Data for Question 1 (5 points)

Normal retirement benefit: 1.3% of compensation per year of service.

Early retirement eligibility: Age 55.

Early retirement benefit:

30 or more years of service	Unreduced accrued benefit
Less than 30 years of service	Accrued benefit reduced by 4% per year by which the benefit commencement date precedes age 65

Actuarial cost method: Unit credit.

Selected actuarial assumptions:

Valuation interest rate	7% per year
Salary increases	0% per year

Rates of retirement

Age	Rate
63	0.33
64	0.50
65	1.00

Data for participant Smith:

Date of birth	1/1/1947
Date of hire	1/1/1981
2006 valuation compensation	\$75,000

Selected annuity values: $\ddot{a}_{63}^{(12)} = 9.72$ $\ddot{a}_{64}^{(12)} = 9.48$ $\ddot{a}_{65}^{(12)} = 9.24$

Question 1

In what range is the 2006 normal cost for Smith as of 1/1/2006?

(A) Less than \$6,400

(B) \$6,400 but less than \$6,600

(C) \$6,600 but less than \$6,800

(D) \$6,800 but less than \$7,000

(E) \$7,000 or more

Data for Question 2 (4 points)

Actuarial cost method: Aggregate (level dollar).

Valuation interest rate: 7% per year.

Credit balance in funding standard account as of 12/31/2005: $0.

Selected valuation results for the sole participant as of 1/1/2006:

Entry age normal cost	$25,000
Entry age normal accrued liability	450,000
Market value of assets	449,000
Actuarial value of assets	451,000
Expected benefit payments	0
Present value of future service	10

Current liability (including expected increase for benefits accruing during the plan year) adjusted to 12/31/2006: $569,000.

Question 2

In what range is the minimum required contribution for 2006 as of 12/31/2006?

(A) Less than $25,700

(B) $25,700 but less than $26,700

(C) $26,700 but less than $27,700

(D) $27,700 but less than $28,700

(E) $28,700 or more

Data for Question 3 (4 points)

Plan effective date: 1/1/1990.

Valuation interest rate: 7% per year.

Actuarial value of assets: Approval 15 of Rev. Proc. 2000-40 with five-year smoothing (Market value of assets adjusted by a decreasing fraction of the (gain)/loss in market value for each of the preceding four years).

Historical excess of expected over actual market value of assets:

(Gain)/loss during 2004	$75,000
(Gain)/loss during 2003	34,000
(Gain)/loss during 2002	45,000

Reconciliation of market value of assets during 2005:

Market value of assets as of 1/1/2005	$355,000
Contributions	15,000
Benefit payments	(10,000)
Investment return	(15,000)
Market value of assets as of 12/31/2005	$345,000

Contributions and benefit payments were assumed to be made 7/1/2005.

Question 3

In what range is the actuarial value of assets at 1/1/2006?

(A) Less than $390,000

(B) $390,000 but less than $400,000

(C) $400,000 but less than $410,000

(D) $410,000 but less than $420,000

(E) $420,000 or more

<u>Data for Question 4</u> (4 points)

Plan effective date: 1/1/2002.

Actuarial cost method: Unit credit.

Valuation interest rate: 7% per year.

Initial unfunded liability: $200,000.

Credit balance in funding standard account on 12/31/2005: $7,000.

Actuarial (market) value of assets as of 1/1/2006: $100,000.

The assumed retirement age was changed on 1/1/2006.

Unfunded actuarial liability as of 1/1/2006:

Before assumption change	$300,000
After assumption change	400,000

The sole plan participant is not within 5 years of the assumed retirement age.

Benefit service as of 1/1/2006 for sole plan participant: 25 years.

The plan had no (gains)/losses prior to 1/1/2005.

<u>Question 4</u>

In what range is the minimum required contribution for 2006 as of 12/31/2006?

(A) Less than $62,000

(B) $62,000 but less than $67,000

(C) $67,000 but less than $72,000

(D) $72,000 but less than $77,000

(E) $77,000 or more

Data for Question 5 (3 points)

Plan effective date: 1/1/2000.

Actuarial cost method: Aggregate.

Valuation interest rate: 7% per year.

Credit balance in funding standard account as of 12/31/2005: $0.

Selected valuation results at 1/1/2006:

Aggregate normal cost	$40,000
Entry age normal cost	30,000
Entry age normal accrued liability	750,000
Actuarial (market) value of assets	730,000
Expected benefit payments	0

Current liability (including expected increase for benefits accruing during the plan year) adjusted to 12/31/2006: $939,000.

Additional funding charge for 2006: $24,000.

Question 5

In what range is the minimum required contribution for 2006 as of 12/31/2006?

(A) Less than $55,000

(B) $55,000 but less than $60,000

(C) $60,000 but less than $65,000

(D) $65,000 but less than $70,000

(E) $70,000 or more

Data for Question 6 (5 points)

Normal retirement benefit: 2% of final pay per year of service.

Disability eligibility: Age 60 and 30 years of service.

Disability benefit: Unreduced accrued benefit.

Actuarial cost method: Aggregate.

Selected actuarial assumptions:

Valuation interest rate	7% per year
Salary increases	4% per year

Pre-retirement decrements:

Age	Rate of disability
64	0.2

Decrements are assumed to occur at the beginning of the plan year.

Credit balance in the funding standard account as of 12/31/2005: $0.

Actuarial (market) value of assets as of 1/1/2006: $150,000.

Data for sole plan participant:

Status	Active
Date of birth	1/1/1943
Date of hire	1/1/1972
2005 compensation	$100,000

Selected annuity values:

Age	Healthy life	Disabled life
64	9.48	6.88
65	9.24	6.77

Question 6

In what range is the normal cost for 2006 as of 1/1/2006?

(A) Less than $250,000

(B) $250,000 but less than $260,000

(C) $260,000 but less than $270,000

(D) $270,000 but less than $280,000

(E) $280,000 or more

Data for Question 7 (4 points)

Plan effective date: 1/1/2004.

Actuarial cost method: Unit credit.

Valuation interest rate: 7% per year.

Initial unfunded liability: $1,200,000.

Net amortization charges in the funding standard account as of 1/1/2005: $100,000.

Credit balance in the funding standard account as of 12/31/2005: $20,000.

Selected valuation results as of 1/1/2006:

Normal cost	$250,000
Accrued liability	1,800,000
Actuarial (market) value of assets	400,000

Question 7

In what range is the minimum required contribution for 2006 as of 12/31/2006?

(A) Less than $376,000

(B) $376,000 but less than $388,000

(C) $388,000 but less than $400,000

(D) $400,000 but less than $412,000

(E) $412,000 or more

Data for Question 8 (3 points)

Effective date: 4/1/1997.

Plan year: 4/1 – 3/31.

Tax year: 1/1 – 12/31.

Actuarial cost method: Frozen initial liability.

Valuation interest rate: 7% per year.

Credit balance in the funding standard account as of 3/31/2006: $25,000.

Selected valuation results as of 4/1/2006:

Normal cost	$50,000
Unfunded accrued liability	345,000

The deductible limit for any taxable year is based on the plan year beginning in that taxable year.

Question 8

In what range is the deductible limit for the 2006 tax year?

(A) Less than $103,000

(B) $103,000 but less than $106,000

(C) $106,000 but less than $109,000

(D) $109,000 but less than $112,000

(E) $112,000 or more

Data for Question 9 (3 points)

Plan effective date: 1/1/2004.

Actuarial cost method: Frozen initial liability.

Valuation interest rate: 8% per year.

Initial accrued liability: $600,000.

Credit balance in the funding standard account as of 12/31/2004: $0.

Normal cost as of 1/1/2005: $100,000.

The minimum funding requirement for 2005 was waived.

Normal cost as of 1/1/2006: $90,000.

150% Federal mid-term rate as of 1/1/2006: 6.76%.

Question 9

In what range is the minimum required contribution as of 12/31/2006?

(A) Less than $145,500

(B) $145,500 but less than $160,500

(C) $160,500 but less than $175,500

(D) $175,500 but less than $190,500

(E) $190,500 or more

Data for Question 10 (4 points)

Plan effective date: 1/1/2000.

Actuarial cost method:

Before 2006	Entry age normal
After 2005	Aggregate

Valuation interest rate: 7% per year.

Initial accrued liability: $500,000.

Selected valuation results as of 1/1/2006:

Entry age normal cost	$90,000
Entry age normal accrued liability	925,000
Present value of future benefits	1,500,000
Current compensation	800,000
Present value of future compensation	9,000,000
Actuarial (market) value of assets	500,000

There have been no experience (gains)/losses, other than an experience loss of $8,000 during 2004.

Question 10

In what range is the minimum required contribution for 2006 as of 12/31/2006?

(A) Less than $50,000

(B) $50,000 but less than $51,000

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

(D) $52,000 but less than $53,000

(E) $53,000 or more

Data for Question 11 (4 points)

Plan effective date: 1/1/1985.

Accrued benefit: 1.25% of final compensation per year of service, up to 30 years.

Early retirement eligibility: Age 55 with 15 years of service.

Early retirement benefit: Accrued benefit reduced by 4% for each year the benefit commencement date precedes age 62.

Actuarial cost method: Unit credit.

Selected actuarial assumptions:

Valuation interest rate	7% per year
Compensation increases	3% per year
Retirement age	62

Data for participant Smith:

Date of birth	1/1/1946
Date of hire	1/1/1978
2005 compensation	$85,000

Selected annuity values: $\ddot{a}_{60}^{(12)} = 12.08$ $\ddot{a}_{62}^{(12)} = 11.61$ $\ddot{a}_{65}^{(12)} = 10.87$

Smith retired on 12/31/2005, and started receiving benefits on 1/1/2006.

Question 11

In what range is the absolute value of the 2005 experience (gain)/loss resulting from Smith's retirement?

(A) Less than $10,000

(B) $10,000 but less than $20,000

(C) $20,000 but less than $30,000

(D) $30,000 but less than $40,000

(E) $40,000 or more

Data for Question 12 (4 points)

Type of plan: Multiemployer.

Plan effective date: 1/1/2004.

Effective date of annual bargaining agreements: 1/1.

Employer contributions: $10 per hour for each hour worked by a participant, payable on 12/31.

Actuarial cost method: Entry age normal with shortfall.

Selected actuarial assumptions:

Valuation interest rate	7% per year
Hours worked per year	1,800 per participant

Selected valuation results:	1/1/2004	1/1/2005
Normal cost	$50,000	$75,000
Unfunded accrued liability	750,000	515,000
Number of active participants	10	11

2004 Contribution: $180,000 paid on 12/31/2004.

2005 Contribution: $210,000 paid on 12/31/2005.

Question 12

In what range is the absolute value of the 2005 shortfall gain or loss as of 1/1/2006?

(A) Less than $4,600

(B) $4,600 but less than $6,200

(C) $6,200 but less than $7,800

(D) $7,800 but less than $9,400

(E) $9,400 or more

Data for Question 13 (4 points)

Plan effective date: 1/1/2005.

Actuarial cost method: Frozen initial liability.

Valuation interest rate: 7% per year.

Initial accrued liability: $150,000.

Normal cost for the 2005 plan year as of 1/1/2005: $25,000.

Contribution for 2005: $45,000 paid on 12/31/2005.

The valuation date was changed from 1/1 to 12/31 for the 2006 plan year.

Selected valuation results as of 12/31/2006:

Present value of future benefits	$300,000
Present value of future compensation	2,850,000
Total annual compensation	240,000

Contribution for 2006: $30,000 paid on 12/31/2006.

Actual rate of investment return during 2006: 3.5%.

There were no benefits paid during 2005 or 2006.

Question 13

In what range is the normal cost for 2006 as of 12/31/2006?

(A) Less than $7,500

(B) $7,500 but less than $8,000

(C) $8,000 but less than $8,500

(D) $8,500 but less than $9,000

(E) $9,000 or more

Data for Question 14 (3 points)

Plan effective date: 1/1/2003.

Actuarial cost method: Entry age normal.

Valuation interest rate: 7% per year.

Funding deficiency in funding standard account as of 12/31/2005: $5,000.

Accumulated reconciliation account balance as of 1/1/2006: $4,500.

Selected valuation results as of 1/1/2006:

Normal cost	$54,000
Accrued liability	260,000
Actuarial (market) value of assets	200,000

Additional interest charge due to late quarterly contributions for 2006: $1,850.

There have been no experience (gains)/losses.

Question 14

In what range is the minimum required contribution for 2006 as of 12/31/2006?

(A) Less than $68,000

(B) $68,000 but less than $70,000

(C) $70,000 but less than $72,000

(D) $72,000 but less than $74,000

(E) $74,000 or more

Data for Question 15 (5 points)

Plan effective date: 1/1/2001.

Normal retirement benefit: $65 per month for each year of service.

Actuarial cost method: Aggregate.

Valuation interest rate: 7% per year.

Credit balance in funding standard account as of 12/31/2005: $0.

Selected valuation results as of 1/1/2006:

Market value of assets	$38,000
Actuarial value of assets	40,000

Current liability (including expected increase for benefits accruing during the plan year) adjusted to 12/31/2006: $50,000.

Data for sole participant:

Date of birth	1/1/1956
Date of hire	1/1/1998

Selected annuity value:

$$\ddot{a}_{65}^{(12)} = 10.00$$

Question 15

In what range is the full funding limitation credit for 2006?

(A) Less than $250

(B) $250 but less than $500

(C) $500 but less than $750

(D) $750 but less than $1,000

(E) $1,000 or more

Data for Question 16 (4 points)

Effective date for all plans: 1/1/2004.

Contributions to profit sharing/401(k) plan for 2006:

Employee 401(k) deferrals	$75,000
Employee voluntary after-tax contributions	25,000
Employer matching contributions	37,500
Employer discretionary contributions	50,000

Selected defined benefit plan valuation results as of 12/31/2006:

Minimum required contribution	$200,000
Normal cost plus 10 year amortization base	225,000
ERISA full funding limitation	300,000
RPA'94 override	75,000
Unfunded current liability	250,000

Contribution to the defined benefit plan for 2006: $240,000 paid on 12/31/2006.

Gross compensation (before deducting 401(k) deferrals) for all participants during 2006: $1,075,000.

All employees participate in the defined benefit and defined contribution plans.

No participant earned more than $220,000 during 2006.

Question 16

In what range is the total non-deductible employer contribution for 2006?

(A) Less than $60,000

(B) $60,000 but less than $80,000

(C) $80,000 but less than $100,000

(D) $100,000 but less than $120,000

(E) $120,000 or more

Data for Question 17 (3 points)

Normal retirement benefit: 2% of final compensation per year of service.

Actuarial cost method: Unit credit.

Valuation interest rate:

Prior to 2006	8% per year
After 2005	7% per year

Assumed compensation increases: 4% per year.

Data for sole participant:

Date of birth	1/1/1952
Date of hire	1/1/1995
2005 compensation	$50,000

Selected annuity values:

Interest rate	$\ddot{a}_{65}^{(12)}$
8%	9.35
7%	10.06

Question 17

In what range is the absolute value of the change in the 2006 normal cost as of 1/1/2006 due to the change in interest rate?

(A) Less than $900

(B) $900 but less than $1,000

(C) $1,000 but less than $1,100

(D) $1,100 but less than $1,200

(E) $1,200 or more

Data for Question 18 (4 points)

Actuarial cost method: Unit credit.

Valuation interest rate: 7% per year.

Credit balance in the funding standard account as of 12/31/2005: $35,000.

Selected valuation results as of 1/1/2006:

Accrued liability	$750,000
Actuarial (market) value of assets	450,000

All amortization charges (credits) in funding standard account as of 1/1/2006:

Source	Date established	Charge (credit)
Experience (gain)/loss	1/1/2004	$70,000
Assumption change	1/1/2005	(5,000)
Experience (gain)/loss	1/1/2005	35,000
Experience (gain)/loss	1/1/2006	16,000

Question 18

In what range is the accumulated reconciliation account balance as of 1/1/2006?

(A) Less than $20,000

(B) $20,000 but less than $30,000

(C) $30,000 but less than $40,000

(D) $40,000 but less than $50,000

(E) $50,000 or more

Data for Question 19 (5 points)

Actuarial cost method: Aggregate.

Normal retirement benefit: 1% of final compensation for each year of service.

Valuation interest rate: 7% per year.

Assumed compensation increases: 4% per year.

Credit balance in the funding standard account as of 12/31/2004: $0.

Selected valuation results as of 1/1/2005:

Normal cost	$182,000
Present value of future benefits:	
Active participants	3,000,000
Inactive participants	6,000,000
Present value of future salary	66,000,000
Actuarial (market) value of assets	7,000,000

All active participants received a 3% compensation increase during 2005.

Investment return during 2005: 2%.

The minimum required contribution for 2005 was made on 12/31/2005.

There were no benefit payments, deaths, terminations, retirements or new entrants during 2005.

Question 19

In what range is the normal cost for 2006 as of 1/1/2006?

(A) Less than $202,000

(B) $202,000 but less than $209,000

(C) $209,000 but less than $216,000

(D) $216,000 but less than $223,000

(E) $223,000 or more

Data for Question 20 (2 points)

Plan effective date: 1/1/1996.

Actuarial cost method: Entry age normal.

Valuation interest rate: 7% per year.

Credit balance in funding standard account as of 12/31/2005: $2,000.

Selected valuation results as of 1/1/2006:

Accrued liability	$1,000,000
Net outstanding balance of all amortization bases	500,000
Actuarial (market) value of assets	550,000

Additional funding charge for 2006: $1,000.

No quarterly contributions were required for 2006.

Question 20

In what range is the accumulated reconciliation account balance as of 1/1/2007?

(A) Less than $50,000

(B) $50,000 but less than $51,000

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

(D) $52,000 but less than $53,000

(E) $53,000 or more

Data for Question 21 (3 points)

Type of plan: Multiemployer.

Plan effective date: 1/1/1985.

Actuarial cost method: Entry age normal.

Valuation interest rate: 7% per year.

Credit balance in funding standard account as of 12/31/2005: $120,000.

Normal cost as of 1/1/2006: $600,000.

Initial balance of all amortization bases:

Experience loss during 2003	$200,000
Experience loss during 2004	150,000
Experience (gain) during 2005	(50,000)
Plan amendment effective 1/1/2003	500,000
Assumption change effective 1/1/2004	300,000

Contribution for 2006: $828,000 paid on 12/31/2006.

Question 21

In what range is the credit balance in the funding standard account as of 12/31/2006?

(A) Less than $100,000

(B) $100,000 but less than $150,000

(C) $150,000 but less than $200,000

(D) $200,000 but less than $250,000

(E) $250,000 or more

Data for Question 22 (5 points)

Plan effective date: 1/1/1990.

Valuation interest rate: 7% per year.

Actuarial cost method: Unit credit.

Current liability interest rate for 1/1/2006: 4.75% per year.

Credit balance in funding standard account as of 12/31/2005: $50,000.

Selected valuation results as of 1/1/2006:

Normal cost	$90,000
Net amortization charges	70,000
Current liability	1,200,000
Expected increase in current liability for 2006	80,000
Current liability at the highest allowable interest rate	1,100,000
Actuarial (market) value of assets	800,000

The applicable percentage of unfunded new liability is defined by the following formula, where FCL% is the funded current liability percentage:

$30\% - [(FCL\% - 60\%, \text{ not less than } 0\%) \times 0.4]$

Additional interest charge for late quarterly contributions for 2006: $10,000.

Maximum number of participants during 2005: 130.

Question 22

In what range is the minimum required contribution for 2006 as of 12/31/2006?

(A) Less than $142,000

(B) $142,000 but less than $148,000

(C) $148,000 but less than $154,000

(D) $154,000 but less than $160,000

(E) $160,000 or more

Data for Question 23 (3 points)

Plan effective date: 1/1/1996.

Actuarial cost method: Frozen initial liability.

Valuation interest rate: 7% per year.

Credit balance in funding standard account as of 12/31/2005: $40,000.

The plan was amended as of 1/1/2006.

Selected valuation results after the plan amendment as of 1/1/2006:

Present value of projected benefits	$3,500,000
Outstanding amortization base of initial unfunded liability	1,250,000
Current compensation	500,000
Present value of future compensation	6,500,000
Actuarial (market) value of assets	1,500,000

Amortization base established due to plan amendment as of 1/1/2006: $450,000.

Question 23

In what range is the minimum required contribution for 2006 as of 12/31/2006?

(A) Less than $118,000

(B) $118,000 but less than $138,000

(C) $138,000 but less than $158,000

(D) $158,000 but less than $178,000

(E) $178,000 or more

Data for Question 24 (3 points)

Plan effective date: 1/1/2004.

Actuarial cost method: Unit credit.

Valuation interest rate: 7% per year.

Funding deficiency in the funding standard account as of 12/31/2005: $25,000.

Actuarial (market) value of assets as of 1/1/2006: $200,000.

Amortization charges and (credits) for all bases in funding standard account as of 1/1/2006:

Initial unfunded liability	$20,000
Actuarial (gain)/loss during 2004 plan year	(30,000)
Actuarial (gain)/loss during 2005 plan year	10,000

Accumulated reconciliation account balance as of 1/1/2006: $5,000.

Question 24

In what range is the accrued liability as of 1/1/2006?

(A) Less than $366,000

(B) $366,000 but less than $383,000

(C) $383,000 but less than $400,000

(D) $400,000 but less than $417,000

(E) $417,000 or more

Data for Question 25 (3 points)

Actuarial cost method: Unit credit.

Valuation interest rate: 7% per year.

Credit balance in funding standard account as of 12/31/2004: $10,000.

Selected valuation results as of 1/1/2005:

Normal cost	$30,000
Accrued liability	150,000
Net amortization charges	(10,000)
Actuarial (market) value of assets	120,000

Benefit payments of $20,000 were made on 7/1/2005.

Credit balance in the funding standard account as of 12/31/2005: $5,000.

Actuarial (market) value of assets as of 1/1/2006: $130,000.

Question 25

In what range is the absolute value of the asset (gain)/loss during 2005?

(A) Less than $6,000

(B) $6,000 but less than $11,000

(C) $11,000 but less than $16,000

(D) $16,000 but less than $21,000

(E) $21,000 or more

Data for Question 26 (4 points)

Actuarial cost method: Aggregate.

Valuation interest rate: 7% per year.

Minimum contributions were made for 2004 and 2005 on the last day of the respective plan years.

Funding standard account entries:

	2005	2006
Normal cost as of 1/1	$100,000	$120,000
Additional funding charge as of 12/31	100,000	120,000

Disbursements over the 12-month period ending on 3/31/2006:

Lump sum payments	$70,000
Monthly annuity payments	0
Recurring administrative expenses	50,000

Liquid market value of assets as of 3/31/2006: $160,000.

Funded current liability percentage as of 1/1/2006: 60%.

Contribution to fund 100% of current liability: $300,000.

There have always been at least 100 participants.

Question 26

In what range is the required quarterly installment due on 4/15/2006?

(A) Less than $40,000

(B) $40,000 but less than $50,000

(C) $50,000 but less than $60,000

(D) $60,000 but less than $70,000

(E) $70,000 or more

Data for Question 27 (3 points)

Plan effective date: 1/1/2000.

Actuarial cost method: Frozen initial liability.

Valuation interest rate: 7% per year.

Credit balance in the funding standard account as of 12/31/2005: $0.

Selected valuation results as of 1/1/2006:

Entry age normal cost	$40,000
Entry age accrued liability	350,000
Unfunded accrued liability	100,000
Present value of future benefits	1,500,000
Current compensation	85,000
Present value of future compensation	1,000,000
Actuarial value of assets	340,000
Market value of assets	300,000
Expected benefit payments	0

Current liability (including expected increase for benefits accruing during the plan year) adjusted to 12/31/2006: $515,000.

Question 27

In what range is the deductible limit for 2006?

(A) Less than $100,000

(B) $100,000 but less than $125,000

(C) $125,000 but less than $150,000

(D) $150,000 but less than $175,000

(E) $175,000 or more

Data for Question 28 (4 points)

Actuarial cost method: Unit credit.

Retirement benefit: $10 per month for each year of service.

Valuation interest rate: 7.0% per year.

Active participant data as of 1/1/2005:

	Group 1	Group 2
Count	100	100
Age	50	45
Service	20	15

Active participant data as of 1/1/2006:

	Group 1	Group 2
Count	90	80

There have been no new participants and no transfers between Groups since 1/1/2005.

Inactive liabilities:

As of 1/1/2005	$750,000
As of 1/1/2006	800,000

Benefit payments for 2005 made on 12/31/2005: $50,000.

Selected annuity factor:

$$\ddot{a}_{65}^{(12)} = 9.24$$

Question 28

In what range is the absolute value of the 2005 liability experience (gain)/loss?

(A) Less than $50,000

(B) $50,000 but less than $100,000

(C) $100,000 but less than $150,000

(D) $150,000 but less than $200,000

(E) $200,000 or more

Data for Question 29 (4 points)

Plan effective date: 1/1/1995.

Benefit accruals under the plan were frozen as of 1/1/2004.

Actuarial cost method: Unit credit.

Valuation interest rate:

Before 2006	8% per year
After 2005	7% per year

Credit balance in the funding standard account as of 12/31/2005: $5,000.

Selected valuation results as of 1/1/2006:

Accrued liability at 8%	$510,000
Accrued liability at 7%	550,000
Actuarial (market) value of assets	375,000

Outstanding balance of all prior amortization bases as of 1/1/2006:

Source	Outstanding balance
Initial unfunded	$147,000
Loss during 2002	2,600
Loss during 2003	5,500
Loss during 2004	1,100

Question 29

In what range is the minimum required contribution for 2006 as of 12/31/2006?

(A) Less than $13,000

(B) $13,000 but less than $14,000

(C) $14,000 but less than $15,000

(D) $15,000 but less than $16,000

(E) $16,000 or more

Data for Question 30 (3 points)

Valuation interest rate: 7% per year.

Market value of assets as of 1/1/2005: $2,750,000.

Actuarial value of assets as of 1/1/2005: $2,775,000.

Contributions for 2005 plan year: $0.

Benefit payments for 2005 with interest as of 12/31/2005: $50,000.

Market value of assets as of 1/1/2006: $2,900,000.

Asset method: Approval 15 of Rev. Proc. 2000-40 with four-year smoothing (Market value of assets adjusted by a decreasing fraction of the (gain)/loss in market value for each of the preceding three years).

Actual gains and losses with respect to market value of assets:

(Gain)/loss during 2004	$(25,000)
(Gain)/loss during 2003	50,000

Question 30

In what range is the absolute value of the actuarial (gain) or loss due to asset experience during 2005?

(A) Less than $5,000

(B) $5,000 but less than $10,000

(C) $10,000 but less than $15,000

(D) $15,000 but less than $20,000

(E) $20,000 or more

Data for Question 31 (3 points)

Actuarial cost method: Unit credit.

Normal retirement benefit: $50 per month for each year of service.

Early retirement benefit: Accrued benefit reduced by 5% for each year the benefit commencement date precedes age 65.

Early retirement eligibility: Age 55.

Valuation interest rate: 7% per year.

Assumed retirement rates:

Age	Retirement rate
61	0.50
62	1.00

Data for sole participant:

Date of birth	1/1/1945
Date of hire	1/1/1978
Date of retirement	12/31/2005
Date of benefit commencement	1/1/2006

Selected annuity values:

$\ddot{a}_{61}^{(12)} = 11.41$ $\qquad$ $\ddot{a}_{62}^{(12)} = 11.23$

Question 31

In what range is the absolute value of the 2005 actuarial (gain)/loss due solely to the participant's retirement?

(A) Less than $1,500

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

(C) $3,000 but less than $4,500

(D) $4,500 but less than $6,000

(E) $6,000 or more

Data for Question 32 (3 points)

Plan effective date: 1/1/1980.

Valuation interest rate: 7% per year.

Actuarial cost method: Entry age normal.

Selected valuation results as of 1/1/2006:

Normal cost	\$1,000
Accrued liability	23,000
Market value of assets	15,000
Actuarial value of assets	14,500
Expected benefit payments	0

Contribution paid for the 2005 plan year but not deductible: \$1,500.

All contributions for the 2005 plan year were made prior to 12/31/2005.

Current liability (including expected increase for benefits accruing during the plan year) adjusted to 12/31/2006: \$27,500.

The fresh start approach is used to determine the deductible limit.

Question 32

In what range is the deductible limit for 2006?

(A) Less than \$12,500

(B) \$12,500 but less than \$13,000

(C) \$13,000 but less than \$13,500

(D) \$13,500 but less than \$14,000

(E) \$14,000 or more

Data for Question 33 (3 points)

Plan effective date: 1/1/1989.

Actuarial cost method: Entry age normal.

Valuation interest rate: 7% per year.

Assumed compensation increases: 4% per year.

Data for sole participant:

Date of birth	1/1/1944
Date of hire	1/1/2005
2005 compensation	$100,000

Projected retirement benefit (compensation-related) at age 65: $1,200 per month.

Selected annuity value:

$$\ddot{a}_{65}^{(12)} = 9.42$$

Question 33

In what range is the normal cost for 2006 as of 1/1/2006?

(A) Less than $28,000

(B) $28,000 but less than $28,500

(C) $28,500 but less than $29,000

(D) $29,000 but less than $29,500

(E) $29,500 or more

Data for Question 34 (3 points)

Plan effective date: 1/1/1989.

Actuarial cost method: Unit credit.

Valuation interest rate: 7% per year.

Credit balance in funding standard account as of 12/31/2005: $0.

Selected valuation results as of 1/1/2006:

Normal cost	$25,000
Accrued liability	1,000,000
Market value of assets	945,000
Actuarial value of assets	900,000
Expected benefit payments	0

Current liability (including expected increase for benefits accruing during the plan year) adjusted to 12/31/2006: $1,303,800.

Question 34

In what range is the 2006 full funding limitation under IRC section 412?

(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 35 (3 points)

Retirement benefit: 3% of final three-year average compensation for each year of service up to 15 years, plus
4% of final three-year average compensation for each year of service in excess of 15 years of service.

Actuarial cost method: Unit credit.

Selected actuarial assumptions:

Valuation interest rate	7% per year
Salary increases	3% per year

Data for sole participant in the plan as of 1/1/2006:

Date of birth	1/1/1946
Date of hire	1/1/1986
2005 compensation	\$35,000

Selected annuity value:

$\ddot{a}_{65}^{(12)} = 9.70$

Question 35

In what range is the normal cost for 2006 as of 1/1/2006?

(A) Less than \$7,000

(B) \$7,000 but less than \$8,000

(C) \$8,000 but less than \$9,000

(D) \$9,000 but less than \$10,000

(E) \$10,000 or more

Data for Question 36 (3 points)

Plan effective date: 1/1/1994.

Actuarial cost method: Frozen initial liability.

Valuation interest rate: 7% per year.

Credit balance in funding standard account as of 12/31/2005: $25,000.

Selected valuation results as of 1/1/2006:

Normal cost	$100,000
Present value of future benefits	1,800,000
Current compensation	250,000
Present value of future compensation	2,000,000
Actuarial (market) value of assets	500,000

Question 36

In what range is the minimum required contribution for 2006 as of 12/31/2006?

(A) Less than $110,000

(B) $110,000 but less than $120,000

(C) $120,000 but less than $130,000

(D) $130,000 but less than $140,000

(E) $140,000 or more

Data for Question 37 (4 points)

Type of plan: Multiemployer plan.

Plan effective date: 1/1/2004.

Actuarial cost method: Unit credit.

Valuation interest rate:

Before 2006	7.5% per year
After 2005	7.0% per year

Amortization charges (credits) for all amortization bases in the funding standard account as of 1/1/2005:

Source of base	Date established	Amortization amount
Initial accrued liability	1/1/2004	$195,000
Assumption change	1/1/2005	30,000
Actuarial (gain)/loss	1/1/2005	(60,000)

There was an actuarial loss of $100,000 during 2005.

Increases due to the change in valuation interest rate as of 1/1/2006:

Accrued liability	$200,000
Normal cost	30,000

Question 37

In what range is the increase in the minimum required contribution as of 1/1/2006 due to the change in interest rate?

(A) Less than $17,000

(B) $17,000 but less than $27,000

(C) $27,000 but less than $37,000

(D) $37,000 but less than $47,000

(E) $47,000 or more

Data for Question 38 (3 points)

Actuarial cost method: Aggregate.

Valuation interest rate: 7% per year.

Credit balance in the funding standard account as of 12/31/2004: $0.

Funding standard account entries:

	2005	2006
Normal cost as of 1/1	$250,000	$280,000
Additional funding charge as of 12/31	50,000	0

Contribution for 2005: $350,000 paid on 12/31/2005.

Quarterly contributions are required for the 2006 plan year.

Question 38

In what range is the minimum amount payable on 4/15/2006 to meet the required quarterly installment due on that date?

(A) Less than $30,000

(B) $30,000 but less than $45,000

(C) $45,000 but less than $60,000

(D) $60,000 but less than $75,000

(E) $75,000 or more

Data for Question 39 (3 points)

Actuarial cost method: Unit credit.

Valuation interest rate: 7% per year.

Selected valuation results as of 1/1/2006:

Normal cost	$10,000
Unfunded accrued liability	100,000

All amortization bases for purposes of IRC section 404 as of 1/1/2006:

	Outstanding balance	Limit adjustment
Initial accrued liability	$150,000	$30,000
Assumption change	(50,000)	(15,000)

There have never been any experience gains or losses.

Contribution for the 2006 plan year: $20,000 paid on 12/31/2006.

Question 39

In what range is the absolute value of the outstanding balance of the assumption change base for IRC section 404 purposes as of 1/1/2007?

(A) Less than $40,000

(B) $40,000 but less than $42,000

(C) $42,000 but less than $44,000

(D) $44,000 but less than $46,000

(E) $46,000 or more

Data for Question 40 (3 points)

Normal retirement benefit: $500 per year for each year of service, paid annually on 1/1.

Death benefit: None.

Actuarial cost method: Entry age normal.

Selected actuarial assumptions and values:

$q_{65} = 0.0153$
$\ddot{a}_{66} = 9.46$

Data for participant Smith:

Date of birth	1/1/1941
Date of hire	1/1/1976
Date of retirement	1/1/2006

Participant Smith died on 12/31/2006 with no surviving beneficiary.

Question 40

In what range is the 2006 mortality gain due to participant Smith's death?

(A) Less than $138,000

(B) $138,000 but less than $139,000

(C) $139,000 but less than $140,000

(D) $140,000 but less than $141,000

(E) $141,000 or more

Data for Question 41 (4 points)

Plan effective date: 1/1/2005.

Valuation interest rate: 7% per year.

Minimum required contribution for 2005 as of 12/31/2005: \$750,000.

Contribution for the 2005: \$1,000,000 paid on 3/15/2006.

Minimum required contribution for 2006 as of 12/31/2006: \$562,500.

Contributions for 2006 were made on 4/15/2006 and 7/15/2006 in the smallest amounts required to meet the quarterly contribution requirement on those dates.

Question 41

In what range is the contribution made on 7/15/2006?

(A) Less than \$90,000

(B) \$90,000 but less than \$95,000

(C) \$95,000 but less than \$100,000

(D) \$100,000 but less than \$105,000

(E) \$105,000 or more

Data for Question 42 (3 points)

Plan effective date: 1/1/1990.

Valuation interest rate: 7% per year.

The minimum required contribution for 2005 as of 12/31/2005 was paid 12/31/2005.

An additional contribution for 2005 was paid on 1/1/2006.

The 1/1/2006 contribution does not result in a negative unfunded liability under the frozen initial liability method.

There are no inactive participants.

The full funding limitation did not apply for the 2005 and 2006 plan years.

At both 1/1/2005 and 1/1/2006 the actuarial (market) value of assets is less than the entry age normal accrued liability.

Consider the following statements concerning 2006 normal costs under IRC section 412:

I. Using the FIL cost method, the amount of the 1/1/2006 contribution has an effect on the FIL normal cost.

II. Using the FIL cost method, the amount of investment earnings during 2005 has an effect on the FIL normal cost.

III. Using the aggregate cost method, the amount of the 1/1/2006 contribution has an effect on the aggregate method normal cost.

Question 42

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

(A) None

(B) I only

(C) II only

(D) III only

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

Data for Question 43 (5 points)

Plan effective date: 1/1/2005.

Normal retirement benefit:

Before 2006	\$50 per month for each year of service
After 2005	(\$50 + \$X) per month for each year of service

Actuarial cost method: Individual level premium.

Valuation interest rate: 7% per year.

Valuation data for sole participant:

Date of birth	1/1/1955
Date of hire	1/1/2000

Credit balance in funding standard account as of 12/31/2005: \$0.

Selected annuity value:

$$\ddot{a}_{65}^{(12)} = 9.87$$

\$X is chosen so that the minimum required contribution for 2006 as of 12/31/2006 is equal to 125% of the 2005 minimum required contribution as of 12/31/2005.

There was no gain or loss during 2005.

Question 43

In what range is \$X?

(A) Less than \$9.50

(B) \$9.50 but less than \$10.50

(C) \$10.50 but less than \$11.50

(D) \$11.50 but less than \$12.50

(E) \$12.50 or more

Data for Question 44 (5 points)

Plan effective date: 1/1/1996.

Normal retirement benefit: 1% of final compensation for each of the first 10 years of service, plus
1.25% of final compensation for each of the next 10 years of service.

Actuarial cost method: Unit credit.

Selected actuarial assumptions:

Valuation interest rate:

Before 2006	7.0% per year
After 2005	6.0% per year

Compensation increases:

Before 2006	3.0% per year
After 2005	2.5% per year

Credit balance in funding standard account as of 12/31/2005: $0.

There have been no gains or losses.

Valuation data for sole participant ever in plan:

Date of birth	1/1/1966
Date of hire	1/1/1996
2005 compensation	$100,000

Selected annuity values:

Interest rate	$\ddot{a}_{65}^{(12)}$
7%	10.00
6%	11.00

Question 44

In what range is the minimum required contribution for 2006 as of 12/31/2006?

(A) Less than $5,800

(B) $5,800 but less than $6,300

(C) $6,300 but less than $6,800

(D) $6,800 but less than $7,300

(E) $7,300 or more

ANSWER KEY

Question #	Answer		Question #	Answer
1	B		28	C
2	B		29	C
3	D		30	E
4	D		31	B
5	C		32	C
6	B		33	B
7	D		34	D
8	D		35	E
9	E		36	D
10	D		37	C
11	B		38	A
12	C		39	D
13	D		40	C
14	B		41	B
15	C		42	C
16	A		43	C
17	D		44	E
18	B			
19	D			
20	D			
21	D			
22	D			
23	C			
24	D			
25	B			
26	E			
27	D			