

Data for Question 1

Market value of a pension fund:

<u>Date</u>	<u>Value</u>
1/1/99	\$100,000
4/1/99	90,000
7/1/99	95,000
10/1/99	185,000
1/1/2000	180,000

Contributions and Benefit Payments:

<u>Date</u>	<u>Contributions</u>	<u>Benefit Payments</u>
3/31/99	\$0	\$20,000
9/30/99	75,000	0

Rates of return on fund:

Time weighted = t

Dollar weighted = d

Dollar weighted assuming cash flows at mid-year = m

Question 1

Which of the following is true?

[A] $t > m > d$

[B] $t > d > m$

[C] $m > t > d$

[D] $d > t > m$

[E] None of the above

2004

Data for Question 10 (3 points)

<u>Date</u>	<u>Market value of fund</u>	<u>Contributions</u>	<u>Withdrawals</u>
1/1/2004	\$100,000	None	None
4/1/2004	85,000	\$30,000	None
8/1/2004	100,000	None	\$20,000
12/31/2004	80,000	None	None

Market value of fund is prior to contributions and withdrawals.

A = Time Weighted Return

B = Dollar Weighted Return

Question 10

In what range is the absolute value of A+B?

- (A) Less than 45.00%
- (B) 45.00% but less than 48.00%
- (C) 48.00% but less than 51.00%
- (D) 51.00% but less than 54.00%
- (E) 54.00% or more

2005

Data for Question 1 (4 points)

A fund has the following transactions for 2005:

<u>Date</u>	<u>Account Value</u>	<u>Contributions</u>	<u>Benefit Payments</u>
1/1/2005	\$1,000	C_1	0
3/31/2005	-	0	\$100
4/1/2005	\$1,300	0	0
12/31/2005	-	C_2	\$150
1/1/2006	\$1,700	0	0

The time weighted rate of return in 2005 is 6.25%. The dollar weighted rate of return in 2005 is 6.00%.

Question 1

In what range is C_1 ?

- (A) Less than \$405
- (B) \$405 but less than \$430
- (C) \$430 but less than \$455
- (D) \$455 but less than \$480
- (E) \$480 or more

2006

Data for Question 2 (3 points)

Fund information for 2006:

<u>Date</u>	<u>Fund Value</u>	<u>Contributions</u>	<u>Benefit Payments</u>
12/31/2005	\$10,000	-	-
1/1/2006	-	\$4,000	\$1,500
3/31/2006	\$12,000	-	-
4/1/2006	-	\$2,000	\$250
12/31/2006	X	-	-

The dollar weighted rate of return was 10% for 2006.

R = the time weighted rate of return for 2006

Question 2

In what range is R?

- (A) Less than 9.2%
- (B) 9.2% but less than 9.5%
- (C) 9.5% but less than 9.8%
- (D) 9.8% but less than 10.1%
- (E) 10.1% or more

2007

Data for Question 20 (3 points)

On 1/1/2007, the value of an investment account is \$9,000. On 4/1/2007 the value has increased to X . On that date, W is withdrawn. No further deposits or withdrawals are made for the remainder of the year.

On 1/1/2008 the investment account is worth \$8,500.

Time weighted return for 2007 = 16.0%

Dollar weighted return for 2007 = 20.0%

Question 20

In what range is X ?

- (A) Less than \$10,450
- (B) \$10,450 but less than \$10,650
- (C) \$10,650 but less than \$10,850
- (D) \$10,850 but less than \$11,050
- (E) \$11,050 or more

2007

Data for Question 27 (3 points)

A pension trust statement reported the following information:

<u>Asset Values</u>	<u>1/1/2006</u>	<u>1/1/2007</u>
Book value	\$1,325,000	\$1,450,000
Market value	X	\$1,650,000

<u>Transaction</u>	<u>2006</u>
Contributions	\$250,000
Interest income	\$80,000
Benefit payments	\$55,000
Plan expenses	\$25,000

During 2006, the net change in unrealized gain/loss was exactly 3 times the net realized gain/loss.

Question 27

In what range is X?

- (A) Less than \$1,400,000
- (B) \$1,400,000 but less than \$1,600,000
- (C) \$1,600,000 but less than \$1,800,000
- (D) \$1,800,000 but less than \$2,000,000
- (E) \$2,000,000 or more

2008

Data for Question 14 (2 points)

A pension trust statement reported the following information:

Market value as of 12/31/2006	\$1,000,000
2007 contributions	\$90,000
2007 benefit payments	\$40,000
2007 plan expenses	\$10,000
Market value as of 12/31/2007	\$1,150,000

The cumulative unrealized gain/(loss) as of 12/31/2006 was (\$10,000).

The unrealized gain/(loss) during 2007 was \$5,000.

Question 14

In what range was the book value of assets as of 12/31/2007?

- (A) Less than \$1,142,000
- (B) \$1,142,000 but less than \$1,147,000
- (C) \$1,147,000 but less than \$1,152,000
- (D) \$1,152,000 but less than \$1,157,000
- (E) \$1,157,000 or more

2008

Data for Question 17 (3 points)

Account information:

<u>Date</u>	<u>Account Balance</u>	<u>Contribution</u>
12/31/2007	\$20,000	-
01/01/2008	-	\$3,000
03/31/2008	\$24,000	-
04/01/2008	-	\$3,000
06/30/2008	X	-
07/01/2008	-	\$3,000
09/30/2008	\$29,000	-
10/01/2008	-	\$3,000
12/31/2008	\$34,000	

The time-weighted rate of return in 2008 is 7.0%.

Question 17

In what range is **X** ?

- (A) Less than \$26,400
- (B) \$26,400 but less than \$26,500
- (C) \$26,500 but less than \$26,600
- (D) \$26,600 but less than \$26,700
- (E) \$26,700 or more

2009

Data for Question 34 (3 points)

Pension fund information for 2009:

<u>Date</u>	<u>Fund Balance</u>	<u>Contribution</u>	<u>Distribution</u>
12/31/2008	\$10,000,000	-	-
01/01/2009	-	\$500,000	-
03/31/2009	\$10,250,000	-	-
04/01/2009	-	-	\$200,000
06/30/2009	\$10,500,000	-	-
07/01/2009	-	-	\$350,000
09/30/2009	\$10,400,000	-	-
10/01/2009	-	\$800,000	-
12/31/2009	\$11,400,000	-	-

X = the dollar-weighted rate of return in 2009.

Question 34

In what range is X ?

- (A) Less than 6.00%
- (B) 6.00% but less than 6.10%
- (C) 6.10% but less than 6.20%
- (D) 6.20% but less than 6.30%
- (E) 6.30% or more

2009

Data for Question 35 (2 points)

A pension trust statement reported the following information:

	<u>12/31/2008</u>	<u>12/31/2009</u>
Book value of assets	\$5,000,000	Y
Market value of assets	X	\$5,335,000

Activity during 2009:

Contributions	\$600,000
Investment income	\$315,000
Benefit payments	\$250,000
Plan expenses	\$60,000
Realized gains (losses)	\$465,000
Change in unrealized gains (losses)	(\$535,000)

Question 35

In what range is $(X - Y)$?

- (A) Less than (\$900,000)
- (B) (\$900,000) but less than (\$300,000)
- (C) (\$300,000) but less than \$300,000
- (D) \$300,000 but less than \$900,000
- (E) \$900,000 or more

2010

Data for Question 10 (3 points)

All assets of a pension plan are invested by manager Smith and manager Jones. There are no other plan assets.

The following chart shows the market values of the plan's assets with each manager:

	<u>Date</u>	<u>Smith</u>	<u>Jones</u>
Balance	12/31/2009	\$2,500,000	\$2,500,000
Contribution	1/1/2010	0	1,500,000
Balance	6/30/2010	2,800,000	4,500,000
Transfer	7/1/2010	1,000,000	(1,000,000)
Balance	12/31/2010	4,180,000	3,500,000

X = one-half of the sum of both managers' time-weighted percentage returns for 2010.

Y = dollar-weighted percentage return for 2010 for the entire pension plan.

Question 10

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

- (A) Less than 0.09%
- (B) 0.09% but less than 0.18%
- (C) 0.18% but less than 0.27%
- (D) 0.27% but less than 0.36%
- (E) 0.36% or more

2010

Data for Question 20 (3 points)

A pension trust statement reported the following information:

<u>Asset values</u>	<u>1/1/2010</u>	<u>1/1/2011</u>
Book value	\$1,325	\$1,450
Market value	X	1,650
 <u>Transactions</u>	 <u>2010</u>	
Contributions	\$250	
Interest income	80	
Benefit payments	55	
Plan expenses	25	

During 2010, the net change in unrealized gain/loss was exactly 3 times the net realized gain/loss.

Question 20

In what range is **X**?

- (A) Less than \$1,400
- (B) \$1,400 but less than \$1,600
- (C) \$1,600 but less than \$1,800
- (D) \$1,800 but less than \$2,000
- (E) \$2,000 or more