Question 1

IRC section 417(a)(1) requires a defined benefit plan to offer a qualified joint and survivor annuity (QJSA) option to married participants, and if the participant elects to waive the QJSA option the plan must also offer a qualified optional survivor annuity (QOSA). IRC section 417(g)(2) specifies that the survivor percentage of the QOSA must either be 50% (if the QJSA survivor percentage is at least 75%) or 75% (if the QJSA survivor percentage is less than 75%).

In this question, the QJSA provides a 50% survivor annuity to the spouse, so the QOSA survivor percentage must be 75%. There is no 75% survivor option available in the plan, so it does not satisfy the QOSA requirement of IRC section 417(g).

The statement is false.

Answer is B.

Question 2

ERISA section 4043(b)(7) states that a reportable event occurs when there is a distribution to a substantial owner if it is $10,000 or more, is not made on account of the death of the participant, <u>and</u> the plan has unfunded vested benefits immediately after the distribution.

In this question, the $6,000 distribution is less than $10,000, so no reportable event occurs.

The statement is false.

Answer is B.

Question 3

When a plan (or in this case aggregated plans) has multiple sets of minimum age and service requirements, an employee is considered to be excludable only if they do not satisfy any set of the eligibility requirements (Treasury regulation 1.410(b)-6(b)(2)). In other words, the nonexcludable employees are those who satisfy at least one set of eligibility requirements (of either plan, in the case of aggregated plans).

In this question, any employee who is at least age 18 and has at least one year of service is nonexcludable, and any employee who is at least age 21 and has at least 6 months of service is nonexcludable.

Using these eligibility requirements, all employees under age 18 are excludable.

The 10 hourly employees who are between the ages of 18 and 21 with at least one year of service are nonexcludable. The 10 salaried and 35 hourly employees who are 21 or over and have at least 6 months but less than one year of service are nonexcludable. And the 20 salaried and 20 hourly employees who are 21 or over and have at least one year of service are nonexcludable.

$X = 10 + (10 + 35) + (20 + 20) = 95$

Answer is D.

Question 4

ERISA regulation 901.20(f)(2) states that an enrolled actuary generally may rely in good faith on information furnished by a client, without verification. If the information does not appear to be reasonable, then the enrolled actuary must investigate.

The statement is true.

Answer is A.

Question 5

For purposes of the top heavy ratio, IRC section 416(g)(4)(B) states that benefits of former key employee are excluded. The statement is true.

Answer is A.

Question 6

The regulations under IRC section 410(b) require that for purposes of the average benefit percentage, benefits from all plans of the employer (including accrued benefits from defined benefit plans, salary deferrals in 401(k) plans, matching contributions and profit sharing plan contributions) be aggregated. In this question, the average benefit percentage is determined by testing on an allocations basis, so the defined benefit accruals must be taken as present values, using the testing assumptions. As of 12/31/2013, Smith is age 60 and Jones is age 30.

The present value of the defined benefit accruals is:

Smith = $10{,}000 \times \ddot{a}_{65}^{(12)} \times v^5 = 10{,}000 \times 9.88 \times 0.696559 = 68{,}820$
Jones = $2{,}500 \times \ddot{a}_{65}^{(12)} \times v^{35} = 2{,}500 \times 9.88 \times 0.079562 = 1{,}965$

The benefit percentage for each participant is equal to the ratio of the present value of the defined benefit accrual plus the sum of the salary deferral, matching contribution and profit sharing contribution to the 2013 salary paid (limited, if necessary, to the 2013 IRC section 401(a)(17) compensation limit of \$255,000). Vesting is ignored for this purpose.

$$X = \frac{68{,}820 + (15{,}000 + 5{,}000 + 4{,}000)}{255{,}000} = 36.40\%$$

$$Y = \frac{1{,}965 + (2{,}000 + 1{,}000)}{65{,}000} = 7.64\%$$

X + Y = 36.40% + 7.64% = 44.04%

Answer is D.

Question 7

IRC section 417(a)(1) requires a defined benefit plan to offer a qualified joint and survivor annuity (QJSA) option to married participants, and if the participant elects to waive the QJSA option the plan must also offer a qualified optional survivor annuity (QOSA). IRC section 417(g)(2) specifies that the survivor percentage of the QOSA must either be 50% (if the QJSA survivor percentage is at least 75%) or 75% (if the QJSA survivor percentage is less than 75%).

In this question, the QJSA provides a 100% survivor annuity to the spouse, so the QOSA survivor percentage must be 50%.

Smith retires on 1/1/2014 (the date that Smith has 5 years of service – and is age 58 on that date). The early retirement benefit (reduced 3% for each of the 7 years prior to age 65) is:

$$\text{ERB} = 30{,}000 \times (1 - (7 \times 0.03)) = 30{,}000 \times 0.79 = 23{,}700$$

The equivalent joint and 50% survivor benefit (using the plan equivalence factor of 94%) is:

$$50\%\ \text{QOSA} = 23{,}700 \times 0.94 = 22{,}278$$

Upon Smith's death, the surviving spouse will receive 50% of this benefit:

$$50\% \times 22{,}278 = 11{,}139$$

Answer is A.

Question 8

The vested accrued benefit attributable to the benefit structure in place exactly 5 years before the plan termination date is fully guaranteed (up to the PBGC maximum guaranteeable benefit). That benefit structure is \$10 per month per year of service. Smith is assumed to retire at age 58, so the vested accrued benefit should be determined as if it will be payable at that age. The vesting schedule is not provided, but Smith has at least 7 years of service (actually 20 years of service as of the plan termination date – note that service after the plan termination date cannot be considered for guaranteed benefits), and must therefore be fully vested under any vesting schedule that would satisfy the minimum vesting rules of IRC section 411(a).

The monthly accrued benefit, payable at 58 (with an early retirement reduction factor reflecting the 5% per year reduction prior to age 65), for Smith using the \$45 benefit formula is:

10×20 years of service $\times [1 - (.05 \times 7$ years$)] = 130$

This is fully guaranteed.

The vested accrued benefit increase under the 1/1/2009 plan amendment is phased in under the rules of ERISA section 4022 at the rate of 20% (or \$20, if greater) for each full 12-month period that the amendment was in effect through the plan termination date (the later of amendment effective date or amendment adoption date is used). The amendment was effective for 4 years, so it is phased in for 4 complete 12-month periods.

The monthly accrued benefit, payable at 58 (with an early retirement reduction factor reflecting the 5% per year reduction prior to age 65), for Smith using the \$15 benefit formula is:

15×20 years of service $\times [1 - (.05 \times 7$ years$)] = 195$

The increase in the vested accrued benefit is 65 (195 – 130). The \$20 phase-in is used because the amount being phased in is less than \$100 (20% of \$100 is \$20), with the \$20 giving a larger phase-in amount than the 20%.

Maximum amount to phase in = 20×4 years = 80

The \$65 increase in the vested accrued benefit is fully guaranteed because it is less than the maximum phase-in amount of \$80.

The vested accrued benefit increase under the 1/1/2011 plan amendment is phased over 2 years.

The monthly accrued benefit, payable at 58 (with an early retirement reduction factor reflecting the 5% per year reduction prior to age 65), for Smith using the $18 benefit formula is:

18×20 years of service $\times [1 - (.05 \times 7 \text{ years})] = 234$

The increase in the vested accrued benefit is 39 (234 – 195). The $20 phase-in is used because the amount being phased in is less than $100, with the $20 giving a larger phase-in amount than the 20%.

Maximum amount to phase in = 20×2 years = 40

The $39 increase in the vested accrued benefit is fully guaranteed because it is less than the maximum phase-in amount of $40.

The benefit increase effective 1/1/2013 is ignored because it was not in effect for at least one year prior to the plan termination date.

$X = 130 + 65 + 39 = 234$

Answer is B.

Question 9

An ERISA section 204(h) notice must be provided to any affected participant when there is a plan amendment that significantly reduces future benefit accruals.

I. Smith is a salaried employee, and beginning in 2015 the rate of future benefit accrual is reduced from $50 to $40. A 204(h) notice is required to be provided to Smith.

II. Smith's status has been changed from salaried to hourly, and as a result of that status change Smith's rate of accrual is reduced from $50 to $30 beginning in 2016. The reduction is not due to a plan amendment, so a 204(h) notice is not required to be provided to Smith.

III. The plan has been amended to remove the early retirement subsidy for future accruals. This is a significant reduction in benefit accruals, and a 204(h) notice is required to be provided to Smith.

Smith must receive a 204(h) notice for the events described only in statements I and III.

Answer is B.

Question 10

ERISA section 4041(c)(3)(D)(ii)(II) requires that in a distress termination situation the plan administrator may continue to pay benefits only in the form of an annuity. Other forms of benefit cannot be paid during the termination proceeding.

The statement is false.

Answer is B.

Question 11

A partial withdrawal occurs under ERISA section 4205(a) on the last day of the plan year in which there is a 70% decline. ERISA section 4205(b)(1) defines a 70% decline as having occurred if for each year during any consecutive 3-year period the contribution base units for an employer is less than 30% of the two-year average base units for the 2 years that were the highest during the 5 years preceding the 3-year period.

In this case, consider 2009 through 2011 as the possible 3-year period. During 2004 through 2008 (the prior 5 years), the base units from 2004 and 2007 are the largest. The average for those two years is:

2-year average = (150,000 + 170,000)/2 = 160,000

30% of 2-year average = 30% × 160,000 = $48,000

A 70% decline has occurred as of 12/31/2011 since the base units for each of 2000, 2010 and 2011 are less than $48,000. Therefore, a partial withdrawal occurs on 12/31/2011.

Note that prior possible 3-year periods can be tested, but it will be found that no partial withdrawal occurs until 12/31/2011.

Answer is B.

Question 12

IRC section 411(a)(8)(B) states that the normal retirement date cannot exceed the later of age 65 or the 5th anniversary of the date the participant entered the plan. Smith entered the plan on 1/1/2010, so the 5th anniversary is 1/1/2015. Smith is age 66 on 1/1/2015, so that is the latest normal retirement date and age allowed under the law.

The statement is true.

Answer is A.

Question 13

In order to determine the maximum lump sum payable under IRC section 415(b), the maximum IRC section 415 benefit must first be determined. Under IRC section 415(b), the accrued benefit cannot exceed the smaller of the 415(b) dollar maximum or the 415(b) compensation maximum.

The dollar maximum for 2014 is equal to \$210,000, reduced by 10% for each year of plan participation less than 10 years. Smith has 9 years of plan participation.

Pro-rated 415(b) dollar maximum = \$210,000 × 9/10 = \$189,000

In addition, the dollar maximum is adjusted from age 65 to Smith's late retirement age of 66 using the smaller of the factor based upon plan actuarial equivalence (applicable mortality and 5.25%) or statutory equivalence (applicable mortality and 5%). The smaller of these factors is the one using statutory equivalence (a factor of 1.088).

415(b) dollar maximum = \$189,000 × 1.088 = \$205,632

The compensation maximum under 415(b) is equal to the high consecutive 3-year average salary, reduced by 10% for each year of service less than 10 years. Smith has 10 years of service with the employer, so there is no reduction. There is no additional adjustment to the compensation maximum for Smith's late retirement age of 66.

Smith's high consecutive 3 years of salary occurred in 2010 through 2012.

$$\text{High consecutive 3-year average salary} = \frac{\$205{,}000 + \$208{,}000 + \$210{,}000}{3} = \$207{,}667$$

The smaller of the dollar maximum and the compensation maximum is the dollar maximum of \$205,632.

The maximum lump sum under IRC section 415 is equal to the maximum annual IRC section 415 benefit multiplied by the smallest of the following factors:

(1) Lump sum factor using plan equivalence
(2) 105% of lump sum factor using IRC section 417(e) assumptions
(3) Lump sum factor using applicable mortality and 5.5%

The smallest of these factors is the one using applicable mortality and 5.5%.

Maximum lump sum payable to Smith = \$205,632 × 11.32 = \$2,327,754

Answer is D.

Question 14

The AFTAP, as defined in IRC section 436(j)(1) and determined on the plan valuation date, is equal to the ratio of the actuarial value of assets (reduced by the funding balances) to the funding target, with both the numerator and denominator increased by the total purchases of annuities for the NHCEs during the last 2 years prior to the valuation date.

$$2014 \text{ AFTAP} = \frac{2{,}400{,}000 - (80{,}000 + 50{,}000) + 98{,}000}{3{,}000{,}000 + 98{,}000} = 76.44\%$$

Note that the 2014 annuity purchases are not included because they were made after the 1/1/2014 valuation date.

In order for the 2014 AFTAP to be increased to 80%, the plan sponsor can elect to reduce the funding balances. The funding standard carryover balance must be reduced to zero before any reduction in the prefunding balance can be made.

If the funding balances were reduced to \$19,600, then the 2014 AFTAP would equal exactly 80%:

$$2014 \text{ AFTAP} = \frac{2{,}400{,}000 - 19{,}600 + 98{,}000}{3{,}000{,}000 + 98{,}000} = 80\%$$

The funding standard carryover balance would be reduced to zero, and the prefunding balance would be reduced by \$30,400 (\$50,000 – \$19,600).

Answer is C.

Question 15

IRC section 436(g) states that with regard to the limitations on UCE benefit payments, plan amendments, and benefit accruals, those restrictions do not apply to single employer plans during the first 5 years that the plan is in effect. There is no such rule with regard to the limitations on accelerated benefit distributions during the first 5 years.

There statement is therefore false.

Answer is B.

Question 16

When a plan (or in this case aggregated plans) has multiple sets of minimum age and service requirements, an employee is considered to be excludable only if they do not satisfy any set of the eligibility requirements (Treasury regulation 1.410(b)-6(b)(2)). In other words, the nonexcludable employees are those who satisfy any set of eligibility requirements (of either plan, in the case of aggregated plans).

In this question, any employee who is at least age 18 and has at least one year of service is nonexcludable for purposes of determining the average benefits percentage.

Using these eligibility requirements, there are 65 hourly NHCEs who are nonexcludable (35 + 20 + 10). There are 45 salaried NHCEs who are nonexcludable (15 + 20 + 10). There are 25 hourly HCEs who are nonexcludable (10 + 15). There are 25 salaried HCEs who are nonexcludable (5 + 20).

The average benefits percentage is equal to the ratio of the average of the benefit percentages for the NHCEs who are nonexcludable to the ratio of the average of the benefit percentages for the HCEs who are nonexcludable.

Average benefits percentage

$$= \frac{[(2.5\times 20)+(2.0\times 10)+(1.8\times 15)+(2.0\times 20)+(1.8\times 10)]/(65+45)}{[(2.0\times 10)+(1.8\times 15)+(2.2\times 5)+(1.8\times 20)]/(25+25)}$$

= 0.7495, or 74.95%

Answer is C.

Question 17

ERISA regulation 901.20(c) requires an enrolled actuary to provide supplemental information relating to a valuation report to the plan administrator. There is no requirement to provide this information to an outside auditor. The statement is false.

Answer is B.

Question 18

IRC section 415(b) provides that the accrued benefit cannot exceed the smaller of the 415(b) dollar maximum or the 415(b) compensation maximum.

The dollar maximum for 2012 is equal to \$200,000 and for 2013 is \$205,000. The dollar maximum must be reduced by 10% for each year of plan participation less than 10 years. Smith has 1 year of plan participation as of 12/31/2012, and 2 years of plan participation as of 12/31/2013.

12/31/2012 pro-rated 415(b) dollar maximum = \$200,000 × 1/10 = \$20,000
12/31/2013 pro-rated 415(b) dollar maximum = \$205,000 × 2/10 = \$41,000

The compensation maximum under 415(b) is equal to the high consecutive 3-year average salary, reduced by 10% for each year of service less than 10 years. Smith has 3 years of service as of 12/31/2012, and 4 years of service as of 12/31/2013.

$$\text{High consecutive 3-year average salary}_{12/31/2012} = \frac{\$60{,}000 + \$75{,}000 + \$40{,}000}{3} = \$58{,}333$$

$$\text{High consecutive 3-year average salary}_{12/31/2013} = \frac{\$75{,}000 + \$40{,}000 + \$250{,}000}{3} = \$121{,}667$$

12/31/2012 pro-rated 415(b) compensation maximum = \$58,333 × 3/10 = \$17,500
12/31/2013 pro-rated 415(b) compensation maximum = \$121,667 × 4/10 = \$48,667

X = 12/31/2012 maximum accrued benefit = min{\$20,000; \$17,500} = \$17,500
Y = 12/31/2013 maximum accrued benefit = min{\$41,000; \$48,667} = \$41,000

Y – X = \$41,000 - \$17,500 = \$23,500

Answer is B.

Question 19

Under ERISA regulation 2510.3-21, a fiduciary is a person providing investment advice with regard to a retirement plan. A fiduciary is not involved in a decision to terminate the plan. The statement is false.

Answer is B.

Question 20

Treasury regulation 1.436-1(f)(2)(iv)(A) states that for a plan in which the certified adjusted funding target attainment percentage (AFTAP) is less than 80%, an IRC section 436 contribution may be made in order to allow a plan amendment increasing liabilities to take effect. Regulation 1.436-1(f)(2)(i)(A)(2) states that if the IRC section 436 contribution is made on a date other than the valuation date for the year, then the contribution must be interest adjusted from the valuation date to the date of the contribution using the plan effective rate for that plan year. This question is asking for the additional contribution that could be made on 7/1/2014 that would allow the amendment increasing the funding target to take effect. (Note that while this question does not specifically refer to the contribution as a 436 contribution – it could be an additional contribution for the prior year – the only information provided with regard to a plan effective rate is for 2014, so it must be assumed that this is a contribution for 2014, making it a 436 contribution.)

The amount of the IRC section 436 contribution is dependent on the AFTAP. The AFTAP, as defined in IRC section 436(j)(1) and determined on the plan valuation date, is equal to the ratio of the actuarial value of assets (reduced by the funding balances) to the funding target, with both the numerator and denominator increased by the total purchases of annuities for the NHCEs during the last 2 years. The AFTAP certified on 5/1/2014 is based upon the plan in effect prior to the amendment. The funding target must be calculated as the present value of the accrued benefit as of 1/1/2014. Smith (age 65) has 10 years of service as of that date.

$$\text{Funding target}_{1/1/2014} = 5\% \times \$100{,}000 \times 10 \text{ years of service} \times \ddot{a}_{65}^{(12)}$$
$$= \$50{,}000 \times 9.98 = \$499{,}000$$

$$2014 \text{ AFTAP} = \frac{395{,}000 - 15{,}000}{499{,}000} = 76.15\%$$

When the AFTAP is less than 80%, IRC section 436(c)(2)(A) allows for a 436 contribution to be made (interest adjusted from 1/1/2014 to 7/1/2014) equal to the increase in the funding target as a result of the plan amendment in order to allow the amendment to take effect. The benefit formula increases from 5% to 5.5%, a 10% increase in the accrued benefit. The funding target for Smith increases by 10%.

Increase in funding target = 10% × \$499,000 = \$49,900

$$X = \$49{,}900 \times 1.06^{6/12} = \$49{,}900 \times 1.02956 = \$51{,}375$$

Answer is E.

Question 21

Jones will be in Smith's rate group if Jones has a normal accrual rate at least as large as that of Smith. The accrual rate for Smith (before permitted disparity is imputed) is equal to the ratio of the accrual for 2013 to the compensation paid to Smith in 2013.

Smith's normal accrual rate = $\dfrac{1{,}804}{250{,}000}$ = .007216, or 0.7216%

For purposes of imputing permitted disparity, Treasury regulation 1.401(a)(4)-7(c)(3) states that for employees whose compensation exceeds social security covered compensation, the accrual rate is the smaller of:

$$\frac{\text{accrual}}{\text{testing compensation - 1/2 covered compensation}}\text{, or}$$

$$\frac{\text{accrual} + (\text{permitted disparity factor} \times \text{covered compensation})}{\text{testing compensation}}$$

The permitted disparity factor for Smith, who was born after 1954, is 0.65%. The imputed accrual rate for Smith is smaller of:

$$\frac{1{,}804}{250{,}000 - (0.5 \times 95{,}160)} = 0.8912\%\text{, or}$$

$$\frac{1{,}804 + (0.0065 \times 95{,}160)}{250{,}000} = 0.9690\%$$

The smaller is 0.8912%, which is the imputed normal accrual rate for Smith. This must also be the imputed normal accrual rate for Jones in order for Jones to be in the same rate group as Smith.

Jones normal accrual rate (before imputing permitted disparity) is:

X/40,000

Treasury regulation 1.401(a)(4)-7(c)(2) states that for employees whose compensation does not exceed social security covered compensation, the accrual rate is the smaller of:

$2 \times$ (the accrual/Testing Compensation), or

(The accrual/Testing Compensation) + permitted disparity factor

For Jones,

If $2X/40{,}000 = 0.8912\%$, then $X = 178.24$

If $X/40{,}000 + 0.65\% = 0.8912\%$, then $X = 96.48$

In order for both of the above results to yield an imputed disparity rate of at least 0.8912% for Jones, X must be equal to the larger of these two values, which is $178.24.

Answer is D.

Question 22

The PBGC premium instructions state that a premium filing must be made through and including the plan year in which a trustee is appointed for the plan under ERISA section 4042. In this question, a trustee is appointed on 6/5/2013, which is during the plan year that begins on 4/1/2013. A Comprehensive Premium Form and filing are due along with premium payment for that year.

The statement is true.

Answer is A.

Question 23

Accelerated benefit restrictions apply under IRC section 436(d) when the AFTAP is less than 80%. Restrictions on benefit accruals apply under IRC section 436(e) when the AFTAP is less than 60%, but not during the first 5 plan years (IRC section 436(g)).

As of January 1 of any plan year, the AFTAP is presumed to be equal to the prior year AFTAP until the current year AFTAP is certified (IRC section 436(h)(1)). As of April 1 of any plan year, if the current year AFTAP has not yet been certified, then the AFTAP is presumed to be 10 percentage points less than the prior year AFTAP until the current year AFTAP is certified (IRC section 436(h)(3)). As of October 1 of any plan year, if the current year AFTAP has not yet been certified, then the AFTAP is presumed to be less than 60% for the remainder of the plan year (IRC section 436(h)(2)).

A range certification can be relied upon provided the final AFTAP certification is within that range and is certified by the end of the plan year (Treasury regulation 1.436-1(h)(4)(ii)(B)).

Based upon the presumed underfunding rules, the plan has no presumed or actual underfunding in 2009 and 2010. There are no accelerated benefit restrictions or restrictions on benefit accruals during 2009 or 2010.

In 2011, the range certification of 80% or higher made on 5/1/2011 is substantiated by the final AFTAP certification before the end of the year of 85%. However, during April of 2011, there has been no AFTAP certification for 2011. The presumed AFTAP for the month of April is 75% (10 percentage points less than the 2010 certified AFTAP of 85%). The accelerated benefit restrictions apply for the month of April, 2011.

In 2012, the AFTAP certification does not take place until July 1. For the first 3 months of 2012 the AFTAP is presumed to be equal to the 2011 AFTAP of 85%, and no restrictions apply. Beginning on April 1, 2012, the AFTAP is presumed to be 75% (10 percentage points less than the 2011 certified AFTAP of 85%), and the accelerated benefit restrictions begin to apply. The 2012 AFTAP is subsequently certified as 58%, so the accelerated benefit restrictions apply during 2012 from April 1 through December 31 (9 months). There are no restrictions on benefit accruals because those restrictions do not apply during the first 5 plan years.

In 2013, the AFTAP is presumed to be equal to the 2012 AFTAP of 58% from January 1 through February 28. The 2013 AFTAP is certified on March 1, 2013 to be 72%. The accelerated benefit restrictions apply for all 12 months of 2013, but there are no restrictions on benefit accruals because those restrictions do not apply during the first 5 plan years.

In 2014, the AFTAP is presumed to be equal to the 2013 AFTAP of 72% from January 1 through March 31. Beginning on April 1, 2014, the AFTAP is presumed to be 62% (10 percentage points less than the 2013 certified AFTAP of 72%). The 2014 AFTAP is not certified until after September 30, 2014, so the AFTAP is presumed to be less than 60% beginning on October 1, 2014. The accelerated benefit restrictions apply for all 12 months of 2014. The restrictions on benefit accruals apply for the last 3 months of 2014.

Summarizing, the accelerated benefit restrictions apply during the month of April, 2011, from April 1, 2012 through the end of 2012, and during all of 2013 and 2014. The restrictions on benefit accruals apply only for the last 3 months of 2014.

$X = 1 + 9 + 12 + 12 = 34$
$Y = 3$

$X + Y = 34 + 3 = 37$

Answer is C.

Question 24

ERISA section 4219(c)(1)(C) provides that the annual withdrawal liability payment is equal to the product of the highest consecutive 3-year average contribution base units within the last 10 years (ending with the plan year before the employer withdraws) and the highest contribution rate during the last 10 years ending in the year during which the employer withdraws. The payment is not based on the actual employer contributions. The statement is false.

Answer is B.

Question 25

The top heavy minimum under IRC section 416(c)(1) is equal to 2% of the high consecutive 5-year average salary for years of service (up to a maximum of 10 years) with the employer other than years in which the plan was not top heavy. Note that Treasury regulation 1.416-1, Q&A M4 indicates that only years of service while actually participating in the plan are used for purposes of the top heavy minimum benefit.

Final 3-year average salary = $\dfrac{65{,}000+75{,}000+85{,}000}{3}$ = 75,000

High consecutive 5-year average salary = $\dfrac{65{,}000+75{,}000+65{,}000+75{,}000+85{,}000}{5}$

= 73,000

As of 12/31/2013, Smith has 14 years of service, and has participated in the plan while it was top heavy for 11 years (all years other than 2007 through 2009). Top heavy service is limited to 10 years for purposes of the top heavy minimum benefit.

Plan accrued benefit = 1.25% × 75,000 × 14 years = 13,125

Top heavy minimum = 2% × 73,000 × 10 years = 14,600

The accrued benefit is equal to the greater of the plan accrued benefit or the top heavy minimum. This is $14,600

Answer is C.

Question 26

There is a material change to a certified AFTAP when the change would result in the operations of the plan being different (such as a change in the certified AFTAP from being at least 80% to less than 80%). The effects of a presumed AFTAP must also be considered when determining whether a material change has occurred. If the change is not material, then it is considered to be immaterial. (See Treasury regulation 1.436-1(h)(4)(iii).) In general, there is no recertification requirement when there is an immaterial change (Treasury regulation 1.436-1(h)(4)(v)(E)).

In this particular plan, the 2014 certified AFTAP is 95.60%, so no restrictions apply. In 2015, if the AFTAP for that year is not certified by April 1, the AFTAP is presumed to be 10 percentage points less than 95.60%, and it would continue to be the case that no restrictions apply. Therefore, there is no requirement to recertify the 2014 AFTAP if it would increase to 100.20% because no restrictions would apply in any case. (Note that restrictions on accelerated distributions can apply under IRC section 436(d)(2) when the AFTAP is less than 100%, but only in the case of an employer in bankruptcy – not the case in this question.)

The statement is false.

Answer is B.

Question 27

A measurement period of the current plan year used to determine the most valuable accrual rate requires the use of the current year accrual for the defined benefit plan. That is \$600.

The most valuable benefit is deemed to be the qualified joint and survivor annuity (Treasury regulation 1.401(a)(4)-3(d)(1)(ii)). The qualified joint and survivor annuity (QJSA) must then be normalized using testing assumptions to a life annuity.

Early retirement benefits can be paid at age 60 or later, with a reduction in the \$600 current year accrual of 6% per year prior to age 65. Each possible early retirement benefit must be considered, and normalized (using the 8.5% testing interest rate) to a life annuity at age 65 in order to determine the most valuable accrual from the defined benefit plan. At each age, the \$600 annual accrual is adjusted by a factor of 0.90 to convert it to a QJSA benefit, and by the appropriate reduction for the early retirement age.

At age 60, the benefit payable as a QJSA is \$378.00 (\$600 × 0.90 × 0.70).
At age 61, the benefit payable as a QJSA is \$410.40 (\$600 × 0.90 × 0.76).
At age 62, the benefit payable as a QJSA is \$442.80 (\$600 × 0.90 × 0.82).
At age 63, the benefit payable as a QJSA is \$475.20 (\$600 × 0.90 × 0.88).
At age 64, the benefit payable as a QJSA is \$507.60 (\$600 × 0.90 × 0.94).
At age 65, the benefit payable as a QJSA is \$540.00 (\$600 × 0.90).

Each of these benefits must be normalized by multiplying by the QJSA annuity value at the actual retirement age, accumulating the result to age 65 at 8.5% interest, and dividing by the life annuity factor at age 65. The benefit at the actual retirement age multiplied by the normalization factor is equal to the normalized benefit.

RA	Benefit	Normalization factor	Normalized benefit
60	\$378.00	$10.35 \times 1.085^5 \div 8.89 = 1.750601$	\$661.73
61	\$410.40	$10.23 \times 1.085^4 \div 8.89 = 1.594751$	\$654.49
62	\$442.80	$10.09 \times 1.085^3 \div 8.89 = 1.449702$	\$641.93
63	\$475.20	$9.95 \times 1.085^2 \div 8.89 = 1.317592$	\$626.12
64	\$507.60	$9.81 \times 1.085 \div 8.89 = 1.197283$	\$607.74
65	\$540.00	$9.65 \div 8.89 = 1.085489$	\$586.16

The largest normalized benefit is \$661.73, so that is the most valuable accrual.

The most valuable accrual rate is equal to the ratio of the most valuable accrual to the testing compensation.

$$\text{Most valuable accrual rate} = \frac{\$661.73}{\$30{,}000} = 0.022\text{, or } 2.2\%$$

Answer is D.

Question 28

The PBGC variable-rate premium for 2014 is equal to 1.4% of the unfunded vested benefits. The vested benefit value using the alternative premium funding target is based upon the funding target using segment rates that have not been adjusted for MAP-21. The assets taken into account are the market value of assets, including receivable contributions for the prior year (2013), interest adjusted to 1/1/2014 using the 2013 plan effective rate.

The excess of the liabilities over the assets are rounded up to the next multiple of \$1,000 before multiplying by 1.4%.

Market value of assets (including receivable contributions)

$$= \$41{,}000{,}000 + (\$1{,}000{,}000 \times v_{5\%}^{6/12}) = \$41{,}975{,}900$$

2014 variable premium unfunded liability = \$50,000,000 – \$41,975,900 = \$8,024,100

\$8,024,100 is rounded up to \$8,025,000.

2014 variable-rate premium = \$8,025,000 × 0.014 = \$112,350

In 2014, there is a variable premium cap of \$412 per plan participant.

Variable premium cap = \$412 × 400 participants = \$164,800

The variable premium cap does not apply because the variable premium before considering the cap is smaller.

The 2014 variable rate premium is \$112,350.

Answer is D.

Question 29

ERISA section 4010(b)(1) generally requires a filing to be made if the funding target attainment percentage (FTAP) is less than 80%. That is not the case in this question, because the FTAP is given to be 83.5%.

ERISA section 4010(b)(2) requires a filing to be made if there is a funding deficiency (or late quarterly contribution) of more than 10 days in an amount exceeding $1,000,000. The quarterly contributions required under IRC section 430(j)(3)(C) were due on 4/15/2014 and 7/15/2014 in the amount of $600,000 each. They were not contributed until 10/1/2014, so the first two quarterly contributions, totaling $1,200,000 were late by more than 10 days. An ERISA section 4010 filing is required due to the two late quarterly contributions.

Answer is A.

Question 30

Vested benefits for purposes of the premium funding target include benefits that are not protected benefits under IRC section 411(d)(6). Specifically, example 1 on page 17 of the 2014 PBGC premium filing instructions states that a temporary supplement, while not a protected benefit, is <u>included</u> as part of the vested liability in the premium funding target.

The statement is false.

Answer is B.

Question 31

IRC section 4980(d)(2) allows the reduction of the excise tax percentage upon reversion of assets from a 50% tax to a 20% tax if at least 25% of the excess assets are transferred to a Qualified Replacement Plan. At least 95% of the remaining active participants from the terminating defined benefit plan must be participants in the Qualified Replacement Plan in order for the 20% excise tax percentage to apply (IRC section 4980(d)(2)(A)).

Required number of participants = $(200 - 20) \times 95\% = 171$

There are 175 participants from the terminated defined benefit plan in the replacement plan, so that condition is satisfied.

Excise tax = $20\% \times \$1{,}000{,}000 = \$200{,}000$

Answer is B.

Question 32

I. ERISA regulation 901.20(e)(1)(i) states that, except when mandated by law, the actuarial assumptions must be reasonable both individually and in combination. That statement is false.

II. ERISA regulation 901.20(k) states that an enrolled actuary must provide written notification of the non-filing of any actuarial document that he/she prepared with the agency to which the document should have been filed. Depending upon the document, the agency might not be the Internal Revenue Service (it could be the Department of Labor or the PBGC). The statement is false.

III. ERISA regulation 901.20(b)(2) states without exception that an enrolled actuary may not perform actuarial services for any person or organization that he/she believes will use such services in a fraudulent manner. The statement is false.

Answer is E.

Question 33

IRC section 4975(a) states that an excise tax applies when a prohibited transaction occurs, and is paid by any disqualified person who <u>participates</u> in the prohibited transaction. In this question, the trustees who did not borrow the money had no knowledge of the transaction, so they are not responsible for paying an excise tax. Only the trustee who borrowed the money is responsible for paying an excise tax. The statement is true.

Answer is A.

Question 34

I. Treasury regulation 54.4980F-1, Q&A 11, section (a)(4)(ii) states that an illustrative example must be provided as part of an ERISA section 204(h) notice when there is a change from a traditional defined benefit plan to a cash balance plan. The statement is true.

II. IRC section 4980F(d)(2) states that in the case of a multiemployer plan, the excise tax resulting from the failure to provide timely 204(h) notices is paid by the plan, not the contributing employers. The statement is false.

III. Treasury regulation 54.4980F-1, Q&A 9 states that a 204(h) notice must generally be provided at least 45 days before the amendment is effective (15 days for small plans – fewer than 100 participants with an accrued benefit on the effective date of the amendment). In the case when the participant has a choice between the old and new formulas there is a further requirement under Q&A 12 in the same regulation that the time period be reasonable based upon the date by which the participant must make the choice. The regulation does not provide for a standard 15 day requirement. The statement is false.

Answer is A.

Question 35

An extension of credit (direct or indirect) between a plan and a disqualified person is a prohibited transaction under IRC section 4975(c)(2). The statement is true.

Answer is A.

Question 36

The AFTAP, as defined in IRC section 436(j)(1) and determined on the plan valuation date, is equal to the ratio of the actuarial value of assets (reduced by the funding balances) to the funding target, with both the numerator and denominator increased by the total purchases of annuities for the NHCEs during the last 2 years. It can be assumed, based upon the general conditions of the exam, that there were no purchases of annuities in the past 2 years.

For 2014, the presumed AFTAP as of 1/1/2014 is 83% (the 2013 certified AFTAP).

In the case where a presumed AFTAP applies, regulation 1.436-1(g)(2) provides rules to allow for an IRC section 436 contribution to be made in order to allow for a plan amendment to take effect. A presumed funding target must be determined as of 1/1/2014, using the actuarial value of assets and funding balances in effect as of the first day of the plan year, and the prior year certified AFTAP.

$$\frac{25{,}000{,}000 - 1{,}500{,}000}{\text{Presumed Funding Target}} = 83\% \quad \rightarrow \quad \text{Presumed Funding Target} = \$28{,}313{,}253$$

The presumed AFTAP is greater than or equal to 80%; however, the plan amendment cannot take effect under IRC section 436(c)(1)(B) if the presumed AFTAP would be less than 80% taking into account the increase in the funding target under the amendment.

$$\frac{25{,}000{,}000 - 1{,}500{,}000}{28{,}313{,}253 + 3{,}500{,}000} = 73.87\%$$

IRC section 436(c)(2)(B) allows for a contribution to be made (interest adjusted from 1/1/2014 to 2/1/2014) equal to an amount that would increase the presumed AFTAP (including the amendment) to 80%, which would then allow the amendment to take effect.

$$\frac{25{,}000{,}000 - 1{,}500{,}000 + \text{Contribution}}{28{,}313{,}253 + 3{,}500{,}000} = 80\% \quad \rightarrow \quad \text{Contribution} = \$1{,}950{,}602$$

This must be increased with interest to 2/1/2014, generally using the 2014 plan effective rate. However, in this case the plan effective rate for 2014 has not yet been determined. Treasury regulation 1.436-1(f)(2)(i)(A)(2) states that if the plan effective rate has not yet been determined, then the largest of the 3 segment rates is used for the interest adjustment.

$\$X = \$1{,}950{,}602 \times 1.075^{1/12} = \$1{,}962{,}393$

Answer is C.

Note: It is possible that the additional contribution of $X could be a contribution for the prior plan year. No information is provided as to whether the minimum required contribution for 2013 has already been made. That would be an important fact to know, because any additional contribution for 2013 above the minimum would be an excess contribution that, in addition to being a receivable contribution to the 1/1/2014 actuarial value of assets, would be added to the prefunding balance (the general conditions of the exam state that the employer elects to add excess contributions to the prefunding balance). That would cause no change in the numerator of the AFTAP (the AVA would increase by the same amount as the offsetting prefunding balance). Without any information about the status of the funding of the minimum required contribution for 2013, it must be assumed that it has already been funded. As a result, $X could only be an IRC section 436 contribution for the 2014 plan year, as assumed in the solution to this question.

Question 37

IRC section 401(a)(14) states that payment of benefits under a qualified plan must commence within 60 days after the close of the plan year in which the latest of the following occurs:

(A) The date on which the participant attains the earlier of age 65 or the plan's normal retirement age.
(B) The 10th anniversary of the year in which the participant commenced participation in the plan.
(C) The participant terminates service with the employer.

In this question, Smith reaches normal retirement age at age 62. Smith's 10th anniversary of plan participation is at age 63. Smith terminates service with the employer at age 61. The latest of those ages is age 63. Therefore, payment of benefits must commence within 60 days after the close of the plan year in which Smith turns age 63.

The statement is false.

Answer is B.

Question 38

The PBGC variable-rate premium for 2014 is equal to 1.4% of the unfunded vested benefits. The vested benefit value using the alternative premium funding target is based upon the funding target using the full yield curve because that is what was used for funding purposes.

2014 variable premium unfunded liability = $16,000,000 – $15,100,000 = $900,000

2014 variable-rate premium = $900,000 × 0.014 = $12,600

In 2014, there is a variable premium cap of $412 per plan participant.

Variable premium cap = $412 × 17 participants = $7,004

The variable premium cap applies because the variable premium before considering the cap is larger.

The 2014 variable rate premium is $7,004.

Answer is C.

Note: For small employers (no more than 25 employees), there is also a cap on the variable premium equal to the number of participants squared, multiplied by $5. The employer in this question has 27 employees, so the small employer cap does not apply.

Question 39

IRC sections 411(a)(4) and 411(a)(6)(D) allow certain years of service to be excluded for purposes of vesting.

1. Years of service prior to attaining age 18 can be excluded. Smith turned age 18 on 1/1/2004, the date that Smith was hired, so this exclusion does not apply to this question.

2. Years of service prior to the plan effective date (provided a predecessor plan does not exist). There is no mention of any other plan (and the exam general conditions state that there has never been another plan), so years of service prior to 1/1/2005 can be ignored.

3. For nonvested participants who have a period of at least 5 consecutive years of breaks in service, years of service prior to the breaks in service can be ignored. Smith had breaks in service from 2008 through 2010 (during a period of termination of employment). This is only a 3-year period, so years of service prior to 2008 must be taken into account.

Applying these rules, for purposes of Smith's vested percentage, the years 2005 through 2007, and 2011 through 2013 must be taken into account. Smith has 6 years of service for vesting. Under the 7 year graded vesting schedule of IRC section 411(a)(2)(A)(iii), Smith must be 80% vested.

The statement is false.

Answer is B.

Question 40

The mandatory de minimis rule under ERISA section 4209(a) states that the allocation to a withdrawing employer of the plan's unfunded vested benefit obligations are generally reduced by the smaller of:

(1) ¾% of the total unfunded vested benefits for the entire plan, or
(2) \$50,000

¾% of the total unfunded vested benefits = ¾% × \$10,000,000 = \$75,000

The smaller of \$75,000 and \$50,000 is \$50,000.

The de minimis credit is reduced by one dollar for every dollar that the withdrawing employer's share of unfunded vested benefit obligations exceeds \$100,000. The reduction in the de minimis credit is:

\$115,000 - \$100,000 = \$15,000

The de minimis credit is:

\$50,000 - \$15,000 = \$35,000

Complete withdrawal liability = \$115,000 - \$35,000 = \$80,000

The statement is true.

Answer is A.

Question 41

The top heavy ratio is based upon the valuation results for the valuation date during the 12-month period ending on the determination date. The determination date is the last day of the prior year. For the calendar year beginning 1/1/2014, the determination date is 12/31/2013. This is the last day of the 2013 defined benefit plan year, and the valuation date for that year is 1/1/2013. Therefore, the 1/1/2013 valuation results are used for the defined benefit plan for purposes of the top heavy ratio.

The profit sharing plan is not a calendar year plan, as it begins on 10/1 and ends on 9/30 each year. Each 9/30 is a determination date for the profit sharing plan, and the determination date that falls within the same calendar year as the determination date for the defined benefit plan is 9/30/2013. The valuation date for the profit sharing plan is 9/30/2013 (while this is not specifically mentioned in the question, the valuation date for a defined contribution plan is typically the last day of the year, and the question does not state that is not the case). Therefore, the 9/30/2013 valuation results are used for the profit sharing plan for purposes of the top heavy ratio.

Treasury regulation 1.416-1, Q&A T-23 describes the determination of the top heavy ratio when plans are aggregated with different plan years.

The top heavy ratio is equal to the present value of the accrued benefits for key employees (account balances from the profit sharing plan) divided by the present value of accrued benefits for all employees. Brown was previously a key employee but is no longer a key employee in 2013. Therefore, Brown's present values are excluded from the top heavy ratio (IRC section 416(g)(4)(B)).

$$\text{Top heavy ratio} = \frac{(275{,}000 + 225{,}000) + (350{,}000 + 230{,}000)}{(275{,}000 + 225{,}000) + (350{,}000 + 230{,}000) + (625{,}000 + 700{,}000)}$$

$$= 44.91\%$$

Answer is A.

Question 42

The MAP-21 cap is a per participant cap that applies to variable premiums beginning with the 2013 plan year. This cap applies to any plan for which a variable premium is due. That is the case regardless of whether or not the small employer cap applies. The statement is false.

Answer is B.

Question 43

There is no adjustment under IRC section 415 to the maximum benefit when the plan's form of benefit includes a cost of living increase. See Treasury regulation 1.415(b)-1(c)(5). The statement is false.

Answer is B.