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Hirzeit University
Faculty of Business and Economics
Acct. 333- Midterm Exam

Lecturer: Hind Muhtaseb

First Semester 2020/2021

Student Name and No.: 1183223 - RUBA MT00R

Multiple Choice Questions

D	1	D
C	2	C
B	3	C
A	4	D
A	5	A
A	6	A
D	7	D
C	8	C
C	9	C
A	10	A
C	11	C
B	12	B
B	13	D
C	14	C
B	15	B
D	16	D
C	17	C
B	18	A
A	19	A
C	20	C

17
20

QUESTION 1 (10 POINTS):

Piper Corporation's management has been reviewing the company's profitability and is attempting to improve performance through better planning. The company manufactures three products: L, M, and N. Selected per unit data on these products follow:

	Product L	Product M	Product N
Selling price	\$19	\$30	\$20
Variable Manufacturing	7	19	13
Variable marketing	1	2	1
Machining time required per hour	1 hour	0.50 hour	0.25 hour

The machining time is limited to 200 hours per month. The company's fixed costs are \$1,500 per month. Assuming that the number of units that can be sold of each product is limited to 500 units of L, 350 units of M, and 400 units of N.

Required:

a- Compute the contribution margin per machine hour for each of the three products

$CM/unit = P - VC/unit$
 $CM/unit$
 $CM/machine\ hour$

Product L	Product M	Product N
(19 - 8)	(30 - 21)	(20 - 14)
\$11	\$9	\$6
<u>\$11</u>	<u>\$18</u>	<u>\$24</u>

b- What product or product combination (in quantities) must be sold to obtain a maximum profit?

Total capacity → 200 hours/month

Product

~~L → 500~~

$N \rightarrow 400 \times 0.25 = 100$

$M \rightarrow 350 \times 0.5 = 175$ } $200 \times 0.5 = 100$

∴ [400 unit Product N, 200 unit product M and no unit Product L]

c- What is the maximum profit obtainable assuming unlimited demand?

$800 \times 0.25 = 200$

→ Product N

$800 \times \$6 = \$4,800$

→ Max profit

F.C.

QUESTION 2: CHOOSE THE CORRECT ANSWER AND FILL UP YOUR ANSWERS ON THE ANSWER SHEET ABOVE (20 POINTS)

1. Financial accounting _____
- A. focuses on estimating future revenues, costs, and other measures to forecast activities and their results
 - B. provides information about the company as a whole
 - C. reports information that has occurred in the past that is verifiable and reliable
 - D. both b and c

2. Which of the following is/are a characteristic of managerial accounting?
- A. cannot be applied in service organization ✗
 - B. must follow GAAP ✗
 - C. emphasis on relevance of data, rather than precision
 - D. both a and c above

3. Werth Company produces tie racks. The estimated fixed costs for the year are \$288,000, and the estimated variable costs per unit are \$14. Werth expects to produce and sell 60,000 units at a price of \$20 per unit. By how much can sales revenue drop before Werth incurs a loss?

- A. \$12,000
- B. \$240,000
- C. \$72,000
- D. \$360,000

FC = \$288,000
 VC/unit = \$14
 Q = 60,000 unit
 P = \$20

360,000

Sale 1,200,000
 VC 840,000
 CM 360,000
 FC 288,000
72,000

4. When evaluating a make-or-buy decision, which of the following needs to be considered?
- A. alternative uses of the production capacity
 - B. the original cost of the production equipment
 - C. pension costs to the current employees ✗
 - D. material-handling costs that cannot be eliminated

5. Which of the following is true of an opportunity cost?
- A. it is the income foregone by not using a resource in an alternative way.
 - B. the higher the opportunity costs, the lower is the relevant cost.
 - C. it is recorded as an expense in the accounting records.
 - D. it is an unavoidable cost that cannot be changed no matter what action is taken.

6. Hermantic, Inc. can produce 100 units of a component part with the following costs:

Direct Materials	\$30,000	
Direct Labor	13,000	
Variable Overhead	32,000	
Fixed Overhead	22,000	
	<u>97,000</u>	

88,000
 10,000
98,000

If Hermantic, Inc. can purchase the component part externally for \$88,000 and only \$12,000 of the fixed costs can be avoided, what is the correct make or buy decision?

- A. Make and save \$1,000 ✓
- B. Buy and save \$1,000
- C. Make and save \$5,000
- D. Buy and save \$13,000

7. Which of the following is /are false of historical costs?
- A. they are used for decision making. ✗

- B. they are always accounted as opportunity costs.
 C. they cannot be fixed costs.
 D. all of the above false.
 8. Zephram Corporation has a plant capacity of 200,000 units per month. Unit costs at capacity are:

Direct materials	\$4.00
Direct labor	6.00
Variable overhead	3.00
Fixed overhead	1.00
Marketing—fixed	7.00
Marketing variable	3.60

5,700,000
3,154,000
<hr/>
2,546,000
<hr/>
OI 1,026,000

Current monthly sales are 190,000 units at \$30.00 each. Q, Inc., has contacted Zephram Corporation about purchasing 2,000 units at \$24.00 each. Current sales would not be affected by the one-time-only special order. What is Zephram's change in operating profits if the one-time-only special order is accepted?

- A. \$14,800 increase
 B. \$17,200 increase
 C. \$22,000 increase
 D. \$33,200 increase

9. Rambo Company has three products, A, B, and C. The following information is available:

	Product A	Product B	Product C
Sales	\$60,000	\$90,000	\$24,000
Variable costs	36,000	48,000	15,000
Contribution margin	24,000	42,000	9,000
Fixed costs:			
Avoidable	6,000	15,000	4,000
Unavoidable	7,000	9,000	5,400
Operating income	\$11,000	\$18,000	\$ (400)

Incremental cost = 15,000 + 5,400 = 20,400

Rambo Company is thinking of dropping Product C because it is reporting a loss. Assuming Rambo drops Product C and does NOT replace it, operating income will _____.

- A. increase by \$400
 B. increase by \$4,000
 C. decrease by \$5,000
 D. decrease by \$9,400

$80 - x = 200 + x$
 $-200 \quad -200$

10. If a company had a contribution margin of \$200,000 and a contribution margin ratio of 40%, total variable costs must have been

- A. \$300,000.
 B. \$120,000.
 C. \$500,000.
 D. \$80,000.

CM = 0.4
 Sales
 $\therefore \text{Sales} = \frac{200,000}{0.4}$
 $\text{VC} = 300,000$

200,000	0.4 Sales	80,000
200,000	=	200,000
sales		80,000
		VC 160,000
		CM 200,000

11. How much sales are required to earn a target net income of \$80,000 if total fixed costs are \$100,000 and the contribution margin ratio is 40%?

- A. \$250,000.
 B. \$405,000.
 C. \$450,000.

$\frac{\text{Sales}}{\text{CM}} = 0.4$
 $\frac{\text{Sales}}{\text{Sales}} \times 100\% = 40\%$
 $\frac{\text{CM}}{\text{Sales}} = 0.4$

D. \$200,000.

12. Reese Company requires sales of \$2,000,000 to cover its fixed costs of \$900,000 and to earn net income of \$400,000. What percent are variable costs of sales?

- A. 20%.
- B. 35%.
- C. 45%.
- D. 65%.

$$2,000,000 - 900,000 - x = 400,000$$

$$x = 700,000$$

$$\frac{700,000}{2,000,000} = 0.35$$

13. A company with an operating income of \$68,000 and a contribution margin ratio of 54% has a margin of safety of:

- A. \$36,720.
- B. \$125,925.
- C. \$147,826.
- D. It is not possible to determine the margin of safety from the information provided.

$$MOS = Sales - BEP$$

$$\frac{CM}{Sales} = 0.54$$

14. Barkley Company sells two products with the following per unit data:

	<u>Standard</u>	<u>Deluxe</u>
<i>Selling price/unit</i>	\$75	\$120
<i>Variable costs/unit</i>	<u>45</u>	<u>60</u>
<i>Contribution margin/unit</i>	<u>\$30</u>	<u>\$ 60</u>
<i>Sales mix</i>	3	2

If fixed costs are \$630,000, the number of standard and deluxe units that Barkley must sell to break even is

- A. 1,800 standard and 1,200 deluxe.
- B. 3,600 standard and 2,400 deluxe.
- C. 9,000 standard and 6,000 deluxe.
- D. 21,000 standard and 14,000 deluxe.

$$BEP = \frac{FC}{CM/unit} = \frac{630,000}{210} = 3,000 \text{ units}$$

$$(3 \times 30 + 2 \times 60)$$

15. When a greater proportion of costs are fixed costs, then _____.

- A. a small increase in sales results in a small decrease in operating income
- B. when demand is low the risk of loss is high
- C. a decrease in sales reduces the total fixed cost per unit
- D. a decrease in sales reduces the cost per unit

$$\frac{Sales (UC)}{CM}$$

$$\frac{(FC) \uparrow}{OI}$$

16. If a company has a degree of operating leverage of 3.0 and sales increase by 25%, then _____.

- A. total fixed costs will increase by 75%
- B. total costs will increase by 75%
- C. profit will increase by 30%
- D. profit will increase by 75%

17. Which of the following costs always differ among future alternatives?

- A. fixed costs
- B. historical costs
- C. relevant costs
- D. variable costs

18. Quantitative factors _____.

- A. include financial information, but not nonfinancial information
- B. can be expressed in monetary terms ✓
- C. are always relevant when making decisions ✓
- D. include employee morale ✗

19. Which of the following costs is NOT considered to calculate the minimum acceptable price of a one-time-only special order?

- A. marketing costs
- B. direct material costs ✓
- C. indirect material costs ✓
- D. special design costs ✓

20. Piels Corporation produces a part that is used in the manufacture of one of its products. The costs associated with the production of 10,000 units of this part are as follows:

<i>Direct materials</i>	<i>\$ 90,000</i>
<i>Direct labor</i>	<i>130,000</i>
<i>Variable factory overhead</i>	<i>60,000</i>
<i>Fixed factory overhead</i>	<i><u>140,000</u></i>
<i>Total costs</i>	<i><u>\$420,000</u></i>

Q = 10,000 units

Of the fixed factory overhead costs, \$60,000 is avoidable.

Assuming no other use of their facilities, the highest price that Piels should be willing to pay for 10,000 units of the part is _____.

- A. \$420,000
- B. \$280,000
- C. \$340,000
- D. \$360,000

QUESTION 1: TRUE/ FALSE

1. Capital budgeting is the process of making long-run planning decisions for investments in projects. T
2. The Required Rate of Return (RRR) is set externally by creditors as the interest rate on long term liabilities. F
3. The internal rate of return for a project is the discount rate that makes the net present value of the project equal to zero. T
4. The present value of an amount to be received in the future will always be more than the actual amount to be received in the future. F
5. Depreciation itself is not a cash flow, but it reduces the amount of taxes that a company must pay. T
6. The payback period method ignores cash flows that occur after the payback period. T
7. Relevant cash flows are expected future cash flows that differ among the alternative uses of investment funds. T
8. In calculating the net initial investment cash flows, any increase in working capital required for the project should be included. T

8

6

QUESTION 2: MULTIPLE CHOICE QUESTIONS

1. The payback period is criticized because:

- A. It is difficult to apply
- B. It ignores the time value of money
- C. It is difficult to understand conceptually
- D. All of the above

2. The minimum annual acceptable rate of return on an investment is the _____.

- A. accrual accounting rate of return
- B. required rate of return
- C. internal rate of return
- D. net present value

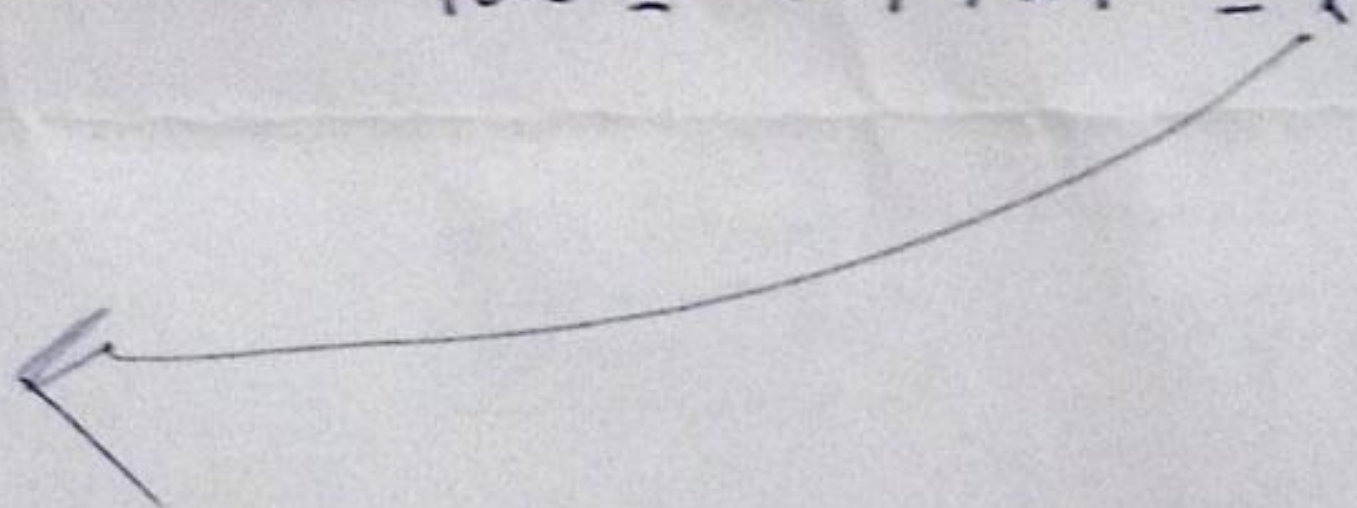
3. The Virginia Company invested in a four-year project at an expected rate of return (discount rate) of 10%. Additional information on the project is as follows:

<u>Year</u>	<u>Net cash inflow</u>	<u>Present value of \$1 at 10%</u>	
1	\$4,000	.909	3,636
2	4,400	.826	3,634
3	4,800	.751	3,605
4	5,200	.683	3,552

What was the amount of the original investment assuming a negative NPV of \$1,000? (Round to nearest dollar)

$$1000 = 14,427 - X$$

- A. \$17,430
- B. \$15,427
- C. \$14,427
- D. \$13,427



4. The net present value method of capital budgeting is preferred over the internal rate-of-return method because _____.

- A. the net present value method is expressed as a percentage of initial investment
- B. the net present values of individual projects can be added to determine the effects of accepting a combination of projects
- C. the percentage return computed under the net present value method is very easy to compare
- D. the calculation under the net present value method is easy as it does not use time value of money

5. Malive Park Department is considering a new capital investment. The following information is available on the investment. The cost of the machine will be \$119,000. The annual cost savings if the new machine is acquired will be \$35,000. The machine will have a 5-year life, at which time the terminal disposal value is expected to be zero. Malive Park is assuming no tax consequences. Malive Park has a 12% required rate of return. What is the payback period for the investment?

4.
3. ✓

A. 4.2 years

B. 3.4 years

C. 5 years

D. 6.8 years

6. AARR indicates the average rate at which _____.

A. a dollar of investment generates after-tax operating income

B. a dollar of after-tax cash flow generates net income

C. a dollar of investment generates a positive cash flow

D. a dollar of after-tax non-operating income generates net income

7. Which of the following is a component of net-initial-investment cash flows?

A. original cost of an old equipment ←

B. cash outflow to purchase a new equipment ←

C. depreciation cost

D. after-tax cash flow from operations

8. The Golden Shades Corporation disposes a capital asset with an original cost of \$280,000 and accumulated depreciation of \$160,000 for a salvage price of \$50,000. Silver Shades's tax rate is 40%.

Calculate the after-tax cash inflow from the disposal of the capital asset.

A. \$28,000

B. \$70,000

C. \$50,000

D. \$78,000

$$BV = 280,000 - 160,000$$

$$120,000 = BV$$

$$\$ 70,000 = \text{loss}$$

9. The Venoid Corporation has an annual cash inflow from operations from its investment in a capital asset of \$16,000 each year for six years. The corporation's income tax rate is 30%. Calculate the total after-tax cash inflow from operations for six years.

A. \$96,000

B. \$67,200

C. \$28,800

D. \$16,000

QUESTION 1: CHOOSE THE CORRECT ANSWER

1. All else being equal, an increase in advertising expenditures will _____

- a. reduce operating income
- b. reduce contribution margin
- c. increase variable costs
- d. increase selling price

13

15

2. Which of the following is *not* an assumption of cost-volume-profit analysis?

- a. The time value of money is incorporated in the analysis.
- b. Costs can be classified into variable and fixed components.
- c. The behavior of revenues and expenses is accurately portrayed as linear over the relevant range.
- d. The number of output units is the only driver.

Questions 3 through 5 are based on the following data.

Tee Times, Inc. produces and sells the finest quality golf clubs in all of Clay County. The company expects the following revenues and costs in 2020 for its Elite Quality golf club sets:

Revenues (400 sets sold @ \$600 per set)	\$240,000
Variable costs	160,000
Fixed costs	50,000

3. How many sets of clubs must be sold for Tee Times, Inc. to reach their breakeven point?

- a. 400
- b. 250
- c. 200
- d. 150

$$BEP_Q = \frac{FC}{CM/unit} = \frac{50,000}{200} = 250 \text{ unit}$$

4. How many sets of clubs must be sold to earn a target operating income of \$90,000?

- a. 700
- b. 500
- c. 400
- d. 300

$$Target_Q = \frac{50,000 + 90,000}{200}$$

5. What amount of sales must Tee Times, Inc. have to earn a target net income of \$63,000 if they have a tax rate of 30%?

- a. \$489,000
- b. \$429,000
- c. \$420,000

$$Target_Q = \frac{565}{565 \times 600} \quad \text{OI} = \frac{63,000}{70\%}$$

$$Target_Q = \frac{90,000 + 50,000}{200}$$

d. \$300,000

6. A company that sells many different types of products should approach C-V-P analysis by assuming that

- a. all products will have the same contribution margin ratio.
- b. products will be sold in a constant mix.
- c. they should calculate a separate break-even calculation for each item.
- d. they will sell equal amounts of each item.

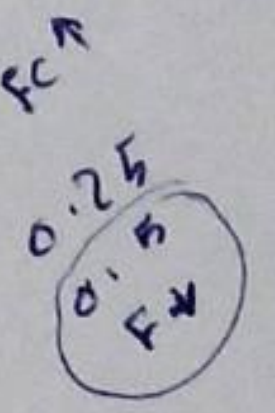
7. In a company with low operating leverage, _____.

- a. fixed costs are more than the contribution margin
- b. contribution margin and operating income are inversely related
- c. there is a higher possibility of net loss than a higher-leveraged firm
- d. less risk is assumed than in a highly leveraged firm

Use the following information for questions 8 and 9.

LSB Company has the following income statement:

Revenues	\$100,000
Variable Costs	<u>40,000</u>
Contribution Margin	60,000
Fixed Costs	<u>30,000</u>
Operating Income	30,000



8. What is LSB's Degree of operating leverage (DOL)?

- a. 3.33
- b. 2.00
- c. 0.50
- d. 1.00

$$\frac{CM}{OI} = \frac{60}{30} = 2$$

9. If LSB's sales increase by \$20,000, what will be the company's operating profit?

- a. \$42,000
- b. \$12,000
- c. \$50,000
- d. \$30,000

10. Stones Manufacturing sells a marble slab for \$1,100. Fixed costs are \$33,000, while the variable costs are \$550 per slab. The company currently plans to sell 210 slabs this month. What is the margin of safety (in dollars) assuming 85 slabs are actually sold?

- a. \$165,000
- b. \$49,500

~~CM~~
BEP = 60
Q

P \$1,100
FC = \$33,000
VC/unit \$550 → CM/unit \$550
Q = ~~210~~ 85 unit

MOS = ~~BEP~~ Sales - BEP
85 - 60 = 25 unit

25 x 1,100 = 27,500

- c. \$27,500
- d. \$33,000

①

QUESTION 2: TRUE/ FALSE

8. If the contribution margin ratio is 40%, it means that every \$1.00 of sales will contribute \$0.40 to covering fixed costs and generating a profit. ~~F~~ T

9. Contribution margin ratio is generally the same as gross margin ratio. ~~F~~

10. When performing cost volume profit analysis with multiple products, it is important to assume the sales mix remains constant. ~~F~~ T

5/5

11. At the breakeven point, total fixed expenses equal total contribution margin.

~~T~~

12. Total variable costs change in direct response to changes in volume or activity.

~~F~~ T