B) so long as she refuses the gift of emeralds.

Explanation

Standard I(B). Attending the conference would be appropriate, but Gillis must avoid any situation that would affect her independence in order to properly comply with Standard I(B) Professionalism - Independence and Objectivity. Since Gingeria is remotely located, it is reasonable for the government to pay her travel expenses. However, the gift of emeralds must be refused. The fact that the host is a sovereign government does not matter-the obvious objective is to give the analysts a favorable bias toward the currency and the proposed reforms.
For Further Reference:
Study Session 1, LOS 2.a
SchweserNotes: Book 1 p.5
CFA Program Curriculum: Vol.1 p.21

A) maintain records of her conversations with local government officials and also keep copies of the research reports prepared by local analysts.

Explanation

Standard V(C). Gillis's reports may not be specific investment recommendations, but because they are client communications, she should keep either electronic or hard copy records of her conversations with the government officials and copies of the research reports she used in developing her weekly summary reports, in order to comply with Standard V(C) Investment Analysis, Recommendations, and Actions - Record Retention.
For Further Reference:
Study Session 1, LOS 2.a
SchweserNotes: Book 1 p.5
CFA Program Curriculum: Vol.1 p.21

A) taking the long position and by selling the position before issuing a recommendation to clients.

Explanation

Standard VI(B). Gillis is attempting to trade ahead of her employer and her clients in violation of the Standards. She was wrong to take the long position in anticipation of a positive recommendation and wrong to sell the position before issuing her negative recommendation. These trades were wrong regardless of whether they were disclosed. In accordance with Standard VI(B) Conflicts of Interest - Priority of Transactions, client interests must take precedence over personal interests.
For Further Reference:
Study Session 1, LOS 2.a
SchweserNotes: Book 1 p.5
CFA Program Curriculum: Vol.1 p.21

C) place limits on Gillis's personal trading and increase monitoring of Gillis's personal trades.

Explanation

Standard I(A). Warning Gillis and/or reporting the violation up Trout's management structure are inadequate solutions. Limiting the trading activity and increased monitoring to prevent future violations are more appropriate initial responses, in accordance with Standard I(A) Professionalism - Knowledge of the Law.
For Further Reference:
Study Session 1, LOS 2.a
SchweserNotes: Book 1 p.5
CFA Program Curriculum: Vol.1 p.21

Question #5 of 60

C) should include both duplicate confirmations of transactions and preclearance procedures for personal trades.

Explanation
Standard VI(B). The main problem in this case appears to be that there is no system to identify potential front-running violations before they occur. Standard VI(B) Conflicts of Interest - Priority of Transactions recommends both preclearance of trades and duplicate trade confirmations as procedures for compliance.
For Further Reference:
Study Session 1, LOS 2.a
SchweserNotes: Book 1 p.5
CFA Program Curriculum: Vol.1 p.21

Question #6 of 60

C) Both the trading strategy and guarantee statement comply with CFA Institute Standards.

Explanation
Standards II(B) and V(B). The strategy based on interest rate parity would provide riskless profits until the prices moved into equilibrium and the forward rates accurately reflected the interest rate differentials. Trout's guarantee is therefore accurate. The low transaction costs available to Trout are a competitive advantage that can be exploited without violating Standard II(B).
For Further Reference:
Study Session 1, LOS 2.a
SchweserNotes: Book 1 p.5
CFA Program Curriculum: Vol.1 p.21

Question #7 of 60

C) ¥32,490,000.

Explanation
A foreign currency dealer buys currency at a low (bid) price and resells it at a high (ask) price in order to make a profit. The easiest way to interpret a currency quote is to put the currency in which you want to transact in the denominator. The quotes are $0.008852-56/¥ and $0.02874-6/NT$. So the dealer will buy yen for $0.008852 and resell it at $0.008856. The dealer will buy NT$ for $0.02874 and resell it at $0.02876.

Carr will be selling yen at the dealer's bid and buying NT$ at the dealer's ask. To determine the yen cost of buying the NT$, we set up the currency quotes so U.S.$ and NT$ cancel and we are left with ¥.

NT$ 10,000,000 × $0.02876/NT$ × ¥/$0.008852 = ¥32,489,833.

Question #8 of 60

A) Only Surratt is correct.

Explanation

Surratt is correct. Market conditions affect currency spreads such that the bid-ask spread on foreign currency quotations increases as exchange rate volatility (uncertainty) increases. In this example, an economic crisis in the Asian markets would create uncertainty, thereby impacting the $/¥ and $/NT$ exchange rates and increasing the bid-ask spread.

Castillo is incorrect. Bank and other currency dealer positions are not considered to directly impact the size of foreign currency spreads.

In this example, it is true that the dealer would likely reduce her yen ask (selling price) if she wanted to unload an excess inventory of yen. However, the dealer would also probably reduce her bid (buying price) so that she did not buy any additional yen. The result would be that the spread would remain relatively unchanged.

Question #9 of 60

A) correct.

Explanation

Surratt is correct. Restrictive monetary policy reduces the growth rate of the money supply and will lead to appreciation of a country's currency. Restrictive monetary policy will increase the real interest rate and, consequently, the demand for domestic physical and financial assets. This increase in financial inflows (increase in the financial account) increases the demand for the domestic currency for investment purposes leading to its appreciation. Choice C is incorrect because we are given in the vignette that the foreign interest rates remain constant.

Question #10 of 60

B) incorrect, because under the Mundell-Fleming model, restrictive U.S. fiscal policies lead to a short-run devaluation of the dollar.

Explanation

Castillo is incorrect with respect to the impact of unanticipated restrictive fiscal policies on the value of the dollar.

A reduction in the budget deficit means that government borrowing will decline, which reduces real interest rates and causes investment funds to flow out of the country. As a result, the value of the dollar tends to decline.

Question #11 of 60

C) Swiss francs to make an arbitrage profit of $75,588.

Explanation

The relevant information here is the spot rate, the forward rate, and the interest rates in the two countries. The first step in covered interest arbitrage is to determine in which currency funds will be borrowed and in which currency funds will be invested. The 3-month interest rate in the United States is 18% / 4 = 4.5% and 12% / 4 = 3% in Switzerland.

In covered interest rate parity, the hedged foreign return (combining the foreign interest rate (SF) with the forward-spot rate differential) should be equal to the domestic (USD) return:

$$1 + r_D = \frac{(1 + r_F)(\text{forward rate})}{\text{spot rate}}$$

If we insert the data from the example into this relationship, we get the following:

$$1.045 \neq 1.03 \left(\frac{0.80}{0.85} \right) = 0.9694$$

Because the effective rate is lower in Switzerland, Ponder will borrow in Switzerland and invest in the United States. Assuming that Ponder will utilize $1,000,000, we convert this amount to SF at the spot rate to determine the amount of the Swiss franc loan:

$1,000,000 × SF/$0.85 = SF1,176,470.59.

The amount of the Swiss franc loan to be paid back in three months uses the Swiss interest rate of 3%:

SF1,176,470.59 × 1.03 = SF1,211,764.71.

At inception of the arbitrage, Ponder will have entered into a forward contract where he buys Swiss franc and sells U.S. dollars. Using this forward contract and rate, the cost of the loan in U.S. dollars is:

SF1,211,764.71 × $0.80/SF = $969,411.76.

In the United States, Ponder will have invested the $1,000,000 at 4.5% and will have in three months:

$1,000,000 × 1.045 = $1,045,000.

The covered interest arbitrage profit is thus:

$1,045,000 − $969,411.76 = $75,588.24.

Professor"s Note: If you are asked to calculate a covered interest arbitrage profit on the exam, the quickest way to arrive at your answer would be to multiply the return differentials calculated at the beginning of this problem by the $1,000,000:

$1,000,000 × (1.045 − 0.9694) = $75,600.

Using six decimal places for the Swiss return to get 0.969412 (or carrying the calculation in your calculator"s memory) will give you the more precise $75,588.

Also note that the expected spot rate and inflation rates are not necessary in this problem. Do not confuse covered interest rate parity with purchasing power parity.

For Further Reference:
Study Session 4, LOS 13.e
SchweserNotes: Book 1 p.242
CFA Program Curriculum: Vol.1 p.518

Question #12 of 60

B) only Surratt is correct.

Explanation
Only Surratt is correct. Castillo is incorrect-FX carry trade risk management is often structured such that whenever the *investment* currency becomes overvalued, the trade is closed or reversed.

For further reference:
Study Session 4, LOS 13.i
SchweserNotes: Book 1 p.255
CFA Program Curriculum: Vol.1 p.539

Question #13 of 60

B) $240 million liability.

Explanation
Funded status equals fair value of plan assets minus PBO (395 - 635 = -240). Because the funded status is negative, Iron Parts would report a liability of $240 million.

For Further Reference:
Study Session 5, LOS 17.b
SchweserNotes: Book 2 p.37
CFA Program Curriculum: Vol.2 p.75

Question #14 of 60

A) Service cost decreased and the pension plan appeared more funded.

Explanation
The discount rate increased from 5.5% to 6.0%. An increase in the discount rate will result in lower service cost. Lower service cost will result in a *lower* PBO. A lower PBO will result in a higher funded status (more funded). Lower service cost will result in lower pension expense and *higher* retained earnings. The impact on interest cost cannot be determined without more information.

For Further Reference:
Study Session 5, LOS 17.d
SchweserNotes: Book 2 p.46
CFA Program Curriculum: Vol.2 p.81

Question #15 of 60

C) $53 million.

Explanation

$327 beginning balance plan assets + $37 actual return + contributions - $22 benefits paid = $395 ending balance plan assets. Solving for the contributions, we get $53.

For Further Reference:
Study Session 5, LOS 17.b
SchweserNotes: Book 2 p.37
CFA Program Curriculum: Vol.2 p.75

Question #16 of 60

C) Net income increased.

Explanation
The higher expected return reduces pension expense. Lower pension expense results in higher net income. Higher net income results in higher retained earnings. Neither the PBO nor the funded status is affected by the expected return on plan assets.

For Further Reference:
Study Session 5, LOS 17.d
SchweserNotes: Book 2 p.46
CFA Program Curriculum: Vol.2 p.81

Question #17 of 60

C) $127 million.

Explanation
Amount reported under IFRS:

Service cost	$37
Interest cost[1]	$10.4
Past service cost	$80
Pension cost on P&L	$127.4 million

[1]Interest cost = discount rate × beginning funded status = 0.06 × (500 - 327)

For further reference:
Study Session 5, LOS 17.c
SchweserNotes: Book 2 p.41
CFA Program Curriculum: Vol.2 p.78

Question #18 of 60

B) $120 million.

Explanation
Total periodic pension cost can be calculated by summing the changes in the PBO for the period (excluding benefits paid) and then subtracting the actual return on assets. The change in the PBO (excluding benefits) is $157 (635 reported 20X8 PBO + 22 benefits paid - 500 reported 20X7 PBO). Subtract the actual return to get economic pension expense of $120 (157 change in PBO excluding benefits paid - 37 actual return).

Alternatively, total periodic pension cost is equal to contributions minus change in funded status. 20X8 funded status was -240 (395 plan assets - 635 PBO) and the funded status for 20X7 was -173 (327 plan assets - 500 PBO). Contributions were $53 (calculated in Question 21). Thus, total periodic pension cost is $120 [53 - (-67)].

For Further Reference:
Study Session 5, LOS 17.c
SchweserNotes: Book 2 p.41
CFA Program Curriculum: Vol.2 p.78

Question #19 of 60

C) 25%.

Explanation

The target payout ratio approach to estimating a company's expected dividend uses the following formula:

increase in dividends = increase in earnings × target payout ratio × adjustment factor

Rearranging the formula to solve for the target payout ratio, we obtain:

$$\text{target payout ratio} = \frac{\text{increase in dividends}}{(\text{increase in earnings} \times \text{adjustment factor})}$$

Managers at MavsHD want to move toward the target payout ratio over a period of 8 years, which makes the adjustment factor equal to: 1 / 8 = 0.125. The expected dividend increase is given as $250,000, and the increase in earnings can be computed as the difference between expected earnings and earnings from the prior year: 153,000,000 - 145,000,000 = $8,000,000. Plugging each of these figures into the previous formula, the target payout ratio is calculated as:

$$\text{target payout ratio} = \frac{250,000}{(8,000,000 \times 0.125)} = 0.25 = 25\%$$

For Further Reference:
Study Session 7, LOS 23.f
SchweserNotes: Book 2 p.225
CFA Program Curriculum: Vol.3 p.146

Question #20 of 60

C) will reduce the wealth of all shareholders, including those who tender their shares for repurchase if the repurchase price is at a premium to the current stock price.

Explanation

Paying a premium price for the shares (i.e., a price higher than the current market price of the stock) will reduce the value of the remaining shareholders' shares. However, this value reduction is actually transferred to the selling shareholders since they receive more than the market value per share for selling their shares.

For Further Reference:
Study Session 7, LOS 23.g
SchweserNotes: Book 2 p.228
CFA Program Curriculum: Vol.3 p.152

Question #21 of 60

C) 3.17.

Explanation

$\Delta_P = D(1 - T_D) / (1 - T_{CG}) = 2.25(1 - 0.15) / (1 - 0.396) = 3.17$

Question #22 of 60

C) Both Director 1 and Director 2 are correct.

Explanation

Investors do not like instability in the dividends paid by a company. Any volatility in dividends is seen as a negative sign by investors, and the company's stock price would be punished as a result of varying dividends. According to the bird-in-the-hand theory, investors prefer the assurance of receiving a higher dividend today rather than waiting for returns in the form of capital appreciation. Because of the uncertainty associated with capital appreciation and the relative certainty of dividends, the bird-in-the-hand theory predicts that investors will reward dividend paying companies with a lower cost of equity and, thus, a higher equity value. A repurchase does not provide the same type of assurance since it is an unpredictable and possibly one-time event.

Question #23 of 60

A) 37.3%.

Explanation

If the company plans on spending $160 million on net investments, then only 60% of the funds need to come from retained earnings. Therefore, MavsHD needs 0.6 × 160 = $96 million in retained earnings. Net income is projected to be $153 million, leaving $57 million (153 - 96) available to pay dividends. Thus, the dividend payout ratio would equal 57 / 153 = 37.3%.

Question #24 of 60

B) incorrect, because the equity cost of capital would not decrease under the proposed plan.

Explanation

Under a residual dividend policy, a firm determines the optimal capital budget and then uses retained earnings to fund the optimal capital budget, paying out what is left over to shareholders. Because the amount of distributable earnings is not known in advance and is determined as a function of the capital budget, the dollar dividend paid to shareholders will fluctuate widely from year to year. However, the firm will be able to use internally generated funds to a greater extent when deciding how to fund the optimal capital budget. It is not true, however, that the residual dividend policy will reduce the firm's cost of capital. Investors do not like unpredictable dividends and will penalize the company in the form of a higher required return on equity to compensate for the additional uncertainty related to dividend payments.

Question #25 of 60

C) $27.60.

Explanation

BMC is a mature company. The most appropriate model for valuation is the single-stage Gordon growth model.

	In $ millions
EBIT (operating income)	3,290.0
Interest expense	600.0
Earnings before tax	2,690.0
Tax at 30%	807.0
Earnings	1,883.0
Dividends at 72%	1,355.8
Dividend per share	1.36

Cost of Equity:	
CAPM beta	0.90
Risk-free rate	4.0%
Market risk premium	5.0%
Discount rate	$(0.90)(5.0\%) + 4.0\% = 8.5\%$

LT growth rate = 3.4% (given)

$$\frac{1.36 \times (1.034)}{(0.085 - 0.034)} = \$27.57$$

Question #26 of 60

A) $33.00.

Explanation

MSC is best valued using a two-stage growth model. For the first three years, dividends grow at 25.0%; after Year 3, dividends grow at 3.4%. Calculate the Year 4 dividend and use this to find the terminal value, which is treated as additional cash flow in Year 3.

Value of Dividend	In $ millions
Year 0	278.0
Year 1	347.50
Year 2	434.38
Year 3	542.97
Terminal value (Year 3 cash flow)	$(542.97 \times 1.034) / (0.094 - 0.034)$ $= 9357.18$

Cost of Equity:	
CAPM beta	1.12
Adjusted beta	$1.12(2/3) + 1.00 (1/3) = 1.08$
Market risk premium	5.0%
Discount rate	$(1.08)(5.0\%) + 4.0\% = 9.4\%$

Using a financial calculator, CF0 = 0; CF1 = 347.50; CF2 = 434.38; CF3 = 542.97 + 9357.18 = 9,900.15; I/Y = 9.4; solve for NPV = $8,241.77 million.

Divide $8,241.77 million by 250 million shares results in $32.97 per share.

For further reference:
Study Session 9, LOS 28.d
SchweserNotes: Book 3 p.24
CFA Program Curriculum: Vol.4 p.70

Study Session 10, LOS 30.l
SchweserNotes: Book 3 p.80
CFA Program Curriculum: Vol.4 p.224

Question #27 of 60

C) free cash flow model.

Explanation
SGC is a growing company that has no dividend history, so the dividend discount model would be inappropriate. Residual income is appropriate for companies with high quality earnings. The value of SGC stock is best estimated using free cash flow model, as we are told that earnings are erratic but cash flows are stable.

For further reference:
Study Session 10, LOS 30.a
SchweserNotes: Book 3 p.62
CFA Program Curriculum: Vol.4 p.199

Question #28 of 60

B) 34%.

Explanation
Using the Pastor-Stambaugh model to calculate SCG's cost of equity:

$0.04 + (1.20 \times 0.05) + (0.50 \times 0.02) + (-0.20 \times 0.04) + (0.20 \times 0.045) = 11.10\%$

$$\$28.45 = \frac{\$1.60(1.30)}{0.111} + PVGO$$

$$\$28.48 = \$18.74 + PVGO$$

PVGO = $9.71

PVGO/Price = $9.71 / $28.45

= 34.13%

For further reference:
Study Session 9, LOS 28.c
SchweserNotes: Book 3 p.19
CFA Program Curriculum: Vol.4 p.69

Study Session 10, LOS 30.e
SchweserNotes: Book 3 p.70
CFA Program Curriculum: Vol.4 p.218

Question #29 of 60

B) undervalued.

Explanation

If the justified fundamental leading P/E ratio is 14.1X, then the justified fundamental trailing P/E ratio is (14.1) × (1.034) = 14.6X.

	In $ millions
EBIT (operating income)	3,290.0
Interest expense	600.0
Earnings before tax	2,690.0
Tax at 30%	807.0
Earnings	1,883.0
Shares outstanding	1000.0
EPS	$1.883

Based on the current market price, the trailing price-to-earnings is $26.50 / $1.883 = 14.1X. This means that the fundamental value is greater than the market price; the stock is undervalued.

For further reference:
Study Session 10, LOS 30.f
SchweserNotes: Book 3 p.71
CFA Program Curriculum: Vol.4 p.220

Question #30 of 60

A) $20.

Explanation

Using the H-model, valuation of SGC is:

$$V_0 = \frac{D_0 \times (1+g_L)}{r-g_L} + \frac{D_0 \times H \times (g_S - g_L)}{r-g_L}$$

$$= \frac{\$0.80 \times (1.034)}{0.12 - 0.034} + \frac{\$0.80 \times 8/2 \times (0.30 - 0.034)}{0.12 - 0.034}$$

$$= \$19.55$$

For further reference:
Study Session 10, LOS 30.p
SchweserNotes: Book 3 p.91
CFA Program Curriculum: Vol.4 p.232

Question #31 of 60

B) 20.6.

<u>Explanation</u>
Normalizing EPS using the method of average EPS is accomplished by averaging the EPS over the six-year period from 2010-2015:

EPS(normalized) = (1.90 + 1.65 + 0.99 + 1.35 + 0.77 + 1.04) / 6 = 1.283. The P/E ratio based on this normalized EPS is 26.5 / 1.283 = 20.649.

For Further Reference:
Study Session 11, LOS 32.e
SchweserNotes: Book 3 p.162
CFA Program Curriculum: Vol.4 p.354

Question #32 of 60

A) 16.0.

<u>Explanation</u>
Normalizing EPS (for 2016) using the method of average return on equity is accomplished by (1) averaging the ROE over the six-year period from 2010-2015, and then (2) multiplying the average ROE times the 2015 BVPS. ROE(average) = (0.178 + 0.178 + 0.122 + 0.177 + 0.114 + 0.160) / 6 = 0.155. EPS(normalized) = 0.155(10.66) = 1.652. The P/E ratio based on this normalized EPS is 26.5 / 1.652 = 16.04.

For Further Reference:
Study Session 11, LOS 32.e
SchweserNotes: Book 3 p.162
CFA Program Curriculum: Vol.4 p.354

Question #33 of 60

A) Advantage 1.

<u>Explanation</u>
Book values are more likely to be positive than EPS. Thus, the P/B ratio suffers less often from the problem where P/E ratios are not meaningful because of a negative EPS. The other two advantages given are actually disadvantages associated with using P/B ratios.

For Further Reference:
Study Session 11, LOS 32.c, d
SchweserNotes: Book 3 p.156
CFA Program Curriculum: Vol.4 p.352, 353

Question #34 of 60

A) Yes.

Explanation

Aims is correct about both ratios. For example, let's take the trailing P/E ratio, which is P_0/E_0. Multiplying by the net profit margin results in $P_0/E_0 \times E_0/S_0 = P_0/S_0$. If the justified P/E is $(1 - b)(1 + g) / (r - g)$, the justified P/S is $(E_0/S_0)(1 - b)(1 + g) / (r - g)$. Multiplying the leading P/E ratio by the ROE results in $P_0/E_1 \times E_1/B_0 = P_0/B_0$. If the justified P/E is $(1 - b) / (r - g)$, the justified P/B is $ROE(1 - b) / (r - g)$. This becomes $(ROE - b \times ROE) / (r - g)$. Since $b \times ROE = g$ (from sustainable growth equation), the equation becomes $(ROE - g) / (r - g)$.

For Further Reference:
Study Session 11, LOS 32.h
SchweserNotes: Book 3 p.165
CFA Program Curriculum: Vol.4 p.363

Question #35 of 60

A) No.

Explanation

Both criteria are poorly applied by the associate. Generally, a lower PEG ratio is considered desirable, not a higher one. The difference in the trailing and leading P/E ratios could be due to transitory elements in the current year's income in the denominator of the trailing P/E. In a constant growth model (admittedly a strong assumption), the leading P/E will naturally be smaller than the trailing P/E because earnings are growing by g.

For Further Reference:
Study Session 11, LOS 32.e, r
SchweserNotes: Book 3 p.162, 171
CFA Program Curriculum: Vol.4 p.354, 427

Question #36 of 60

C) No. The comment about dividend yields is correct, but the comment about EBITDA ratios is incorrect.

Explanation

Comment 1 about EBITDA ratios is incorrect. EBITDA is a pre-interest variable, so it is a flow available to all suppliers of capital, not just common shareholders. The comment about dividend yields is reasonable.

For Further Reference:
Study Session 11, LOS 32.m, n
SchweserNotes: Book 3 p.176, 177
CFA Program Curriculum: Vol.4 p.401, 408

Question #37 of 60

C) No, one statement is correct, but the other statement is incorrect.

Explanation

Statement 1: McDonnell is correct. Private firms are usually smaller than public firms and, thus, thought to be riskier. Accordingly, private firms are usually assigned higher risk premiums and

required returns than public firms. The lack of access to liquid public equity markets can also limit a private firm's growth.

Statement 2: McDonnell is correct that small private firms may not be able to attract as many qualified applicants for top positions as public firms. This may reduce the depth of management, slow growth, and increase risk at private firms. She is, however, incorrect that private firm managers and investors have a shorter-term view. Public firm shareholders often focus on short-term measures such as quarterly earnings and the consistency of such. Public management may therefore take a shorter-term view than they otherwise would. So it is private firms that should be able to take a longer-term view.

Furthermore, in most private firms, management has substantial equity ownership. In this case, external shareholders cannot exert as much control, and the firm may be able to take a longer-term perspective.

For Further Reference:
Study Session 11, LOS 34.a
SchweserNotes: Book 3 p.232
CFA Program Curriculum: Vol.4 p.519

Question #38 of 60

C) Investment value.

Explanation
McDonnell and Lutge will use the investment value of Albion Biotechnology to determine what the firm is worth to Thorngate. Investment value is the value to a specific buyer and may be different for each investor due to different cash flow estimates, perceived firm risk, discount rates, financing costs, and synergies that lead to decreased costs.

Market value is frequently used in real estate and other real asset appraisals where the purchase will be levered. Intrinsic value is the value that should be the market value once other investors arrive at this "true" value.

McDonnell and Lutge are determining the firm's value to Thorngate. The firm is not publicly traded so there is no market for its shares at the present time.

Furthermore, combining Albion with Thorngate's current pharmaceutical firm would result in advances that no pharmaceutical competitor could match. The synergies appear to be unavailable to other potential buyers (i.e., the value that McDonnell and Lutge will determine is specific to Thorngate and is not a value determined in a market of many buyers and sellers).

For Further Reference:
Study Session 11, LOS 34.c
SchweserNotes: Book 3 p.235
CFA Program Curriculum: Vol.4 p.522

Question #39 of 60

A) -$117,800.

Explanation
In a strategic transaction, a firm is acquired based in part on the synergies it brings to the acquirer. A financial transaction occurs when there are no synergies. The previous suitor of Balanced, a competitor in the same industry, was a strategic buyer and could realize the synergistic cost savings of $1,200,000.

Thorngate currently does not own a manufacturing firm, so it would be a financial buyer. Thorngate will not be able to realize any synergistic cost savings, so these are not included in the free cash flow to the firm (FCFF) estimates in the following tables.

The calculations are as follows.

Pro forma Income Statement	
Revenues	$23,540,000
Cost of goods sold	$17,655,000
Gross profit	$5,885,000
SG&A expenses	$5,400,000
Pro forma EBITDA	$485,000
Depreciation and amortization	$235,400
Pro forma EBIT	$249,600
Pro forma taxes on EBIT	$74,880
Operating income after tax	$174,720

Adjustments to Obtain FCFF	
Plus: Depreciation and amortization	$235,400
Minus: Capital expenditures	$297,000
Minus: Increase in working capital	$231,000
FCFF	−$117,880

The following provides a line by line explanation for the above calculations.

Pro forma Income Statement	Explanation
Revenues	Current revenues times the growth rate: $22,000,000 \times (1.07)$
Cost of goods sold	Revenue times one minus the gross profit margin: $23,540,000 \times (1 - 0.25)$
Gross profit	Revenues times the gross profit margin: $23,540,000 \times 0.25$
SG&A expenses	Given in the question
Pro forma EBITDA	Gross profit minus SG&A expenses: $5,885,000 - $5,400,000
Depreciation and amortization	Revenues times the given depreciation expense: $23,540,000 \times 0.01$
Pro forma EBIT	EBITDA minus depreciation and amortization: $485,000 - $235,400
Pro forma taxes on EBIT	EBIT times tax rate: $249,600 \times 0.30$
Operating income after tax	EBIT minus taxes: $249,600 - $74,880
Adjustments to Obtain FCFF	

Plus: Depreciation and amortization	Add back noncash charges from above
Minus: Capital expenditures	Expenditures cover depreciation and increase with revenues: $235,400 + 0.04 \times (\$23,540,000 - \$22,000,000)$
Minus: Increase in working capital	The working capital will increase as revenues increase $0.15 \times (\$23,540,000 - \$22,000,000)$
FCFF	Operating income net of the adjustments above

For Further Reference:
Study Session 11, LOS 34.e
SchweserNotes: Book 3 p.237
CFA Program Curriculum: Vol.4 p.525

Question #40 of 60

A) The free cash flow method.

Explanation

The free cash flow method can accommodate multiple stage growth assumptions and is the most appropriate. The firm's growth is expected to slow considerably in the years ahead, so the constant growth assumption of the capitalized cash flow method would be inappropriate. The capitalized cash flow method is a single-stage model.

The excess earnings method is useful when there are intangible assets to value, but that does not appear to be a concern in the valuation of Balanced. The firm's assets appear to be largely tangible (consisting of equipment and the factory).

For Further Reference:
Study Session 11, LOS 34.f
SchweserNotes: Book 3 p.242
CFA Program Curriculum: Vol.4 p.537

Question #41 of 60

B) A discount of 36.0% would be applied.

Explanation

Lutge is using the guideline transactions method (GTM) because his database uses the price multiples from the sale of entire public and private companies. The interest in Jensen is a noncontrolling equity interest, so a discount for lack of control (DLOC) will be applied to its valuation. A discount for lack of marketability (DLOM) will also be applied because the Jensen interest cannot be easily sold.

The DLOC is backed out of the control premium.

$$DLOC = 1 - \left[\frac{1}{1 + \text{Control Premium}}\right]$$

$$DLOC = 1 - \left[\frac{1}{1 + 0.187}\right] = 15.75\%$$

The total discount includes the discount for lack of marketability (DLOM).

Total discount = 1 - [(1 - DLOC)(1 - DLOM)]

Total discount = 1 - [(1 - 0.1575)(1 - 0.24)] = 36.0%

For Further Reference:
Study Session 11, LOS 34.i, k
SchweserNotes: Book 3 p.248, 254
CFA Program Curriculum: Vol.4 p.541, 550

Question #42 of 60

A) Yes.

Explanation

Statement 1: McDonnell is correct. Using data from the smallest cap segment of public equity to get the size premium may include a distress premium that is not applicable to a healthy private firm such as Jensen. If so, the estimated size premium will be too large, resulting in a discount rate that is too high and an undervaluation of the Jensen equity interest.

Statement 2: McDonnell is correct. Using the CAPM and estimating beta from public firm data may not be appropriate for private firms that have little probability of going public or being acquired by a public firm. In the build-up method, an industry risk premium is added to the risk-free rate along with an equity risk premium, the small stock premium, and a company-specific risk premium.

For Further Reference:
Study Session 11, LOS 34.g, k
SchweserNotes: Book 3 p.246, 254
CFA Program Curriculum: Vol.4 p.532, 550

Question #43 of 60

B) Any U.S. Treasuries' forward curve will lie below the spot curve.

Explanation
If the spot curve is upward sloping, the forward curve will be upward sloping and lie above the spot curve.

For Further Reference:
Study Session 12, LOS 35.a
SchweserNotes: Book 4 p.1
CFA Program Curriculum: Vol.5 p.6

Question #44 of 60

C) 0.45%.

Explanation
$f(1,1) = [(1.0029)^2/(1.0013)] - 1 = 0.00450$ or 0.45%.

For Further Reference:
Study Session 12, LOS 35.b
SchweserNotes: Book 4 p.3
CFA Program Curriculum: Vol.5 p.7

Question #45 of 60

A) the one-year holding period return on a two-year, zero-coupon U.S. Treasury starting today would be 0.13%.

If the spot rate curve after one year has passed is the same as the one-year forward curve from one year ago, the total return on a bond of any maturity over that year will be the one-year spot rate. In other words, the return on a bond over one year is always equal to the one-year spot rate if spot rates evolve as predicted by today's forward curve.

For Further Reference:
Study Session 12, LOS 35.c
SchweserNotes: Book 4 p.5
CFA Program Curriculum: Vol.5 p.14

Question #46 of 60

A) invest in bonds with a maturity longer than their investment horizon.

In a "riding the yield curve" strategy, given an upward-sloping yield curve, investors purchase bonds with maturities longer than their investment horizon. As the bond approaches maturity, its price will increase, generating superior returns for the investor.

For Further Reference:
Study Session 12, LOS 35.d
SchweserNotes: Book 4 p.7
CFA Program Curriculum: Vol.5 p.20

Question #47 of 60

A) in short-term rates more than in long-term rates.

Volatility at the long-maturity end is thought to be associated with uncertainty regarding the real economy and inflation, while volatility at the short-maturity end reflects risks regarding monetary policy.

For Further Reference:
Study Session 12, LOS 35.l
SchweserNotes: Book 4 p.22
CFA Program Curriculum: Vol.5 p.44

Question #48 of 60

C) Theoretical shift C.

Theoretical Shift A	KRD	% Change
Short term (2yr) +70bps	0.50	-0.35
Medium term (5yr) +0bps	1.20	0.00
Long term (15yr) +50bps	0.80	-0.40
		-0.75
Theoretical Shift B		
Short term (2yr)	0.50	-0.15

+30bps		
Medium term (5yr) +30bps	1.20	-0.36
Long term (15yr) +30bps	0.80	-0.24
		-0.75
Theoretical Shift C		
Short term (2yr) -10bps	0.50	+0.05
Medium term (5yr) +40bps	1.20	-0.48
Long term (15yr) +50bps	0.80	-0.40
		-0.83

For Further Reference:
Study Session 12, LOS 35.k
SchweserNotes: Book 4 p.20
CFA Program Curriculum: Vol.5 p.37

Question #49 of 60

B) fixed-rate receiver and S&P 500 Index return payer.

Explanation
Jacobs needs to offset the returns on the S&P 500 Index. She is currently receiving the returns on the index (which means if there is a negative return on the Index, Jacobs must make a payment), so she will need to enter into a swap in which she pays the index and receives a fixed rate.

For Further Reference:
Study Session 14, LOS 40.c
SchweserNotes: Book 4 p.138
CFA Program Curriculum: Vol.5 p.305

Question #50 of 60

C) 4.9%.

Explanation
Calculate the contract rate on a fixed-rate receiver equity swap using the following formula:

$$C_N = \frac{1 - Z_N}{(Z_1 + Z_2 + \cdots + Z_N)}$$

Note that this is the same formula for determining the fixed interest rate on an interest rate swap. The discount (Z) factors are given in Exhibit 1. Therefore, the contract rate is:

$$C_N = \frac{1 - 0.8251}{(0.9690 + 0.9242 + 0.8718 + 0.8251)} = 4.9\%$$

For Further Reference:
Study Session 14, LOS 40.c

SchweserNotes: Book 4 p.138
CFA Program Curriculum: Vol.5 p.305

Question #51 of 60

A) 0.

Explanation

A floating-rate equity swap will have zero value on the reset date. The value of the floating-rate side is par or $10 million. The value of a $10 million exposure to the index is also $10 million. Intuitively, this position could be established by borrowing for three years at a floating rate of 1-year LIBOR and investing the proceeds in the index, a zero value portfolio.

For Further Reference:
Study Session 14, LOS 40.d
SchweserNotes: Book 4 p.138
CFA Program Curriculum: Vol.5 p.305

Question #52 of 60

C) only statement 2 is correct.

Explanation

$N(d_2)$ is interpreted as the risk-neutral probability that a *call* option will expire in the money. $N(-d_2)$ is interpreted as the risk-neutral probability that a *put* option will expire in the money.

For Further Reference:
Study Session 14, LOS 41.h
SchweserNotes: Book 4 p.175
CFA Program Curriculum: Vol.5 p.356

Question #53 of 60

A) both statements are correct.

Explanation

Both statements are correct.

For Further Reference:
Study Session 14, LOS 41.i, j
SchweserNotes: Book 4 p.177, 178
CFA Program Curriculum: Vol.5 p.359, 362

Question #54 of 60

C) incorrect, because the CDS does not reference the proper credit risk.

Explanation

The credit risk underlying the equity swap is associated with the swap counterparty, not the companies in the equity index. This credit risk arises from the possibility that the counterparty to the swap will be unable or unwilling to make payments to Jacobs if the equity return is less than the fixed rate on the swap (i.e., the counterparty owes a payment to Jacobs).

For Further Reference:
Study Session 13, LOS 39.a

SchweserNotes: Book 4 p.107
CFA Program Curriculum: Vol.5 p.235

Question #55 of 60

C) Property #2 and Property #3.

Explanation

While almost any private equity real estate investment will be unique (if for no other reason than that they must be in different locations), residential properties tend to have the fewest unique characteristics. Transactions-based indices tend to be more useful for residential commercial property benchmarking than for nonresidential commercial properties due to the large amount of data required for many properties and the unique features of many nonresidential commercial properties.

For Further Reference:
Study Session 15, LOS 43.b
SchweserNotes: Book 5 p.2
CFA Program Curriculum: Vol.6 p.9

Question #56 of 60

C) Property #3.

Explanation

Commercial uses with higher management involvement, such as restaurants, hotels, shopping centers, also have higher operational risks. One way to check this given the specifics in this case is to look at management fees as a percentage of effective gross income for the three properties.

Property #1   3.97%   ($145,000 / $3,652,000)

Property #2   3.99%   ($172,500 / $4,327,500)

Property #3   4.06%   ($138,288 / $3,407,557)
Therefore, Property #3 would be expected to have greater operational risk.

For Further Reference:
Study Session 15, LOS 43.d
SchweserNotes: Book 5 p.6
CFA Program Curriculum: Vol.6 p.19

Question #57 of 60

B) Income approach.

Explanation

Property #2 is an older office building with unique characteristics that could not be easily reproduced using current architectural designs and materials. Therefore, the cost approach would be less appropriate than the income approach as a basis for appraisal. The sales comparison approach would also be less suitable as the property is relatively unique.

For Further Reference:
Study Session 15, LOS 43.e
SchweserNotes: Book 5 p.7
CFA Program Curriculum: Vol.6 p.25

B) $24,295,000.

Explanation

DCF valuation based on a required return of 9.5% is:

	NOI	**Present Value**
Year 1	$1,706,500	$1,558,447.49
Year 2	$1,774,760	$1,480,169.30
Year 3	$1,845,750	$1,405,822.60
Year 4	$1,919,580	$1,335,210.50
Year 5	$1,996,364	$1,268,145.64
Terminal value	$27,150,550	$17,246,780.74
Property #1 value		$24,294,576.27

Selected Calculation:

Terminal value is computed by applying the terminal cap rate to NOI in year 6. To estimate NOI for year 6, we need a growth rate estimate. We are not given the growth rate directly, but given the discount rate of 9.5% and the terminal cap rate of 7.5%, we can estimate the growth rate to be 2%.

$$TV_s = \frac{NOI_5 (1+g)}{C_t}$$

$$= \frac{\$1,996,364(1+0.02)}{0.075} = \$27,150,550.40$$

Note: Make sure that you use the uneven cash flow function to compute NPV using your financial calculator.

For Further Reference:

Study Session 15, LOS 43.g
SchweserNotes: Book 5 p.9
CFA Program Curriculum: Vol.6 p.29

A) $20.7 million.

Explanation

The maximum loan amount will typically be based on the lower of loan-to-value (LTV) or debt service coverage ratio. Based on LTV of 70%, ALIC would be willing to loan $21 million ($30 million × 0.70). Based on a debt service coverage ratio of 1.5x, ALIC will loan just under $20.7 million. ALIC will be willing to loan only an amount equal to the lower of these two measures.

The calculation for maximum debt service based on a minimum debt service coverage ratio of 1.5x is:

$$\text{Maximum debt service} = \frac{NOI_1}{DSCR}$$

$$= \frac{\$1,706,500}{1.5} = \$1,137,666.67$$

Maximum debt service on an interest-only loan can be used to calculate the maximum loan amount:

$$\text{Maximum loan} = \frac{\text{Maximum debt service}}{\text{Interest rate}}$$

$$= \frac{\$1,137,666.67}{0.055} = \$20,684,848.48$$

For Further Reference:
Study Session 15, LOS 43.m
SchweserNotes: Book 5 p.24
CFA Program Curriculum: Vol.6 p.62

Question #60 of 60

B) greater.

Explanation
AIP should earn a higher return on equity by financing part of its purchase price with a mortgage because the cost of mortgage funds (5.5%) is less than the required return on equity (9.5%). Including the mortgage funding in a weighted-average cost of capital (WACC) will increase the value over the purchase price required if only equity funding is used.

For Further Reference:
Study Session 15, LOS 43.l
SchweserNotes: Book 5 p.4
CFA Program Curriculum: Vol.6 p.61