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

Enrolled Actuaries Pension Examination, Segment L

EA-2, Segment L

Date: Thursday, May 11, 2023

INSTRUCTIONS TO CANDIDATES

1. Special conditions generally applicable to all questions on this examination are found in a separate .PDF on the computer screen.

2. All questions should be answered in accordance with laws, rules and regulations in effect as of November 30, 2022.

3. This examination consists of 45 True/False or multiple-choice questions worth a total of 100 points. The point value for each question is shown in parentheses at the beginning of each question.

4. Your score will be based on the point values for the questions that you answer correctly. No credit will be given for omitted answers and no credit will be lost for wrong answers; hence, you should answer all questions even those for which you have to guess. Answer choices C, D, and E will be considered incorrect answers on True-False questions.

5. Do not spend too much time on any one question. If a question seems too difficult, leave it and go on.

6. While every attempt is made to avoid defective questions, sometimes they do occur. If you believe a question is defective, the supervisor or proctor cannot give you any guidance beyond the instructions on the computer screen.

7. Use the scratch paper booklets provided by Prometric for your scratch work. Extra scratch paper booklets are available if you run out of scratch paper in the booklet provided to you.

Answer Key EA-2L Spring 2023
July 7, 2023

Question	Answer
1	B
2	B
3	A
4	B
5	B
6	A
7	A
8	A
9	A
10	A
11	A
12	Correct for All
13	B
14	A
15	A
16	B
17	A
18	A
19	B
20	B
21	B
22	B
23	B
24	D
25	B
26	Correct for All
27	E
28	C
29	C or D
30	B
31	C

32	**C**
33	**C**
34	**D**
35	**B**
36	**B**
37	**B**
38	**B**
39	**C**
40	**D**
41	**E**
42	**Correct for All**
43	**D**
44	**E**
45	**B**

Data for Question 1 (1 point)

The number of participants in a plan since the plan's effective date has always been over 100.

There are no funding balances.

The plan sponsor missed a quarterly installment, which results in a PBGC reportable event.

Consider the following statement:

> The plan administrator must notify the PBGC of the reportable event unless the missed quarterly installment is made by the 45th day after its due date.

Question 1

Is the above statement true or false?

(A) True

(B) False

Data for Question 2 (1 point)

A plan that covers employees in only 2 divisions (Division A and Division B) provides a normal retirement benefit equal to 1.15% of final average compensation times years of benefit service.

The normal form of payment is as follows:

> 5-year certain and life for employees of Division A
> 10-year certain and life for employees of Division B

There are no collectively bargained employees in the plan.

Consider the following statement:

> The plan automatically satisfies the nondiscrimination requirements under IRC section 401(a)(4).

Question 2

Is the above statement true or false?

(A) True

(B) False

Data for Question 3 (2 points)

A plan benefits both collectively bargained and non-collectively bargained participants.

Data for all employees during the plan year:

	Total	Benefitting
Collectively bargained NHCEs	80	70
Non-excludable HCEs	10	9
Non-excludable NHCEs	100	65

The plan sponsor does not use snapshot testing to satisfy IRC section 410(b) and 401(a)(4).

Consider the following statement:

> The plan satisfies the ratio percentage test of IRC section 410(b).

Question 3

Is the above statement true or false?

(A) True

(B) False

Data for Question 4 (1 point)

Consider the following statement:

> Interest on mandatory employee contributions must be credited at 125% of the first segment rate used to determine minimum lump sum payments required under IRC Section 417(e).

Question 4

Is the above statement true or false?

(A) True

(B) False

Data for Question 5 (1 point)

Smith was hired at age 18 and worked more than 1,000 hours per year until he terminated employment at age 23.

Consider the following statement:

Smith must be 100% vested when he terminated employment.

Question 5

Is the above statement true or false?

(A) True

(B) False

Data for Question 6 (1 point)

The only death benefit in a plan is the qualified pre-retirement survivor annuity.

Active participant Smith who was never married died after becoming eligible for early retirement.

Smith’s brother filed a benefit claim for the death benefit payable by the plan.

Consider the following statement:

> Smith's brother is not entitled to a death benefit from the plan.

Question 6

Is the above statement true or false?

(A) True

(B) False

Data for Question 7 (1 point)

A plan provides for a qualified joint and survivor annuity with 50% payable to the surviving spouse. The plan also provides an optional form of payment that is a joint and survivor annuity with 100% payable to the surviving spouse.

Consider the following statement:

> The plan must also provide a qualified optional survivor annuity of 75% payable to the surviving spouse.

Question 7

Is the above statement true or false?

(A) True

(B) False

Data for Question 8 (1 point)

Type of plan: Statutory hybrid (cash balance)

The plan provides a normal retirement benefit that is the sum of the following:

A. 1% of final average compensation for each year of service before 1/1/2020, plus
B. Hypothetical account balance which credits 1% of compensation per year after 12/31/2019

Consider the following statement:

> A plan participant with accrued benefits under both A and B must be 100% vested after 3 years of service.

Question 8

Is the above statement true or false?

(A) True

(B) False

Data for Question 9 (1 point)

A plan is adopted 12/31/2022 and becomes effective 1/1/2023.

Consider the following statement:

> The Participant Count Date for the 2023 PBGC Comprehensive Premium filing is 1/1/2023.

Question 9

Is the above statement true or false?

(A) True

(B) False

Data for Question 10 (1 point)

Plan effective date: 1/1/2022

Plan adoption date: 9/1/2022

Valuation date: 1/1/2022

The plan is not a continuation plan.

Consider the following statement:

> The 2022 PBGC Comprehensive Premium Filing is due 90 days after the adoption date.

Question 10

Is the above statement true or false?

(A) True

(B) False

Data for Question 11 (1 point)

Consider the following statement:

> As part of the plan termination process and the transfer of assets to the PBGC Missing Participant Program, a plan sponsor can satisfy the "diligent search" criteria for locating missing participants under Title IV by using a commercial locator service.

Question 11

Is the above statement true or false?

(A) True

(B) False

Data for Question 12 (1 point)

In performing a multiemployer plan's 2023 annual zone certification, the actuary determines a funded percentage of 72% for 2023 and a projected accumulated funding deficiency beginning in 2025.

Consider the following statement:

> The plan is certified in Seriously Endangered status for 2023.

Question 12

Is the above statement true or false?

(A) True

(B) False

Data for Question 13 (1 point)

A prohibited transaction has occurred between a plan and a disqualified person involving an amount of $100,000. An excise tax is due on the prohibited transaction.

Consider the following statement:

> The initial excise tax assessed is $50,000.

Question 13

Is the above statement true or false?

(A) True

(B) False

Data for Question 14 (1 point)

Smith is the son-in-law of the sole owner of Company A.

Consider the following statement:

Smith is a disqualified person for prohibited transaction purposes for Company A.

Question 14

Is the above statement true or false?

(A) True

(B) False

Data for Question 15 (1 point)

Consider the following statement:

> An enrolled actuary must ensure that, except as mandated by law, actuarial assumptions are reasonable individually and in combination.

Question 15

Is the above statement true or false?

(A) True

(B) False

Data for Question 16 (1 point)

Plan effective date: 1/1/2020

There are no predecessor plans.

Valuation date: 1/1/2023

The plan's AFTAP was timely certified as follows:

Year	AFTAP
2022	65.00%
2023	55.00%

Consider the following statement:

Benefit accruals are required to cease as of 1/1/2023.

Question 16

Is the above statement true or false?

(A) True

(B) False

Data for Question 17 (1 point)

On 2/1/2022, the plan's enrolled actuary certifies the 2021 AFTAP is 95.00%.

There was no prior AFTAP certification issued for the 2021 plan year.

There has been no AFTAP certification issued for the 2022 plan year.

The plan allows lump sum distributions upon termination of employment.

Smith terminates employment on 3/31/2022 and is entitled to a lump sum distribution of $7,500 on 4/15/2022.

Consider the following statement:

Smith may receive the full distribution of $7,500.

Question 17

Is the above statement true or false?

(A) True

(B) False

Data for Question 18 (1 point)

Plan effective date: 1/1/2000

A plan provides the qualified joint and 50% survivor annuity on a fully subsidized basis.

Selected data for participant Smith as of 12/31/2022:

Age	63
Years of service	20
Compensation in each year	$60,000
Date of Retirement	12/31/2022

Consider the following statement:

> The maximum annual annuity as of 12/31/2022 that Smith can receive in the form of a qualified joint and 50% survivor annuity is $60,000.

Question 18

Is the above statement true or false?

(A) True

(B) False

Data for Question 19 (1 point)

Consider the following statement:

> A participant in a multiemployer defined benefit plan is subject to the IRC section 415(b)(3) three-year average compensation limit.

Question 19

Is the above statement true or false?

(A) True

(B) False

Data for Question 20 (1 point)

Employer A and Employer B participate in a multiple employer plan established on 1/1/2000.

The plan is top-heavy as defined in IRC section 416 with respect to Employer A.

Employer B has no key employees.

Consider the following statement:

> Both Employer A and Employer B must apply the special vesting and minimum benefit rules for top-heavy plans under IRC section 416.

Question 20

Is the above statement true or false?

(A) True

(B) False

Data for Question 21 (1 point)

Smith is a 2% owner and officer of Company A with annual compensation of $145,000 for all years since Smith's date of hire.

Consider the following statement:

> For the 2023 plan year, Smith is a key employee for purposes of determining if a plan is subject to top-heavy requirements.

Question 21

Is the above statement true or false?

(A) True

(B) False

Data for Question 22 (2 points)

An employer maintains both a statutory hybrid (cash balance) plan and a defined contribution plan.

The plans are aggregated under IRC section 416 and determined to be top-heavy for the 2022 year.

The plan documents specify the top-heavy minimum requirement is satisfied by making a contribution to the defined contribution plan.

In 2022, the sole key employee receives no contributions in the defined contribution plan and a 3% pay credit in the cash balance plan.

Consider the following statement:

> The minimum top-heavy contribution and forfeiture to each non-key employee in the defined contribution plan is 3% of compensation.

Question 22

Is the above statement true or false?

(A) True

(B) False

Data for Question 23 (3 points)

Selected data as of 1/1/2022:

Funding standard carryover balance	$31,000,000
Prefunding balance	29,000,000
Market value of assets	450,000,000
Actuarial value of assets	490,000,000
Funding target based on non-stabilized rates	550,000,000
Funding target based on stabilized rates	460,000,000
ERISA section 4044 termination liabilities	625,000,000

Question 23

In what range is the ERISA section 4010 FTAP for the 2022 information year?

(A) Less than 75.00%

(B) 75.00% but less than 80.00%

(C) 80.00% but less than 85.00%

(D) 85.00% but less than 90.00%

(E) 90.00% or more

Data for Question 24 (3 points)

Selected plan data as of 1/1/2022:

Funding standard carryover balance	$0
Prefunding balance	1,300,000
Actuarial (market) value of assets	170,000,000
Funding target not using stabilized segment rates	215,000,000

The plan has always had over 500 participants.

There have never been any waivers of minimum funding standards and all contributions have been made timely.

On 1/1/2022, the plan sponsor made the smallest possible contribution of ***$X*** for the 2021 plan year to avoid an ERISA section 4010 filing for the 2022 information year.

Question 24

In what range is ***$X***?

(A) Less than $2,200,000

(B) $2,200,000 but less than $2,600,000

(C) $2,600,000 but less than $3,000,000

(D) $3,000,000 but less than $3,400,000

(E) $3,400,000 or more

Data for Question 25 (4 points)

A company sponsors two defined benefit plans. Each plan has always had over 500 participants.

Valuation results as of 1/1/2022:

	Plan A	Plan B
Funding standard carryover balance	$8,500,000	$1,750,000
Prefunding balance	20,250,000	3,500,000
Market value of assets	172,500,000	45,100,000
Actuarial value of assets	176,000,000	46,500,000
Funding target using stabilized segment rates	175,800,000	53,400,000
Funding target not using stabilized segment rates	185,000,000	55,000,000
Benefit liability based on PBGC assumptions under ERISA section 4044	190,600,000	57,200,000

2021 effective interest rate for both plans: 5.00%

$X = smallest total contribution that the plan sponsor would need to make to plans A and B combined on 4/15/2022 for the 2021 plan year to be exempt from the reporting requirement under ERISA section 4010 for the 2022 information year.

Question 25

In what range is ***$X***?

(A) Less than $1,000,000

(B) $1,000,000 but less than $3,500,000

(C) $3,500,000 but less than $6,000,000

(D) $6,000,000 but less than $8,500,000

(E) $8,500,000 or more

Data for Question 26 (4 points)

Pursuant to IRC section 414(q)(3), a plan counts only the top-paid group in determining the highly compensated employees.

All employees of the employer are eligible to participate in the plan upon completion of one year of service.

Snapshot testing is being used to satisfy IRC section 410(b).

Half of the employees earned in excess of $150,000 for the year preceding the plan year being tested.

All HCEs have at least 1 year of service as of the snapshot testing date.

There are no owner employees.

Plan participant counts as of the snapshot testing date:

	Years of Completed Service		
Age	Less than 6 months	6 months but less than 12 months	12 months or more
Less than 18	27	21	6
18 but less than 21	44	36	64
At least 21	124	101	575

X% = minimum safe harbor percentage under the nondiscriminatory classification test of IRC section 410(b).

Question 26

In what range is ***X%***?

(A) Less than 34.75%

(B) 34.75% but less than 36.25%

(C) 36.25% but less than 37.75%

(D) 37.75% but less than 39.25%

(E) 39.25% or more

Data for Question 27 (4 points)

Participant data for 2022:

Group	Count	HCE/ NHCE	Plan compensation per participant	Covered compensation	Accrual for year
A	2	HCE	$275,000	$125,000	$6,700
B	1	HCE	225,000	135,000	5,400
C	7	NHCE	65,000	125,000	1,300
D	18	NHCE	50,000	125,000	1,100

All participants were born on or after 1/1/1976.

Testing is done on a current year benefits basis with permitted disparity imputed using plan year compensation as testing compensation.

The most valuable accrual rate is equal to the normal accrual rate.

Question 27

In what range is the ratio percentage for the rate group defined by the HCEs in Group B?

(A) Less than 50%

(B) 50% but less than 100%

(C) 100% but less than 150%

(D) 150% but less than 200%

(E) 200% or more

Data for Question 28 (4 points)

Selected plan provisions:

Benefit formula	3% of average compensation for each year of service
Plan vesting schedule	Top-heavy 6-year graded
Actuarial equivalence interest rate	5%

Selected data for participant Smith:

Date of birth	12/31/1957
Date of hire	1/1/2017
Date of termination	12/31/2021
Date of benefit commencement	12/31/2023
Compensation for all years	$50,000

Selected actuarial factors:

$\ddot{a}_{64}^{(12)}$	12.09
$\ddot{a}_{65}^{(12)}$	11.79
$\ddot{a}_{66}^{(12)}$	11.49

Actuarial increases do not include pre-commencement mortality.

Question 28

In what range is the vested annual benefit payable to Smith on 12/31/2023?

(A) Less than $5,650

(B) $5,650 but less than $6,300

(C) $6,300 but less than $6,950

(D) $6,950 but less than $7,600

(E) $7,600 or more

Data for Question 29 (3 points)

Monthly normal retirement benefit:	3% of final 3-year average compensation for each year of service, divided by 12
Early retirement eligibility:	Age 60 with 10 years of service
Early retirement benefit:	Accrued benefit reduced 6% per year prior to age 65

Plan conversion factors at all ages:

Optional forms of payment:	Plan conversion factor from life annuity
Joint and 50% survivor annuity	0.92
Joint and 75% survivor annuity (QJSA)	0.87
Joint and 100% survivor annuity	0.82

Information for participant Smith:

Date of birth	1/1/1962
Spouse's date of birth	1/1/1970
Date of hire	1/1/2001
Date of death	1/1/2023
Annual compensation each year	$72,000

At the time of Smith's death, Smith had been married to his current spouse for over one year.

Question 29

In what range is the monthly qualified pre-retirement survivor benefit payable to Smith's spouse at the earliest commencement date?

(A) Less than $1,400

(B) $1,400 but less than $1,800

(C) $1,800 but less than $2,200

(D) $2,200 but less than $2,600

(E) $2,600 or more

Data for Question 30 (3 points)

Plan type: Statutory hybrid (cash balance)

Selected plan provisions:

Annual pay credit	15% of compensation credited at the end of the plan year
Interest crediting rate	Equal to the actual annual rate of return on plan assets

Data for participant Smith:

Date of hire	1/1/2021
Date of termination	12/31/2023
Compensation for all years	$80,000

Actual rate of return for the indicated plan year:

2021	3.00%
2022	-20.00%
2023	8.00%

Question 30

In what range is the lump sum benefit payable to Smith on 12/31/2023?

(A) Less than $35,600

(B) $35,600 but less than $36,200

(C) $36,200 but less than $36,800

(D) $36,800 but less than $37,400

(E) $37,400 or more

Data for Question 31 (4 points)

Type of plan: Statutory hybrid (cash balance)

Interest credits: Equal to the actual annual rate of return on plan assets, less 200 basis points, but not less than zero, multiplied by the beginning of year account balance

Plan termination date: 12/31/2021

All plan benefits are distributed on 4/1/2023.

Selected data for active participant Smith:

Date of birth	1/1/1970
1/1/2022 account balance	$50,000

Selected values:

		Segment rates as of the prior December	
Year	Rate of return on plan assets	With stabilization	Without stabilization
2016	7%	{4.43%, 5.91%, 6.65%}	{1.55%, 3.76%, 4.73%}
2017	13%	{4.16%, 5.72%, 6.48%}	{1.79%, 3.70%, 4.56%}
2018	-6%	{3.92%, 5.52%, 6.29%}	{2.50%, 3.92%, 4.50%}
2019	20%	{3.74%, 5.35%, 6.11%}	{2.78%, 3.85%, 4.30%}
2020	10%	{4.75%, 5.50%, 6.27%}	{1.87%, 3.12%, 3.72%}
2021	3%	{4.75%, 5.36%, 6.11%}	{0.92%, 2.62%, 3.29%}
2022	8%	{4.75%, 5.18%, 5.92%}	{2.00%, 3.00%, 4.00%}

Question 31

In what range is Smith's account balance as of 12/31/2022?

(A) Less than $50,500

(B) $50,500 but less than $51,250

(C) $51,250 but less than $52,000

(D) $52,000 but less than $52,750

(E) $52,750 or more

Data for Question 32 (4 points)

A plan administrator revoked an election to use the alternative funding target to determine PBGC variable rate premiums effective with the PBGC comprehensive premium filing for the 2018 plan year.

The plan does not qualify for the small employer cap.

Selected 1/1/2022 valuation results:

	Participant count	Standard funding target	Alternative funding target
Active participants	2,000	$150,000,000	$145,000,000
Retirees and beneficiaries	1,500	75,000,000	73,000,000
Vested terminations	2,900	300,000,000	296,000,000
Alternate payees from QDROs	150	15,000,000	14,400,000
Total	6,550	$540,000,000	$528,400,000

Participants associated with all alternate payees are alive and still entitled to a future benefit from the plan.

1/1/2022 market value of assets (excluding receivable 2021 plan year contributions)	$440,000,000

Date paid	Contribution amount	Plan year to which contribution is attributed
1/15/2022	$ 9,000,000	2021
4/15/2022	12,000,000	2022
9/15/2022	4,000,000	2021

2021 effective interest rate 4.50%

$X is the smallest total PBGC premium the plan sponsor could pay for the 2022 plan year without incurring any penalties.

Question 32

In what range is ***$X***?

(A) Less than $4,200,000

(B) $4,200,000 but less than $4,300,000

(C) $4,300,000 but less than $4,400,000

(D) $4,400,000 but less than $4,500,000

(E) $4,500,000 or more

Data for Question 33 (3 points)

Number of participants as of 12/31/2021: 38

Selected data as of 1/1/2022:

Number of participants	35
Market value of assets	$3,600,000
Actuarial value of assets	3,700,000
PBGC premium funding target	4,100,000

The plan does not qualify for the small employer cap.

The sponsor has opted out of the Small Plan Lookback Rule.

Question 33

In what range is the total 2022 PBGC premium?

(A) Less than $24,300

(B) $24,300 but less than $25,400

(C) $25,400 but less than $26,500

(D) $26,500 but less than $27,600

(E) $27,600 or more

Data for Question 34 (3 points)

Selected data for the 2022 PBGC premium determination:

Active participants as of 12/31/2021	5
Terminated vested participants as of 12/31/2021	1

There are no other participants in the plan as of 12/31/2021.

	1/1/2021	1/1/2022
Market value of assets	$545,000	$582,000
Actuarial value of assets	560,000	580,000
PBGC premium funding target	550,000	585,000

The plan uses the Small Plan Lookback Rule.

Question 34

In what range is the total 2022 PBGC premium?

(A) Less than $560

(B) $560 but less than $625

(C) $625 but less than $690

(D) $690 but less than $755

(E) $755 or more

Data for Question 35 (2 points)

A defined benefit plan terminates on 1/1/2023.

The plan sponsor maintains a profit sharing plan that is eligible to be used as a qualified replacement plan.

No increases to the accrued benefits in the defined benefit plan were adopted within the 60 days before plan termination.

All liabilities are paid from the defined benefit plan on 10/1/2023.

Selected plan data as of 10/1/2023:

Total assets before distributions	$6,500,000
Cost of annuity purchases	3,000,000
Cost of lump sum payments	2,500,000

$X = the minimum amount of excess assets that must be transferred to the qualified replacement plan in order to avoid a 50% excise tax on the reversion to the employer.

Question 35

In what range is ***$X***?

(A) Less than $210,000

(B) $210,000 but less than $330,000

(C) $330,000 but less than $450,000

(D) $450,000 but less than $570,000

(E) $570,000 or more

Data for Question 36 (3 points)

In a standard termination, Smith, who has not yet retired, cannot be located.

Benefit determination date: 1/1/2023
Early retirement provisions: Age 60, reduced 5% per year from age 65

The plan does not provide a lump sum option.

Present value factors at selected ages:

	Age 60	Age 63	Age 65
PBGC Regulation 4044 assumptions	16.4557	15.2681	14.4458

Data for participant Smith as of the benefit determination date:

Age:	63
Accrued monthly benefit:	$475
XRA	63

Question 36

In what range is the amount to be paid to the PBGC to cover the designated benefit for Smith?

(A) Less than $75,000

(B) $75,000 but less than $80,000

(C) $80,000 but less than $85,000

(D) $85,000 but less than $90,000

(E) $90,000 or more

Data for Question 37 (3 points)

A plan terminates while the plan sponsor is in bankruptcy.

Plan effective date	1/1/2000
Date of bankruptcy filing	12/31/2020
Date of plan termination	12/31/2022

Normal retirement benefit: 1.5% of highest 3-year average compensation for each year of service

Selected data for participant Smith:

Date of birth	1/1/1960
Date of participation	1/1/2006
Compensation for each year before 2019	$278,000
2019 compensation	282,000
2020 compensation	290,000
2021 compensation	295,000
2022 compensation	302,000

$X is the PBGC guaranteed monthly benefit payable at normal retirement date for Smith.

Question 37

In what range is ***$X***?

(A) Less than $5,120

(B) $5,120 but less than $5,260

(C) $5,260 but less than $5,400

(D) $5,400 but less than $5,540

(E) $5,540 or more

Data for Question 38 (4 points)

Company A completely withdraws from a multiemployer plan on 1/1/2022.

Company A's withdrawal liability is $2,275,000.

The interest rate for the present value of vested benefits is 7%.

The first quarterly payment on the withdrawal liability is due on 7/1/2022.

The following is Company A's contribution history:

Plan year	Contribution hours	Contribution rate	Contribution
2002	17,353	$2.71	$47,027
2003	18,791	2.91	54,682
2004	20,379	3.12	63,582
2005	22,135	3.34	73,931
2006	24,080	3.57	85,966
2007	26,168	3.82	99,962
2008	23,427	4.09	95,816
2009	20,968	4.38	91,840
2010	18,770	4.69	88,031
2011	18,000	5.02	90,360
2012	15,062	5.37	80,883
2013	11,302	5.75	64,987
2014	17,822	6.15	109,605
2015	16,855	6.58	110,906
2016	15,475	7.04	108,944
2017	13,770	7.53	103,688
2018	11,766	7.53	88,598
2019	12,920	7.53	97,288
2020	10,376	7.53	78,131
2021	11,244	7.53	84,667

Question 38

In what range is the annual withdrawal liability payment payable by Company A?

(A) Less than $110,000

(B) $110,000 but less than $145,000

(C) $145,000 but less than $180,000

(D) $180,000 but less than $215,000

(E) $215,000 or more

Data for Question 39 (4 points)

Employer A is a contributing employer to a multiemployer plan.

Method for calculating withdrawal liability: Rolling-5 with mandatory *de minimis* rule

Employer A completely withdraws from the plan on 12/30/2022.

Selected information:

Year	Total contributions from all employers	Total contributions from withdrawn employers	Total contributions from Employer A	Total 12/31 unfunded vested benefits (all employers)	Outstanding claims*
2016	$14,800,000	$750,000	$670,000	$0	$0
2017	16,000,000	790,000	620,000	0	0
2018	16,800,000	600,000	640,000	0	0
2019	17,700,000	815,000	580,000	0	0
2020	16,200,000	880,000	605,000	63,000,000	1,400,000
2021	16,800,000	635,000	499,000	60,900,000	3,200,000
2022	15,800,000	805,000	400,000	66,200,000	2,800,000

*For withdrawal liability that can be reasonably expected to be collected with respect to employers who withdrew before the end of the plan year.

$X = the withdrawal liability for Employer A.

Question 39

In what range is ***$X***?

(A) Less than $2,066,000

(B) $2,066,000 but less than $2,099,000

(C) $2,099,000 but less than $2,132,000

(D) $2,132,000 but less than $2,165,000

(E) $2,165,000 or more

Data for Question 40 (3 points)

A plan sponsor borrows $100,000 from the plan on 7/1/2021.

Interest on the note is 6% per year payable annually on 6/30 until the note is repaid.

Payments of $6,000 each were made on 6/30/2022 and 6/30/2023.

The loan was not repaid as of 12/31/2023.

Market rate of interest is 4% per year.

Question 40

In what range is the prohibited transaction excise tax for 2023?

(A) Less than $1,200

(B) $1,200 but less than $1,650

(C) $1,650 but less than $2,100

(D) $2,100 but less than $2,550

(E) $2,550 or more

Data for Question 41 (2 points)

Consider the following statements with respect to the standards of performance of actuarial services:

I. An enrolled actuary shall not perform actuarial services for a client if the representation involves a conflict of interest.

II. An enrolled actuary advising a client to take a position on any document to be filed with the Pension Benefit Guaranty Corporation generally may rely in good faith without verification upon information furnished by the client.

III. Without the express consent of the client, the enrolled actuary may not retain copies of any and all records requested by the client to be returned.

Question 41

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

(A) I and II only

(B) I and III only

(C) II and III only

(D) I, II, and III

(E) The correct answer is not given by (A), (B), (C), or (D) above

Data for Question 42 (4 points)

Selected data as of 1/1/2022:

Funding balances	$30,000
Actuarial (market) value of assets	194,000
Funding target	200,000
Effective interest rate	4.00%

Return on assets during 2022: 10%

Funding balances were not used, forfeited or created in 2022 or 2023.

The market value of assets as of 1/1/2023 is $200,000.

As of 4/1/2023, the 2023 AFTAP has not been certified.

The plan provides for lump sum distributions.

There have never been any annuities purchased by the plan.

$X = the deemed reduction on 4/1/2023 to the 1/1/2023 funding balances to avoid IRC section 436 benefit restrictions.

Question 42

In what range is ***$X***?

(A) Less than $4,650

(B) $4,650 but less than $9,300

(C) $9,300 but less than $13,950

(D) $13,950 but less than $18,600

(E) $18,600 or more

Data for Question 43 (3 points)

Plan effective date: 1/1/2000

During 2022, the plan is amended to increase benefits effective 9/30/2022 from 1% of compensation per year of service to 1.25% of compensation per year of service.

Selected valuation results as of 1/1/2022:

Funding balances	$0
Market value of assets	1,900,000
Actuarial value of assets	1,950,000
Funding target before amendment	2,400,000
Increase in funding target due to amendment	250,100

Other information:

NHCE annuity purchases during 2021	$230,000
NHCE annuity purchases during first 9 months of 2022	40,000
Effective interest rate for 2021	5.20%
Effective interest rate for 2022	5.50%

The 2022 AFTAP was certified before the amendment was adopted.

There were no annuity purchases before 2021.

$X is the IRC section 436 contribution the plan sponsor must make on 9/30/2022 in order to allow the amendment to take effect.

Question 43

In what range is ***$X***?

(A) Less than $119,000

(B) $119,000 but less than $124,000

(C) $124,000 but less than $129,000

(D) $129,000 but less than $134,000

(E) $134,000 or more

Data for Question 44 (3 points)

Plan's actuarial equivalence assumptions

Interest	8%
Mortality	Applicable mortality table

Selected data for participant Smith:

Age of retirement	65
Service at retirement	20
Date of retirement	1/1/2022
Annual accrued benefit under the plan (before the application of IRC section 415)	$248,000

Selected optional form conversion factors using applicable mortality:

	5%	8%
10-year certain and life	0.970	0.920
Joint & 50% survivor	0.928	0.942

$X = the annual benefit payable in the joint and 50% survivor form (QJSA) at retirement

$Y = the annual benefit payable in the 10-year certain and life form at retirement

Question 44

In what range is **|*$X* - *$Y*|**?

(A) Less than $1,500

(B) $1,500 but less than $2,500

(C) $2,500 but less than $3,500

(D) $3,500 but less than $4,500

(E) $4,500 or more

Data for Question 45 (3 points)

Normal retirement benefit formula: 1% of final 3-year average compensation for each year of service

The plan provides the minimum top-heavy benefit required under IRC section 416.

Data for non-key participant Smith:

Date of birth	1/1/1964
Date of hire	1/1/2009

Year	Compensation
2009	$60,000
2010	62,500
2011	65,000
2012	67,500
2013	120,000
2014	72,500
2015	75,000
2016	77,500
2017	80,000
2018	82,500
2019	85,000
2020	87,500
2021	90,000
2022	92,500

The plan was determined to be top-heavy for years 2009 through 2019. The plan is not top-heavy for 2020, 2021 or 2022.

$X = Smith's annual accrued benefit reflecting top-heavy provisions as of 12/31/2022.
$Y = Smith's annual accrued benefit ignoring top-heavy provisions as of 12/31/2022.

Question 45

In what range is ***$X - $Y***?

(A) Less than $3,800

(B) $3,800 but less than $4,600

(C) $4,600 but less than $5,400

(D) $5,400 but less than $6,200

(E) $6,200 or more

END OF EXAMINATION