section 4204 deals with the sale of assets from one employer to another in a multiemployer plan. Since Employer B is unable to pay the withdrawal liability upon withdrawal in 2006, it is the responsibility of the employer that was sold (Employer A) to make the liability payments that would have been due from the employer if it was not sold.

Question 38

When a qualified replacement plan is set up to receive excess assets from a terminated plan, the excise tax on the reversion of assets to the employer is 20% of the amount that is returned to the employer (see IRC section 4980(a))

The excess assets in the plan at plan termination equal the difference between the plan assets and the benefit liabilities.

Excess assets = 4,400,000 – 4,000,000 = 400,000

The amount that must be transferred to the qualified replacement plan must be equal to at least 25% of the excess assets.

Minimum to transfer to qualified replacement plan = 25% × 400,000 = 100,000

Any increase in the liabilities through a plan amendment adopted within 60 days of the plan termination date and effective on the plan termination date may be used to reduce the required transfer to the qualified replacement plan. Therefore, the total of the increase in the liabilities and the transfer to the qualified replacement plan should be at least $100,000. This total is:

54,000 + 70,000 + 80,000 = 204,000

The actual transfer plus amendment increase exceeds $100,000, so the excise tax is 20% of the remaining assets.

Excise tax = (400,000 – 204,000) × 20% = 39,200

Answer is A.

Question 39

Neither Smith nor Jones was eligible to retire 3 years before the plan termination date, so each participant's category 4 benefit is their guaranteed benefit.

Under the terms of the original 1/1/1990 plan, Smith's vested accrued benefit as of the plan termination date is:

$\$100 \times 5$ years of service $\times$ 80% vesting = \$400

Note that Smith is 80% vested with 5 years of service. This benefit is clearly not close to the PBGC maximum guaranteeable benefit for 2006 of \$3,971.59 per month, so this is fully guaranteed.

Adjusting this benefit to the 100% joint and survivor annuity being asked about in the question, the PBGC factors must be used (see ERISA regulation 4022.23 or the exam attachment for the PBGC factors). There are two factors that must be used. The first is to adjust to the 100% joint and survivor annuity (the factor is 0.80). The second is to adjust for the spousal age difference of 3 years younger than the participant (the factor is 0.97). The adjusted benefit under the original plan:

Adjusted benefit = $\$400 \times 0.80 \times 0.97 = \$310.40$

Under the terms of the amended 1/1/2003 plan, Smith's vested accrued benefit as of the plan termination date is:

$\$110 \times 5$ years of service $\times$ 80% vesting = \$440

The increase in this benefit is phased in for each year less than 5 that the new benefit formula was effective through the plan termination date. The amendment was effective for 3 years, so the phase-in benefit increase is:

Phase-in = $(\$440 - 310.40) \times 20\% \times 3$ years = \$77.76

Total guaranteed benefit for Smith (category 4 benefit) = $\$310.40 + 77.76 = \$388.16$

Next, the guaranteed benefit for Jones must be determined. Under the terms of the original 1/1/1990 plan, Jones' vested accrued benefit as of the plan termination date is:

$100 × 25 years of service = $2,500

Note that Jones is fully vested with 25 years of service. This benefit is clearly not close to the PBGC maximum guaranteeable benefit for 2006 of $3,971.59 per month, so this is fully guaranteed.

The PBGC factors must be used to adjust this to the 100% joint and survivor annuity. The first is to adjust to the 100% joint and survivor annuity (the factor is 0.80). The second is to adjust for the spousal age difference of 2 years older than the participant (the factor is 1.01). The adjusted benefit under the original plan:

Adjusted benefit = $2,500 × 0.80 × 1.01 = $2,020

Under the terms of the amended 1/1/2003 plan, Jones' vested accrued benefit as of the plan termination date is:

$110 × 25 years of service = $2,750

The PBGC maximum of $3,971.59 must be adjusted to reflect the 100% joint and survivor annuity, the spousal age difference, and the retirement age of 62 (factor is 0.79).

Adjusted PBGC maximum = $3,971.59 × 0.80 × 1.01 × 0.79 = $2,535.15

The 1/1/2003 vested accrued benefit must be limited to the adjusted PBGC maximum.

The increase in the benefit is phased in for each year less than 5 that the new benefit formula was effective through the plan termination date. The amendment was effective for 3 years, so the phase-in benefit increase is:

Phase-in = ($2,535.15 – 2,020.00) × 20% × 3 years = $309.09

Total guaranteed benefit for Jones (category 4 benefit) = $2,020.00 + 309.09 = $2,329.09

Total category 4 benefits for Smith and Jones = $388.16 + 2,329.09 = $2,717.25

Answer is C.

Question 40

The following employees are excludable under the rules of IRC section 410(b):

1. Employees who are excluded due to minimum age or service (see IRS regulation 1.410(b)-6(b)).
2. Employees who terminate employment with 500 or fewer hours of service and do not accrue a benefit for the year (see IRS regulation 1.410(b)-6(f)).

Employee 1 entered the plan on 1/1/2006, and terminated employment during 2006. However, Employee 1 worked more than 500 hours, and would be considered non-excludable in 2006.

Employee 2 entered the plan on 1/1/2006 and is still employed. Employee 2 is non-excludable in 2006.

Employee 3 did not work a year of service in 2005, but did in 2006. The entry date for employee 3 is 1/1/2007. Employee 3 is excludable in 2006.

Employee 4 entered the plan on 1/1/2006, and terminated employment during 2006. Employee 4 worked fewer than 500 hours, and would be considered excludable in 2006.

Employee 5 entered the plan on 1/1/2006, and terminated employment during 2006. However, Employee 5 was rehired during 2006 and is not a terminated employee at the end of the year. Employee 5 would be considered non-excludable in 2006.

Employee 6 entered the plan on 1/1/2006, and terminated employment during 2006. However, Employee 6 was rehired during 2006 and is not a terminated employee at the end of the year. Employee 6 would be considered non-excludable in 2006 (despite working fewer than 500 hours, since the hours only matter if the employee is terminated).

Employees 1, 2, 5, and 6 are non-excludable.

Answer is D.

Question 41

ERISA section 4021 describes plans that are covered by the PBGC, and thus required to pay premiums.

I. In general, a professional service employer with 25 or fewer active participants is exempt from PBGC coverage (see ERISA section 4021(b)(13)). Although the employer initially had 35 employees, there were only 20 employees on the effective date of the plan (and effectively only 20 active participants). Since the plan has always had 25 or fewer active participants, it is not covered by the PBGC and not required to pay a premium for 2006.

II. During 2005, the professional service employer has as many as 28 active participants. ERISA section 4021(b)(13) states that the plan is covered by the PBGC if *at any time* it has more than 25 active participants. It is not enough to just look at the beginning or end of the year. So, the plan is no longer exempt from PBGC coverage once the active participant count exceeded 25 (on 7/1/2005), and this coverage extends for the life of the plan. A premium is due to the PBGC for 2006.

III. 8 owners of a partnership, each owning equal shares, would own 12.5% apiece. Each owner would be considered a substantial owner with respect to the partnership under ERISA section 4022(b)(5)(A)(ii) if they own more than 10%. Each of the 8 owners is deemed to be a substantial owner. ERISA section 4021(b)(9) states that a plan that covers only substantial owners is excluded from PBGC coverage, and no premium would be due for this plan in 2006.

Answer is C.