

Lebanese Association of Certified Public Accountants – Managerial Accounting - 2024 -

I- Multiple Choice Questions

1. The following information is given for the Asia Company: (Feb. 2019)

Fixed costs	\$30,000 per period
Variable cost	\$5/unit
Selling Price	\$8/unit

The margin of safety at the 12,000-unit level is:

- A. 15.7%
- B. 16.1%
- C. 16.7%
- D. 17.1%

Use the following information to answer questions 2 and 3: (P: 290 Managerial)
Gardenia Company's net accounts receivable were \$250,000 at December 31, 20A, and \$300,000 at December 31, 20B. Net cash sales for 20B were \$100,000. The accounts receivable turnover for 20B was 5.

2. Gardenia's net credit sales for 20B were:

- A. \$1,275,000
- B. \$1,375,000
- C. \$1,527,000
- D. \$1,725,000

3. Gardenia's total net sales for 20B were:

- A. \$1,350,000
- B. \$1,450,000
- C. \$1,475,000
- D. \$1,550,000

Use the following information to answer questions 4 and 5. (Managerial Acc. P: 290)

On January 1, 20A, the Atlantic Company's beginning inventory was \$400,000. During 20A, the company purchased \$1,900,000 of additional inventory. On December 31, 20A, Atlantic's ending inventory was \$500,000.

4. The inventory turn-over of the company is:

- A. 3
- B. 4
- C. 5
- D. 6

5. The age of inventory for 20A is:

- A. 89 days

- B. 90.5 days
- C. 91.3 days
- D. 92 days

6. The following information is given for Sailor Company, Inc.: (Managerial Acc. P: 70)

Unit selling price	\$ 250
Variable cost per unit	130
Fixed costs	26,000
Tax rate	40%

The number of units that should be produced to achieve an after-tax target income of \$6,000 should be:

- A. 200 units
 - B. 300 units
 - C. 400 units
 - D. 500 units
7. If the demand for a good is inelastic, then a(n) Feb 2019
- A. decrease in price will increase total revenue.
 - B. increase in price will increase total revenue.
 - C. increase in price will have no effect on total revenue.
 - D. Any of the above.
8. Which of the following actions would a more risk averse management team likely take? Feb 2020
- A. Purchasing forward contracts to lock in a certain amount of local currency in exchange for foreign currency to be received from sales in a foreign country.
 - B. Renegotiating an equipment lease under which the company's lease payment is based on monthly sales to a new contract in which the company would make a fixed monthly payment regardless of sales.
 - C. Reducing standards to grant credit to customers.
 - D. Moving a manufacturing facility next to a river.
9. Sally Co has two manufacturing divisions, both of which are profit centers. Sally Co is considering how to assess the performance of the divisional managers. Division X employed capital is \$300,000 and is currently generating a profit of \$48,000. In order to try and improve the current performance, the manager of Division X is considering 3 new projects: (Nov. 2021)

	Capital Investment (\$)	Profit (\$)
Project 1	96,000	24,000
Project 2	100,000	18,000
Project 3	200,000	44,000

Which combination of projects will maximize the divisions ROI?

- A. Project 1 only
- B. Both projects 1 & 2
- C. Both projects 1 & 3
- D. All three projects

10. Using the facts as in the previous question and assuming that Sally Co's cost of capital is 10% and projects are ranked according to their Residual Income (RI), which project will be the priority choice for Division X? (Nov. 2021)
- A. Project 1
 - B. Project 2
 - C. Project 3
 - D. Can not be determined without more information
11. A corporation has \$90 million in current assets. If the corporation has a quick ratio of 0.9 and a net working capital of \$15 million, what is the current ratio? (2014)
- A. 1.5
 - B. 1.4
 - C. 1.3
 - D. 1.2
12. The dollar value of a company's ending inventory on its balance sheet was \$500,000, \$600,000, and \$400,000 for Years 1, 2, and 3, respectively. In preparing a horizontal analysis with Year 1 as the base year, the percentage change shown for Year 3 would be:
Feb 2019
- A. 80%.
 - B. 20%.
 - C. (20)%.
 - D. (25)%.
13. If Dexter Industries has a beta value of 1.0, then its: July 2018
- A. return should equal the risk-free rate.
 - B. price is relatively stable.
 - C. expected return should approximate the overall market.
 - D. volatility is low.

Correct answer c. If a firm has a beta value of 1.0, the stock has the same systematic risk as the market as a whole and should rise and fall with the market

Use the following information to answer numbers 14 and 15:

The securities of firms Y and Z have the expected return and standard deviations given below; the expected correlation between the two stocks (ρ_{AB}) is 0.1.

	Expected Return (r)	Standard Deviation (σ)
Y	14%	20%
Z	9%	30%

14. The return for the portfolio 60 percent Y – 40 percent Z is:
- A. 10%
 - B. 11%
 - C. 12%
 - D. 13%

15. The risk of the portfolio 50 percent Y – 50 percent Z is:

- A. 15.48%
- B. 16.84%
- C. 17.48%
- D. 18.84%

Solution:

(c) 60 percent A – 40 percent B:

$$r_p = w_A r_A + w_B r_B = (0.6)(14\%) + (0.4)(9\%) = 12\%$$

$$\sigma_p = \sqrt{w_A^2 \sigma_A^2 + w_B^2 \sigma_B^2 + 2w_A w_B \rho_{AB} \sigma_A \sigma_B}$$

$$= \sqrt{(0.6)^2 (0.2)^2 + (0.4)^2 (0.3)^2 + 2(0.6)(0.4)\rho_{AB}(0.2)(0.3)}$$

$$= \sqrt{0.0144 + 0.0144 + 0.0288\rho_{AB}} = \sqrt{0.0288 + 0.0288(0.1)} = \sqrt{0.03168} = 0.1780 = 17.8\%$$

b-

(d) 50 percent A–50 percent B:

$$r_p = (0.5)(14\%) + (0.5)(9\%) = 11.5\%$$

$$\sigma_p = \sqrt{(0.5)^2 (0.2)^2 + (0.5)^2 (0.3)^2 + 2(0.5)(0.5)\rho_{AB}(0.2)(0.3)}$$

$$= \sqrt{0.01 + 0.0225 + 0.03\rho_{AB}} = \sqrt{0.0325 + 0.03\rho_{AB}}$$

$$= \sqrt{0.0325 + 0.03(0.1)} = \sqrt{0.0355} = 0.1884 = 18.84\%$$

The following information applies to numbers 16 and 17 (Dec. 2017)

Pacific Corporation's common stock account for the year 2016 showed:

Common stock, \$10 par value \$45,000

The following data are provided relative to 2016:

	2016
Dividends	\$2,250
Market price per share	\$20
Earnings per share	\$2.13

16. What is the dividend yield?

- A. 0.015
- B. 0.025
- C. 0.036
- D. 0.045

17. What is the dividend payout?

- A. 0.18
- B. 0.22
- C. 0.23
- D. 0.32

Use the following information to answer questions 18-20. (Dec. 2019)

Seagull Corporation paid an annual cash dividend of 5\$ per share last year. The required rate of return is 13%. Lana expects no change in the policy of dividend distribution (5\$ per share per year): she does not expect any growth in dividends at all. Lara expects dividends to grow at a constant growth rate of 5%. Fadi expects dividends to grow at an annual rate of 10% for the next 3 years and then to a normal growth rate of 5%.

18. Based on Lana's expectation, the price of the common stock today is:

- A. \$28.15
- B. \$30.25
- C. \$35.14
- D. \$38.46

19. Based on Lara's expectation, the price of the common stock today is:

- A. \$61.48
- B. \$63.36
- C. \$65.63
- D. \$68.24

20. Based on Fadi's expectation, the price of the common stock today is:

- A. \$73.267
- B. \$74.748
- C. \$75.341
- D. \$76.175

II. Exercises

Exercise 1

201-

Right-Away Company had a current ratio of 2.5 on June 30 of the current year. On that date, the company's assets were as follows:

Cash	\$ 80,000
Accounts receivable, net	460,000
Inventory	750,000
Prepaid expenses	10,000
Plant and equipment, net	1,900,000
Total assets	\$3,200,000

Required:

1. What was the company's working capital on June 30?
2. What was the company's acid-test ratio on June 30?

3. The company paid an account payable of \$100,000 immediately after June 30.
 - a. What effect did this transaction have on the working capital? Show computations.
 - b. What effect did this transaction have on the current ratio? Show computations.

Solution

1. Current assets (\$80,000 + \$460,000 + \$750,000 + \$10,000)	\$1,300,000
Current liabilities (\$1,300,000 ÷ 2.5)	<u>520,000</u>
Working capital	<u>\$ 780,000</u>

2.

$$\text{Acid-test ratio} = \frac{\text{Cash} + \text{Marketable securities} + \text{Accounts receivable} + \text{Short-term notes}}{\text{Current liabilities}}$$

$$= \frac{\$80,000 + \$0 + \$460,000 + \$0}{\$520,000} = 1.04 \text{ (rounded)}$$

3. a. Working capital would not be affected by a \$100,000 payment on accounts payable:

Current assets (\$1,300,000 – \$100,000)	\$1,200,000
Current liabilities (\$520,000 – \$100,000)	<u>420,000</u>
Working capital	<u>\$ 780,000</u>

- b. The current ratio would increase if the company makes a \$100,000 payment on accounts payable:

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$= \frac{\$1,200,000}{\$420,000} = 2.9 \text{ (rounded)}$$

Exercise 2

Martin Company is considering the purchase of a new piece of equipment. Relevant information concerning the equipment follows:

Purchase cost	\$180,000
Annual cost savings that will be provided by the equipment	\$37,500

Life of the equipment

12 years

Required: (ignore income taxes)

1. Compute the payback period for the equipment. If the company rejects all proposals with a payback period of more than four years, would the equipment be purchased?
2. Compute the simple rate of return on the equipment. Use straight line depreciation based on the equipment's useful life. Would the equipment be purchased if the company's required rate of return is 14%?

Solution

1. The payback period is:

$$\begin{aligned} \text{Payback Period} &= \frac{\text{Investment required}}{\text{Net annual cash inflow}} \\ &= \frac{\$180,000}{\$37,500 \text{ per year}} = 4.8 \text{ years} \end{aligned}$$

No, the equipment would not be purchased, because the 4.8-year payback period exceeds the company's maximum 4-year payback period.

2. The simple rate of return would be computed as follows:

Annual cost savings.....	\$37,500
Less annual depreciation (\$180,000 ÷ 12 years)	<u>15,000</u>
Annual incremental net operating income	<u>\$22,500</u>

$$\begin{aligned} \text{Simple rate of return} &= \frac{\text{Annual incremental net operating income}}{\text{Initial investment}} \\ &= \frac{\$22,500}{\$180,000} = 12.5\% \end{aligned}$$

The equipment would not be purchased because its 12.5% rate of return is less than the company's 14% required rate of return.

Exercise 3

A company is planning its annual Riverboat Extravaganza. The assigned committee has assembled the following expected costs for the event:

Dinner (per person)	\$7
Favors and program (per person)	\$3

Band	\$1,500
Tickets and advertising	\$700
Riverboat rental	\$4,800
Floorshow and strolling entertainers	\$1,000

The committee members would like to charge \$30 per person for the evening's activities.

Required:

1. Compute the break-even point for the Extravaganza (in terms of the number of persons that must attend).
2. Assume that only 250 people attended the Extravaganza last year. If the same number attend this year, what price per ticket must be charged to break even?

Solution

The contribution margin per person would be:

Price per ticket	\$30
Variable expenses:	
Dinner.....	\$7
Favors and program.....	<u>3</u> <u>10</u>
Contribution margin per person.....	<u>\$20</u>

The fixed expenses of the Extravaganza total \$8,000; therefore, the break-even point would be computed as follows:

$$\begin{aligned}
 \text{Profit} &= \text{Unit CM} \times Q - \text{Fixed expenses} \\
 \$0 &= (\$30 - \$10) \times Q - \$8,000 \\
 \$0 &= (\$20) \times Q - \$8,000 \\
 \$20Q &= \$8,000 \\
 Q &= \$8,000 \div \$20 \\
 Q &= 400 \text{ persons; or, at } \$30 \text{ per person, } \$12,000
 \end{aligned}$$

Alternative solution:

$$\begin{aligned}
 \text{Unit sales to break even} &= \frac{\text{Fixed expenses}}{\text{Unit contribution margin}} \\
 &= \frac{\$8,000}{\$20 \text{ per person}} = 400 \text{ persons}
 \end{aligned}$$

or, at \$30 per person, \$12,000.

2. Variable cost per person (\$7 + \$3).....	\$10
Fixed cost per person (\$8,000 ÷ 250 persons)	<u>32</u>

Ticket price per person to break even \$42

Exercise 4 p: 325 financial management

The milestone company is planning to invest \$10 million in an expansion program which is expected to increase earnings before interest and taxes by \$2.5 million. The company currently is earning \$5 per share on 1 million shares of common standing. The capital structure prior to the investment is:

Debt	\$10,000,000
Equity	30,000,000
	\$40,000,000

The expansion can be financed by sale of 200,000 shares at \$50 net each, or by issuing long-term debt at a 6% interest cost. The firm's recent profit and loss statement was as follows:

Sales	\$101,000,000
Variable cost	\$ 60,000,000
Fixed cost	30,500,000
	\$ 90,500,000
Earnings before interest and taxes	\$ 10,500,000
Interest	500,000
Earnings before taxes	\$ 10,000,000
Taxes (50%)	5,000,000
Earnings after taxes	\$ 5,000,000

1. Assuming the firm maintains its current earnings and achieves the anticipated earnings from the expansion, what will the earnings per share be if:
 - a. The expansion is financed by debt?
 - b. The expansion is financed by equity?
2. At what level of earnings before interest and taxes will the earnings per share under either alternative be the same amount?

SOLUTION

(a)		(1)	(2)
		Debt-Financed	Equity-Financed
	Earnings before interest and taxes—present	\$10,500,000	\$10,500,000
	Added earnings—expansion	<u>2,500,000</u>	<u>2,500,000</u>
		\$13,000,000	\$13,000,000
	Interest	<u>1,100,000</u>	<u>500,000</u>
		\$11,900,000	\$12,500,000
	Taxes	<u>5,950,000</u>	<u>6,250,000</u>
	Net income	<u>\$ 5,950,000</u>	<u>\$ 6,250,000</u>
	Common shares outstanding	<u>1,000,000</u>	<u>1,200,000</u>
	Earnings per share	<u>\$5.95</u>	<u>\$5.21</u>

(b)

$$EPS = \frac{(EBIT - I)(1 - t)}{\text{no. of shares}}$$

$$\frac{(EBIT - 1,100,000)(1 - 0.50)}{1,000,000} = \frac{(EBIT - 500,000)(1 - 0.50)}{1,200,000}$$

$$EBIT = \$4,100,000$$