

## **2006 Level 1 Sample Exam Volume 2**

### **Answers**

**1 A**

A member may use client brokerage to purchase research service that assists in the investment decision-making process, but may not use client brokerage to pay the member's operating expenses.

**2 B**

Gifts from clients who already have a compensation agreement with the member can be distinguished from gifts given by entices; the potential for obtaining influence to the detriment of other clients is greater in situations where no compensation agreement exists

**3 A**

The Standard relating to fair dealing states that members have an obligation to ensure that all clients are treated fairly when taking investment action. When an investment in a new offering is made, members should ensure the pro rate distribution of the shares to all clients for whom the investment is appropriate.

**4 D**

Knoll cannot take any investment action based on her knowledge of material nonpublic information about Techwood.

**5 D**

The director of the brokerage department would be in violation of the Standard relating to independence and objectivity if the recommendation was changed to buy? The firm should remove the company in question from the research universe and give only factual information about the company.

**6 A**

Transactions for clients and employers have priority over personal transactions; A member may undertake personal transactions only after the member's clients and employer have had adequate opportunity to act, no specific waiting period is required.

**7 B**

To avoid the potential for the dissemination of material nonpublic information among departments, firms commonly use an information barrier known as a fire wall to prevent communication of sensitive information from one department to another.

**8 B**

Members with supervisory responsibility are expected to establish written compliance procedures tailored to the member's operations, Compliance procedures should be designed to anticipated the

activities most likely to result in misconduct.

9 A

Both total firm asset for each period and the relevant details of the treatment of withholding taxes on interest, dividends, and capital gains are required disclosures.

10 A

A joint probability is the probability that both event A and event B occur at the same time; a conditional probability is the probability that event A occurs given that event B has occurred.

11 B

Baye's formula uses the total probability rule, reversing the given that information; Baye's formula uses the occurrence of the event to infer the probability of the scenario:  $0.07/(0.07+0.18)=0.28$  or 28%

12 B

The range of outcomes for a normal distribution is the entire real number line; the normal distribution is not a discrete distribution.

13 B

Approximately 68 percent of the returns fall within one standard deviation (plus or minus) of the mean:

$$(100\%-68\%)/2=16\%$$

14 A random variable is standardized by subtracting the means of the variable from the observation, then dividing that difference by the standard deviation of the variable

$$(200-500)/150=-2.00$$

15 D

The standard error of the sample mean is equal to the population standard deviation divided by the square root of the sample size:

$$100/\sqrt{64}=12.50$$

18 B

Factors that would result in a downward shift in a company's average total cost curve include a decrease in taxes, a decrease in the price of resources, a decrease in regulation, and technological improvements.

20 D

For a profit-seeking firm, as long as price exceeds average variable cost, higher prices will lead the firm to expand output. If price falls below the firm's average variable cost, the firm should shut down immediately

22 Ideally, price regulation of a natural monopoly would improve resource allocation if price was set

equal to the firm's average total cost per unit of output. The resulting output level would produce zero economic profits for the firm. If price was set equal to marginal cost, however, economic losses would occur and the monopolist would not undertake production

23 D

2004 interest equals EBIT/2004 interest coverage ratio; \$4,400,000

Interest on debt maturing on 31 December 2004 equals \$20,000,000(0.12); \$2,400,000

Maximum amount of interest for 2005 equals EBIT/2005 minimum ratio; \$5,500,000

Maximum amount of additional interest changes for 2005;

$\$5,500,000 - (\$4,400,000 - \$2,400,000) = \$3,500,000$ .

Maximum amount of new debt =  $\$3,500,000 / 0.09 = \$38,888,889$ ; this amount is closest to \$39 million

24 C

The cash flow from financing section of the statement of cash flows contains the amortization of the capital lease obligation. The cash flow from operations section of the statement of cash flows contains the interest expense associated with the capital lease. The total of the amortization and interest expense is the lease payment;

$\$1,300 + (\$10,000 \times 0.12) = \$2,500$

25 B

The early recognition of revenue results in an increase in accounts receivable and a decrease in inventory (increase in cost of goods sold). Accounts receivable is overstated and inventory is understated.

26 B

LIFO inventory; 400 units @ \$20 + 200 units @ \$22 = \$12,400

FIFO inventory; 200 units @ \$28 + 300 units @ \$26 + 100 units @ \$24 = \$15,800.

28 C

All costs incurred (invoice price, freight, installation) to make the asset ready for use must be capitalized. The interest on funds used for self-constructed assets during the construction period is also capitalized. Increases in the fair value of the plant assets are not recorded.

29 A

Using FIFO, cost of goods sold would be \$5,000 lower and income before taxes \$5,000 higher;  $\$5,000 (1 - \text{tax rate}) = \$3,000$  increase in net income using FIFO.

31 B

Firms with low effective tax rates cannot make full use of the deductions associated with capitalization. The existence of restrictive bond covenants relating to leverage ratios would also cause a firm to favor operating leases.

32 C

The increase in inventory would decrease cash flow from operations by \$20,000; the combined

amount of short-term and long term borrowing (\$150,000) would be included in cash flow from financing activities.

33 B

Capitalization increases the asset base; costs that are expensed reduce cash flow from operations but capitalized costs reduce cash flow from investing.

34 A

LIFO reserves can decline because of the Liquidation of inventories or because of price declines. Price declines are a normal part of a firm's operating results and do not require adjustment.

35 B

Net present value is the only capital budgeting method that computes the expected change in shareholder wealth from an investment project.

36 C

No tax adjustment is made because dividends paid on common stock are not tax deductible;  
 $(\$6.00/\$72.00)+7\%=0.1533$  or 15.33%

37 A

Incremental cash flows are those cash flows that occur only if the firm accepts an investment project. A sunk cost is an outlay that has already been incurred; it is not affected by the investment project under consideration.

38 A

Financial leverage refers to the use of fixed-income securities (debt and preferred stock) in the firm's capital structure.

39 A

A divisional cost of capital for the toy division (required return for investments in the toy industry) should be developed to evaluate investments in that industry. Using a risk-adjusted discount rate recognizes that different projects (industries) have different levels of risk associated with their expected cash flows.

40 C

The price/earnings ratio is equal to the expected dividend payout ratio divided by the difference between the required rate of return and the expected growth rate of dividends, where the expected growth rate of dividends is equal to the retention rate times the expected return on equity.  $1.30/(0.16-0.14)=15.00$

41 B

A price-weighted series is an arithmetic average of current prices. If a stock split occurs, the divisor is adjusted so that the index value will be the same before and after the split. In this case, the new divisor would be 2.25

$$(\$10 + \$20 + \$30) / 3 = 20$$

$$(\$10 + \$20 + \$15) / 2.25 = 20$$

42 B

Value of preferred stock;  $\$7.00 / 0.12 = \$58.33$

Value of common stock;  $\$3.15 / 0.10 = \$31.50$

43 D

Price to book value multiples are particularly useful when a company has negative earnings and are also used in valuation of companies that are not expected to continue as a going concern. Book value is more stable than earnings and is less likely to be negative.

44 C

Terminal value of the stock;  $\$1.51 / 0.10 = \$15.10$

Present value of dividends and terminal value;  $\$1.043 + \$1.089 + \$11.418 = \$13.55$

45 D

A price-weighted series is an arithmetic average of current prices. If a stock split occurs, the divisor is adjusted downward so that the index value will be the same before and after the split.

46 C

The forward rate agreement contract is for three months and interest is paid nine months from the contract initiation date, hence the notation 3 \* 9; when the rate on the underlying increases, the party that is long receives the payment at expiration.

47 C

A discount interest computation is used for quoting prices on both Treasury bill futures and Eurodollar futures.

48 C

The payment at the end of year two is based on the difference between the interest rate at the end of year one and the fixed rate;  $\$10,000,000 * 0.02 = \$200,000$

49 D

Only those exchange traded funds that invest in index futures or other derivatives assume counterparty credit risk

50 D

Net operating income;  $\$300,000 * 0.14 = \$42,000$

Before-tax loss;  $\$42,000 - \$37,500 - \$13,000 = -8,500$

After-tax cash flow;  $\$42,000 - \$39,100 + \$2,550 = \$5,450$

51 C

All other factors constant, the longer a bond's term to maturity, the greater the bond's price

sensitivity to changes in interest rates.

52 A

The predicted decrease in the bond's price is \$80;

$$0.10 \times \$800 = \$80$$

53 D

The sum of the present values of the coupon payments in years one and two is \$163.12. The present value of the final coupon payment and the maturity value is \$836.88. If Z is the three-year spot rate;  $\$1,090/(1+z)^3 = \$836.88$   $Z = 0.0921$  or 9.21%

54 B

As interest rates change, the price of the embed option tends to limit the price change for a callable bond compared to a similar option-free bond

55 B

The bond has been selling at a premium, so the bond's value will decline over time if discount rates remain the same. The value of the bond on 1 January 2002 was \$1,067.10 and the value on 1 January 2003, using an 8.0 percent discount rate, would be \$1,062.47. the difference associated with the passage of time only is a decrease of \$4.63

56 C

The nominal spread between mortgage-backed securities and Treasury securities reflects substantial prepayment risk; the option-adjusted spread would be much smaller than the nominal spread.

57 C

For option-free bonds, both modified and effective convexity will be positive. For bonds with embedded options, effective convexity can be negative when modified convexity is positive because effective convexity assumes that the cash flows change when yields change.

58 B

Risk aversion is demonstrated by investors requiring a higher rate of return on A-rated bonds than on AAA-rated bonds; the A-rated bonds have more credit risk than the AAA-rated bonds

59 A

Maximum benefits from diversification are achieved when assets with perfect negative correlation are added to a participant. Some diversification benefits are achieved as long as the correlation is less than perfectly positive.

60 A

Unsystematic risk is a unique risk that can be reduced by diversification. Systematic risk is not reduced by diversification and refers to the variability caused by macroeconomic variables; systematic risk is the only type of risk remaining in the market portfolio.

