

The logo for the Certified Management Accountant (CMA) certification, featuring the letters 'CMA' in a serif font inside a white square with a blue shadow effect.

*IMA's Certification for
Accountants and
Financial Professionals
in Business*

CMA Exam Support Package

Part 2

Part 2 Questions

1. A Statement of Financial Position prepared in accordance with U.S. GAAP allows investors to assess all of the following **except** the
 - a. efficiency with which enterprise assets are utilized.
 - b. liquidity and financial flexibility of the enterprise.
 - c. capital structure of the enterprise.
 - d. net realizable value of enterprise assets.

2. An item of inventory purchased for \$25 had been incorrectly written down at the end of last year to a current replacement cost of \$17. The item is currently selling for \$50, its normal selling price. The error will affect the financial statements in which one of the following ways?
 - a. The income for last year is overstated.
 - b. The cost of sales for this year will be overstated.
 - c. The income for this year will be overstated.
 - d. The income for this year will be unaffected.

3. In calculating net cash flow from operating activities using the indirect method, all of the following items would be either added or subtracted from net income **except**
 - a. depreciation.
 - b. amortization.
 - c. gain on sale of equipment.
 - d. dividends paid.

4. At the end of the current fiscal year, Premiere Company reported net income of \$30,000. In addition, the following information is available.

	<u>Prior Fiscal Year</u>	<u>Current Fiscal Year</u>
Accounts receivable	\$10,000	\$12,000
Inventories	22,000	19,000
Prepaid expenses	6,000	7,000
Accounts payable	14,000	19,000
Long-term debt	70,000	62,000

What amount should be reported as cash flow from operating activities on Premiere's Statement of Cash Flows for the current fiscal year?

- a. \$25,000.
- b. \$27,000.
- c. \$33,000.
- d. \$35,000.

5. Preparation of common-size financial statements is also referred to as
 - a. vertical analysis.
 - b. horizontal analysis.
 - c. liquidity analysis.
 - d. activity analysis.

6. Norton Inc. has a 2 to 1 current ratio. This ratio would increase to more than 2 to 1 if
 - a. a previously declared stock dividend were distributed.
 - b. the company wrote off an uncollectible receivable.
 - c. the company sold merchandise on open account that earned a normal gross margin.
 - d. the company purchased inventory on open account.

7. An analyst uses the Statement of Financial Position as the primary source for all of the following **except**
 - a. determining measures for controlling solvency.
 - b. analyzing the potential cost of new financing.
 - c. estimating the firm's value as a going concern.
 - d. identifying the firm's capital structure.

8. Selected financial information from Ferguson Inc.'s financial statements is shown below.

Statement of Financial Position		
(\$000's)		
	Current Year	Prior Year
Total current assets	740	590
Total long-term assets	960	1,045
Total assets	\$1,700	\$1,635
Total current liabilities	315	285
Total long-term liabilities	94	80
Shareholders' equity	1,291	1,270
Total liabilities and equity	\$1,700	\$1,635

Income Statement	
(\$000's)	
Net Sales	\$1,646
Cost of goods sold	<u>782</u>
Gross profit	864
Operating expenses	<u>698</u>
Operating income	166
Interest expense	10
Income taxes	<u>55</u>
Net income	<u>\$ 101</u>

Ferguson Inc.'s asset turnover for the current year is

- a. .06 times.
- b. .47 times.
- c. .99 times.
- d. 1.94 times.

9. Appalachian Outfitters Inc., a mail order supplier of camping gear, is putting together its current year Statement of Cash Flows. A comparison of the company's year-end balance sheet to the prior year's balance sheet shows the following changes from a year ago.

<u>Assets</u>		<u>Liabilities & Net Worth</u>	
Cash & Marketable Securities	\$(600)	Accounts Payable	\$ 250
Accounts Receivable	200	Accruals	50
Inventories	(100)	Long-term Note	(300)
Gross Fixed Assets	3,600	Long-term Debt	1,400
Accumulated Depreciation	500	Common Stock	0
		Retained Earnings	<u>2,200</u>
Total	<u>\$3,600</u>	Total	<u>\$3,600</u>

The firm's payout ratio is 20%. During the current year, net cash provided by operations is

- a. \$2,900.
- b. \$3,050.
- c. \$3,450.
- d. \$4,050.

10. Ajax Company is a privately-held manufacturer of wooden toys. For the last fiscal year, Ajax's financial statements included the following data.

Revenue	\$36,500,000
Cost of goods sold	<u>23,900,000</u>
Gross profit	12,600,000
Operating expenses	<u>11,000,000</u>
Net income	<u>\$ 1,600,000</u>

Total assets	\$25,400,000
Total debt	2,300,000
Total equity	23,100,000

The shareholders consider the return on their equity to be less than satisfactory. Which one of the following changes is **most** likely to improve Ajax's return on equity?

- Increase the selling price.
 - Reduce the gross profit margin.
 - Increase fixed assets.
 - Increase their borrowing.
11. From the following information calculate economic profit.

Total Sales Revenue	\$600,000
Explicit Costs:	
Total Cost of Sales	200,000
Selling Expenses	50,000
General & Administrative Expenses	25,000
Implicit Costs:	
Foregone Interest	20,000
Foregone Entrepreneurial Income	15,000

- \$400,000.
 - \$325,000.
 - \$305,000.
 - \$290,000.
12. An appreciation of the U.S. dollar against the Japanese yen would
- increase the translated earnings of U.S. subsidiaries domiciled in Japan.
 - increase the cost of buying supplies for U.S. firms.
 - make U.S. goods more expensive to Japanese consumers.
 - make travel in Japan more expensive for U.S. citizens.

13. Investors in financial securities require a rate of return that
- compensates for the risk of the security and for time.
 - is based on the risk-free rate of return plus a risk premium.
 - can be used to determine the value of a financial security.
 - satisfies all of the above requirements.
14. A U.S. company currently has domestic operations only. It is considering an equal-size investment in either Canada or Britain. The data on expected rate of return and the risk associated with each of these proposed investments are given below.

<u>Proposed Investment</u>	<u>Mean Return</u>	<u>Standard Deviation</u>
British Investment	22%	10%
Canadian Investment	28%	15%

The mean return on the company's current, domestic only, business is 20% with a standard deviation of 15%. Using the above data and the correlation coefficients, the company calculated the following portfolio risk and return (based on a ratio of 50% U.S. domestic operations and 50% international operations).

<u>Investments</u>	<u>Mean Return</u>	<u>Standard Deviation</u>
U.S. and Britain	21%	3%
U.S. and Canada	24%	15%

The company plans to select the optimal combination of countries based on risk and return for the domestic and international investments taken together. Because the company is new to the international business environment, it is relatively risk averse. Based on the above data, which one of the following alternatives provides the **best** risk adjusted return to the firm?

- The British investment.
 - The Canadian investment.
 - Neither investment.
 - Unable to determine based on data given.
15. Risk assessment is a process
- designed to identify potential events that may affect the entity.
 - that establishes policies and procedures to accomplish internal control objectives.
 - of identifying and capturing information in a timely fashion.
 - that assesses the quality of internal controls throughout the year.

16. A British company currently has domestic operations only. It plans to invest equal amounts of money on projects either in the U.S. or in China. The company will select the country based on risk and return for its portfolio of domestic and international projects taken together. The risk reduction benefits of investing internationally (based on 50% of British domestic operations and 50% foreign operations) will be the greatest when there is perfectly
- positive correlation between the British return and the U.S. return.
 - negative correlation between the U.S. return and the Chinese return.
 - positive correlation between the U.S. return and the Chinese return.
 - negative correlation between the Chinese return and the British return.
17. If a bond sells at a premium, the
- stated coupon rate must be less than the required market rate.
 - nominal rate must be less than the yield rate.
 - bond purchase price must be more than the fair market value of the bond.
 - stated coupon rate must be more than the required market rate.
18. On July 1 of the current year, Block Company issued \$200,000 of 10% ten-year bonds for \$227,180 when the market rate of interest was 8%. Interest is payable each year on January 1 and July 1, beginning January 1, next year. Assuming the effective interest rate method is used, what amount of interest expense should Block accrue on December 31 of the current year?
- \$8,000.
 - \$9,087.
 - \$10,000.
 - \$11,359.
19. All of the following are concerns that are unique to foreign investments **except**
- exchange rate changes.
 - purchasing power parity.
 - changes in interest rates.
 - expropriation.

20. An analyst covering Guilderland Mining Co. common stock estimates the following information for next year.

Expected return on the market portfolio	12%
Expected return on Treasury securities	5%
Expected beta of Guilderland	2.2

Using the CAPM, the analyst's estimate of next year's risk premium for Guilderland's stock is closest to

- a. 7.0%.
 - b. 10.4%.
 - c. 15.4%.
 - d. 21.4%.
21. Keller Industries currently has a capital structure consisting of 40% debt and 60% equity, which it believes is the optimal structure. The common stock produced a 12% capital gain in the recent 12-month period and paid a 5% dividend. Keller's effective income tax rate is 30%. Its debt is rated AA and the issues outstanding are as follows.

- \$20 million of 7% coupon bonds with a yield to maturity of 10%
- \$20 million of 12% coupon bonds with a yield to maturity of 11%

Keller's investment banker informed the firm that long-term AA rated debt are currently being issued to yield 11%. The banker also estimates that equity investors currently require a 20% pre-tax yield.

Keller's marginal cost of capital is approximately

- a. 12.8%.
 - b. 13.1%.
 - c. 14.7%.
 - d. 15.1%.
22. A firm has daily receipts of \$100,000. A bank has offered to reduce the collection time on the firm's deposits by two days for a monthly fee of \$500. If money market rates are expected to average 6% during the year, the net annual benefit from having this service is
- a. \$0.
 - b. \$3,000.
 - c. \$6,000.
 - d. \$12,000.

23. Cleveland Masks and Costumes Inc. (CMC) has a majority of its customers located in the states of California and Nevada. Keystone National Bank, a major west coast bank, has agreed to provide a lock-box system to CMC at a fixed fee of \$50,000 per year and a variable fee of \$0.50 for each payment processed by the bank. On average, CMC receives 50 payments per day, each averaging \$20,000. With the lock-box system, the company's collection float will decrease by 2 days. The annual interest rate on money market securities is 6%. If CMC makes use of the lock-box system, what would be the net benefit to the company? Use 365 days per year.
- \$51,750.
 - \$60,875.
 - \$111,750.
 - \$120,875.
24. On January 1, Scott Corporation received a \$300,000 line of credit at an interest rate of 12% from Main Street Bank and drew down the entire amount on February 1. The line of credit agreement requires that an amount equal to 15% of the loan be deposited into a compensating balance account. What is the effective annual cost of credit for this loan arrangement?
- 11.00%.
 - 12.00%.
 - 12.94%.
 - 14.12%.
25. Which of the following is a disadvantage of an Initial Public Offering (IPO)?
- The company needs to raise equity funds from potential new shareholders.
 - The company must produce and sell high quality goods or services.
 - The company must file required information filings with the S.E.C.
 - The company must disclose its production methods to competitors.
26. A growth strategy where a company increases the range of products and services offered to current markets either through internal development or acquisition is called
- horizontal growth.
 - vertical growth.
 - conglomerate diversification.
 - concentric diversification.

27. The Baker Company, a U.S. corporation headquartered in California, has a manufacturing affiliate in Mexico. Baker wants to expand the capability of this plant. The plant is very profitable and generates a substantial positive cash flow. Approximately \$1,000,000 (U.S.) is available to be paid in dividends to the U.S. parent from the Mexican affiliate. In addition, another affiliate, located in Brazil, has \$750,000 (U.S.) available to be paid in dividends.

Which one of the following would be the **best** way to finance a \$500,000 investment in the Mexican facility?

- a. Have the parent transfer funds for the \$500,000 investment.
 - b. Have Brazil transfer the \$500,000.
 - c. Have the parent transfer \$250,000, and Brazil transfer \$250,000.
 - d. Have the Mexican facility reduce its dividends to the U.S. parent by the \$500,000.
28. To assist a firm's operating decisions, cost/volume/profit analysis is applicable to all of the following situations **except**
- a. setting prices when the firm brings a product to market.
 - b. analyzing whether to make or buy a product used in the production process.
 - c. evaluating the effect of replacing a piece of equipment used in the production process.
 - d. determining a unique break-even point when the firm produces multiple product lines.
29. Parker Company pays each member of its sales staff a salary as well as a commission on each unit sold. For the coming year, Parker plans to increase all salaries by 5% and to keep unchanged the commission paid on each unit sold. Because of increased demand, Parker expects the volume of sales to increase by 10%. How will the total cost of sales salaries and commissions change for the coming year?
- a. Increase by 5% or less.
 - b. Increase by more than 5% but less than 10%.
 - c. Increase by 10%.
 - d. Increase by more than 10%.
30. Roberta Johnson is the manager of Sleep-Well Inn, one of a chain of motels located throughout the U.S. An example of an operating cost at Sleep-Well that is both direct and fixed is
- a. Johnson's salary.
 - b. water.
 - c. toilet tissue.
 - d. advertising for the Sleep-Well Inn chain.

31. Consider the following information for Richardson Company for the prior year.
- The company produced 1,000 units and sold 900 units, both as budgeted.
 - There were no beginning or ending work-in-process inventories and no beginning finished goods inventory.
 - Budgeted and actual fixed costs were equal; all variable manufacturing costs are affected by production volume only; and all variable selling costs are affected by sales volume only.
 - Budgeted per unit revenues and costs were as follows.

	<u>Per Unit</u>
Sales price	\$100
Direct materials	30
Direct labor	20
Other variable manufacturing costs	10
Fixed selling costs	5
Variable selling costs	12
Fixed selling costs (\$33,600 total)	4
Fixed administrative costs (\$1,800 total)	2

The contribution margin earned by Richardson for the prior year was

- a. \$25,200.
 - b. \$28,000.
 - c. \$31,500.
 - d. \$35,000.
32. Highfield Corporation expects to sell 10,000 units of its product at a target price of \$50 per unit. The current full cost of the product is \$60 per unit. If Highfield wants to earn an operating profit margin of 20%, the target cost per unit is
- a. \$10.
 - b. \$12.
 - c. \$38.
 - d. \$40.
33. In a make-versus-buy decision, relevant costs include variable manufacturing costs as well as
- a. factory management costs.
 - b. general office costs.
 - c. avoidable fixed costs.
 - d. depreciation costs.

34. In accepting or rejecting orders, all of the following costs are relevant **except**
- differential costs.
 - out-of-pocket costs.
 - replacement costs.
 - sunk costs.
35. Polar Company sells refrigeration components both in the U.S. and to a subsidiary located in France. One of the components, Part No. 456, has a variable manufacturing cost of \$30. The part can be sold domestically or shipped to the French subsidiary for use in the manufacture of a residential subassembly. Relevant data with regard to Part No. 456 are shown below.

	<u>Part No. 456</u>
Domestic selling price	\$ 65
Shipping charges to France	15
Cost of acquiring Part No. 456 in France	75
French residential subassembly:	
Sales price	170
Other additional manufacturing costs	55
 Units shipped to France	 150,000 ¹

¹If deemed preferable, these units could be sold in the U.S.

Polar's applicable income tax rates are 40% in the U.S. and 70% in France.

Polar will transfer Part No. 456 to the French subsidiary at either variable manufacturing cost or the domestic market price. On the basis of this information, which one of the following strategies should be recommended to Polar's management?

- Transfer 150,000 units at \$30 and the French subsidiary pays the shipping costs.
- Transfer 150,000 units at \$65 and the French subsidiary pays the shipping costs.
- Sell 150,000 units in the U.S. and the French subsidiary obtains Part No. 456 in France.
- Transfer 150,000 units at \$65 and have the U.S. company absorb the shipping costs.

36. An economic research firm performed extensive studies on the market for large screen televisions (LSTs). Portions of the results are shown below.

<u>Household Income</u>	<u>LST Sales (units)</u>
\$50,000	20,000
60,000	28,000
72,000	39,200

<u>Price of LSTs</u>	<u>LST Sales (units)</u>
\$1,000	100,000
900	115,000
810	132,250

The income elasticity of demand for LSTs is

- a. 0.4.
 - b. 1.5.
 - c. 1.8.
 - d. 2.5.
37. Which one of the following most accurately describes the market conditions normally associated with monopolistic competition?
- a. High barriers to entry; homogenous products; many independent firms.
 - b. Few independent firms; high barriers to entry; differentiated products.
 - c. Low barriers to entry; homogenous products; many independent firms.
 - d. Differentiated products; many independent firms; low barriers to entry.
38. If the price of computers increases and total revenue of the firm increases, then the demand for computers is
- a. inelastic and the elasticity of demand is greater than one.
 - b. inelastic and the elasticity of demand is less than one.
 - c. elastic and the elasticity of demand is greater than one
 - d. elastic and the elasticity of demand is less than one.

39. Worldwide, Inc. noticed that they were losing business to others firms. In view of this, the company decided to change its monthly charges for its various telephone services as follows.

	<u>Previous Rate</u>	<u>New Rate</u>
Call Waiting	\$ 8	\$ 4
Caller ID	6	4
International Calling	3	1
Internet Access	15	13

In response to these price changes, the demand for the above services changed as follows.

	<u>Previous Demand</u>	<u>New Demand</u>
Call Waiting	100	150
Caller ID	50	70
International Calling	30	40
Internet Access	150	160

The price elasticity of demand is the highest for

- a. Call Waiting.
 - b. Caller ID.
 - c. International Calling.
 - d. Internet Access.
40. QLP Corporation is planning to build a new plant but wishes to complete a capital budgeting analysis before deciding to proceed with construction. The following cost data has been collected. The land on which the plant will be built was purchased eight years ago for \$835,000, but a recent appraisal indicates that the current value of the land is \$2.2 million. The plant will cost \$8.4 million to construct. Last year, QLP paid a consulting company \$800,000 for an environmental impact study on the new plant. What total cost figure should QLP Corporation use in a capital budgeting analysis of the new plant?
- a. \$9,235,000.
 - b. \$10,035,000.
 - c. \$10,600,000.
 - d. \$11,400,000.

41. Jackson Corporation uses net present value techniques in evaluating its capital investment projects. The company is considering a new equipment acquisition that will cost \$100,000, fully installed, and have a zero salvage value at the end of its five-year productive life. Jackson will depreciate the equipment on a straight-line basis for both financial and tax purposes. Jackson estimates \$70,000 in annual recurring operating cash income and \$20,000 in annual recurring operating cash expenses. Jackson's cost of capital is 12% and its effective income tax rate is 40%. What is the net present value of this investment on an after-tax basis?

- a. \$940.
- b. \$8,150.
- c. \$36,990.
- d. \$51,410.

42. Tendulkar Inc. has a project that requires a \$40,000,000 initial investment, and is expected to generate annual after-tax cash flows of \$6,000,000 for 12 years. Tendulkar's weighted average cost of capital is 14%. This project's net present value (NPV) and the approximate internal rate of return (IRR) are

	<u>NPV</u>	<u>IRR</u>
a.	(\$6,040,000)	10%
b.	(\$6,040,000)	12%
c.	(\$ 232,000)	10%
d.	(\$ 232,000)	12%

43. A capital budgeting analyst makes the following two statements.

- I. Internal rate of return (IRR) is the discount rate that causes the net present value to be \$0.
- II. When we use the IRR method for evaluating projects, we are assuming that all cash flows are reinvested at IRR%.

Which of the analyst's statements is (are) **true**?

- a. I only.
- b. II only.
- c. Both I and II.
- d. Neither I nor II.

44. Often corporate headquarters assigns only a limited amount of funds that each division can use for capital expenditures each year. Which of the following is the **best** definition and **best** reason for this policy?

<u>Definition</u>	<u>Reason</u>
a. Capital budgeting	Additional funds would increase in cost
b. Capital rationing	Market conditions may prevent raising additional funds
c. Capital rationing	Government regulations
d. Capital budgeting	Project's internal rate of return is below cost of capital

45. Bennet Inc. uses the net present value method to evaluate capital projects. Bennet's required rate of return is 10%. Bennet is considering two mutually exclusive projects for its manufacturing business. Both projects require an initial outlay of \$120,000 and are expected to have a useful life of four years. The projected after-tax cash flows associated with these projects are as follows.

<u>Year</u>	<u>Project X</u>	<u>Project Y</u>
1	\$40,000	\$10,000
2	40,000	20,000
3	40,000	60,000
4	40,000	80,000
Total	<u>\$160,000</u>	<u>\$170,000</u>

Assuming adequate funds are available, which of the following project options would you recommend that Bennet's management undertake?

- a. Project X only.
 b. Project Y only.
 c. Projects X and Y.
 d. Neither project.
46. When simulating with the Monte Carlo technique, the average simulated demand over the long run should approximate the
- a. actual demand.
 b. real demand.
 c. sampled demand.
 d. expected demand.

47. Mega Inc., a large conglomerate with operating divisions in many industries, uses risk-adjusted discount rates in evaluating capital investment decisions. Consider the following statements concerning Mega's use of risk-adjusted discount rates.
- I. Mega may accept some projects with internal rates of return less than Mega's overall average cost of capital.
 - II. Discount rates vary depending on the type of project.
 - III. Mega may reject some projects with internal rates of return greater than the cost of capital.
 - IV. Discount rates may vary depending on the division.

Which of the above statements are correct?

- a. I and III, only.
 - b. II and IV, only.
 - c. II, III and IV, only.
 - d. I, II, III and IV.
48. Debrock Corporation has an option to abandon one of its capital investment projects. The option to abandon makes Debrock the
- a. writer of a put option.
 - b. owner of a put option.
 - c. writer of a call option.
 - d. owner of a call option.

49. The Gamma Company is a national chain of drug stores in the U.S., but has decided it needs more stores in the Northeast. It is considering buying a regional chain in the U.S. from Theta Corporation, a worldwide conglomerate. Gamma needs to determine the value of the regional chain, so they can make an offer to Theta.

Gamma has gathered the following data:

- The regional chain's net income for the year which just ended is \$3,500,000.
- The regional chain's free cash flow for the year just ended is \$4,500,000.
- The regional chain's growth rate for the first 3 years under Gamma is 6%.
- The regional chain's growth rate for years after year 3 is 3%.
- Gamma's required rate of return is 9%.

Which one of the following is **closest** to the maximum amount Gamma should pay for the regional chain?

- a. \$105 million.
 - b. \$ 84 million.
 - c. \$ 81 million.
 - d. \$ 65 million.
50. Which of the following is prohibited by the Foreign Corrupt Practices Act?
- a. The payment for U.S. exports in currency other than U.S. dollars.
 - b. The offer of payment to foreign officials to obtain business.
 - c. The purchase by foreigners of strategic assets from the U.S.
 - d. The payment of U.S. funds to any regime not recognized by the U.S. Department of State.

Part 2 answers

1. Key = d

2. Key = c

3. Key = d

4. Key = d

Net income of \$30,000 less increases in accounts receivable of \$2,000 and prepaid expenses of \$1,000; plus decrease in inventories of \$3,000; plus increase in accounts payable of \$5,000.

5. Key = a

6. Key = c

7. Key = c

8. Key = c

Net sales/Average total assets
[1,646/((1700+1635)/2)]

9. Key = c

Net Profit after Taxes = Δ Retained Earnings \div (1 - Payout Ratio) = $\$2,200 / .8 = \$2,750$. The operating cash flow section of the statement is then constructed as follows.

Net Profit after Taxes	\$2,750
Depreciation Charges	500
Increase in Accounts Receivable	(200)
Decrease in Inventories	100
Increase in Accounts Payable	250
Increase in Accruals	<u>50</u>
Net Cash Provided by Operating Activities	<u>\$3,450</u>

10. Key = d

The Dupont equation shows that increasing the equity multiplier can improve ROE.

11. Key = d

Economic profit = Sales revenue – Explicit costs – Implicit costs = \$600,000 - \$200,000 - \$50,000 - \$25,000 - \$20,000 - \$15,000 = \$290,000.

12. Key = c

An appreciation of the US\$ against the Japanese ¥ means that it would take more Japanese ¥ to purchase US products, thus making it more expensive.

13. Key = d

14. Key = a

Expanding the investment into Britain would increase the return from 20% to 21% and, at the same time, reduce risk measured by the standard deviation from 15% to 3%. This will give a better return per unit of risk whereas the investment in Canadian operations would increase the return from 20% to 24% without any reduction in risk (standard deviation of 15%).

15. Key = a

Risk assessment involves identifying all risks and vulnerabilities that an organization is exposed to.

16. Key = d

The firm can reduce its overall risk by diversification into investments that are not highly correlated with its current operations.

17. Key = D

If a bond sells for more than its face value, it is sold at a premium. Buyers are willing to pay higher price for the bond expecting higher returns. Thus, the stated rate must be higher than the market rate.

18. Key = b

4% x carrying amount of \$227,180 = \$9,087

19. Key = c

Changes in interest rates are not unique to foreign investments.

20. Key = c

According to CAPM, the risk premium = Beta x (Expected return on the market portfolio – Expected return on treasury securities) = 2.2 x (12% - 5%) = 15.4%

21. Key = d

Weighted after-tax cost of debt + weighted cost of equity
 $[40\% \times 11\% (1 - .30)] + (60\% \times 20\%) = 3.08\% + 12.00\% = 15.1\%$

22. Key = c

\$100,000 x 2 days x 6%	\$ 12,000	Additional annual investment income
(\$500 x 12)	<u>6,000</u>	Annual cost
Net	\$ <u>6,000</u>	Annual benefit

23. Key = b

Gross Benefit = Average Payment x Payments per day x Float reduction in days x Opportunity cost
 Cost = Fixed cost + Variable cost
 Gross Benefit - Cost = Net Benefit
 $[\$20,000 \times 50 \times 2 \times .06] - [\$50,000 + (50 \times 365 \times \$0.50)] = \$60,875$

24. Key = d

interest paid/Available funds	
\$300,000 x 12% = \$36,000	Interest
\$300,000 - (15% x \$300,000) = \$255,000	Net of compensating balance
\$36,000/\$255,000 = 14.12%	Effective annual interest rate

25. Key = c

Filing required SEC reports is expensive in terms of money, time and other resources.

26. Key = a

27. Key = d

28. Key = d

29. Key = b

The cost of salaries will increase by exactly 5%. The cost of commissions paid (a variable cost) will increase by the level of activity, which is 10%. Because total compensation is a blend of these two costs, total compensation will increase by some amount between 5% and 10%.

30. Key = a

A direct cost can be traced directly to a cost object. Salary does not vary over a set period of time and is therefore a fixed direct labor cost. The other items are either variable or indirect.

31. Key = a

Sales price less direct and variable costs x number of units sold = contribution margin
 $(\$100 - (\$30 + \$20 + \$10 + \$12)) \times 900 \text{ units} = \$25,200$

32. Key = d

Target price of \$50 – target operating profit of \$50 x 20%

33. Key = c

34. Key = d

35. Key = c

c. (Sales less costs) x (1-tax rate)

U.S.	$(\$65 - \$30) \times .6$	\$21
French	$(\$170 - \$75 - \$55) \times .3$	<u>12</u>
Net Profit Per Unit		<u>\$33</u>

a. French sales only $(\$170 - \$30 - \$15 - \$55) \times .3 = \$21$.

b. U. S. $(\$65 - \$30) \times .6 = \$21$;

French sales $(\$170 - \$65 - \$15 - \$55) \times .3 = \$10.50$; $\$21 + \$10.50 = \$31.50$

d. U. S. $(\$65 - \$30 - \$15) \times .6 = \12 ;

French sales $(\$170 - \$65 - \$55) \times .3 = \15 ; $\$12 + \$15 = \$27$

36. Key = c

Percent change in quantity/Percent change in income = $.4/.2 = 2$

37. Key = d

38. Key = b

39. Key = b

Price elasticity of demand = Percent change in quantity demanded/Percent change in price

	<u>Call waiting</u>	<u>Caller ID</u>	<u>International</u>	<u>Internet</u>
Calculation	$(50/125) / (4/6)$	$(20/60) / (2/5)$	$(10/35) / (2/2)$	$(10/155) / (2/14)$
	0.40 / .667	.333/.40	.286 / 1	0.0645 / 0.1429
Elasticity	0.60	0.83	.286	0.45

40. Key = c

$$\$2.2 \text{ million} + \$8.4 \text{ million} = \$10.6 \text{ million}$$

41. Key = c

Initial Investment		(\$100,000)
Annual Cash Income	\$70,000	
Annual Cash Expenses	<u>20,000</u>	
Net Operating Inflows	50,000	
Taxes (\$50,000 @ 40%)	<u>20,000</u>	
Net After Taxes (x PVIF 3.605)	\$30,000	108,150
Annual Depreciation Tax Savings: (\$100,000/5 x 40% x 3.605)		<u>28,840</u>
Net Present Value of Investment		<u>\$ 36,990</u>

42. Key = a

(\$40 million) + PVIF of 5.66 x \$6 million = NPV of -\$6.04 million
Interest rate associated with factor of \$40 million/\$6 million (6.667) for a 12 year period
= approximately 10%

43. Key = c

44. Key = b

45. Key = a

<u>Year</u>	<u>Project X</u>	<u>Project Y</u>	<u>Factor</u>	<u>Present Value of Y</u>
1	\$ 40,000	\$ 10,000	0.909	\$ 9,090
2	40,000	20,000	0.826	16,520
3	40,000	60,000	0.751	45,060
4	<u>40,000</u>	<u>80,000</u>	0.683	<u>54,640</u>
Total	<u>\$160,000</u>	<u>\$170,000</u>		<u>\$125,310</u>

Present Value of project X = 40,000 x 3.170 (annuity discount factor) = 126,800
Present value (PV) of cash inflows of project X is greater than PV of project Y and since the two projects are mutually exclusive, select project X

46. Key = d

47. Key = d

48. Key = b

49. Key = b

Solution:

	<u>Numerator</u>	<u>Denominator</u>	
	Free cash flow		
a. Year 1	$4.5 * 1.06$	1.09	4,376 k
2	$4.5 * 1.06^2$	1.09^2	4,256
3	$4.5 * 1.06^3$	1.09^3	4,139
3	$\frac{4.5 * 1.06^3 * 1.03}{.09 - .03}$	$= \frac{5.5204}{.06}$	$= \underline{92,006}$
			PV = \$104,777k

	Free cash flow		
b. Year 1	$4.5 * 1.06$	1.09	\$4,376 k
2	$4.5 * 1.06^2$	1.09^2	4,256
3	$4.5 * 1.06^3$	1.09^3	4,138
3	$\frac{4.5 * 1.06^3 * 1.03}{.09 - .03} = \frac{5.5204}{.06}$	$= \frac{92,006}{1.09^3}$	$= \underline{71,046}$
			PV = \$83,817k

	Net income		
c. Year 1	$3.5 * 1.06$	1.09	\$3,404
2	$3.5 * 1.06^2$	1.09^2	3,310
3	$3.5 * 1.06^3$	1.09^3	3,219
3	$\frac{3.5 * 1.06^3 * 1.03}{.09 - .03}$	$= \frac{4.294}{.06}$	$\underline{71,560}$
			\$81,493k

	Net income		
d. Year 1	$3.5 * 1.06$	1.09	\$3,404
2	$3.5 * 1.06^2$	1.09^2	3,310
3	$3.5 * 1.06^3$	1.09^3	3,219
3	$\frac{3.5 * 1.06^3 * 1.03}{.09 - .03} = \frac{4.294}{.06}$	$= \frac{71,560}{1.09^3}$	$= \underline{55,257}$
			\$55,190k

50. Key = b