

## SAMPLE QUESTIONS- PART 4

### Sample Essay Question #1.

SaveMore Company is a closely-held investment services group that has been very successful over the past five years, consistently providing most members of the management team with substantial bonuses. In addition, both the chief financial officer and the chief executive officer have received 100% bonuses. SaveMore expects this trend to continue.

Recently, the top management group of SaveMore, which holds 35% of the outstanding shares of common stock, has learned that a major corporation is interested in acquiring SaveMore. SaveMore's management is concerned that this corporation may make an attractive offer to the other shareholders and that management would be unable to prevent the takeover. If the acquisition occurs, this executive group is uncertain about continued employment in the new corporate structure. As a consequence, the management group is considering changes to several accounting policies and practices that, although not in accordance with generally accepted accounting principles, would make the company a less attractive acquisition. Management has told Aram Deerling, SaveMore's controller, to implement some of these changes. Deerling has also been informed that SaveMore's management does not intend to immediately disclose these changes to anyone outside of the immediate top management group.

Answer all of the following requirements:

1. Referring to the IMA Statement of Ethical Professional Practice, evaluate:
  - a. The changes SaveMore Company's top management group is considering.
  - b. Deerling's responsibilities as a management accountant.
  
2. Identify all of the specific steps Deerling should take to resolve the situation in accordance with the IMA Statement of Ethical Professional Practice.

## Suggested Answers – SaveMore Company

1a. The changes SaveMore Company's top management group is considering are evaluated as follows:

- Competence: Top management's request of Deerling to account for the company's information in a manner that is not in accordance with generally accepted accounting principles is in violation of the standard to "perform professional duties in accordance with relevant laws, regulations, and technical standards." Also, the restriction on information disclosure has violated the standard to "provide decision support information and recommendations that are accurate, clear, concise and timely."
- Confidentiality: Top management has violated the ethical standard of "refraining from using confidential information for unethical or illegal advantage" (personal job security).
- Integrity: Top management clearly is in violation of the standard to "avoid apparent conflicts of interest and advise all of any potential conflict."
- Credibility: By telling Deerling to restrict the disclosure of the acquisition information, top management has violated the standard to "disclose all relevant information that could reasonably be expected to influence an intended users understanding of the reports, analyses or recommendations." Also, top management's restriction and distortion of SaveMore's financial information violates the standard to "communicate information fairly and objectively."

1b. Deerling's responsibilities as a management accountant are as follows:

Competence: Deerling must "perform professional duties in accordance with relevant laws, regulations, and technical standards."

Integrity: Deerling must "refrain from engaging in or supporting any activity that may discredit the profession."

Credibility: Deerling must "disclose all relevant information that could reasonably be expected to influence an intended users understanding of the reports, analyses or, recommendations." He must "communicate information fairly and objectively," and "disclose all relevant information that could reasonably be expected to influence an intended user's understanding of the reports."

2. If SaveMore Company has an established policy in place, Deerling should follow those policies on the resolution of ethical conflict. If no policy exists, the specific steps are:

- Discuss with immediate supervisor, or with the next higher level, and successively higher levels, perhaps to the Audit Committee of the Board of Directors or the Chair of the Board of Directors, as the company's top management appears to be fully involved in the situation. Communication of such problems to authorities or individuals not employed or engaged by the organization is not considered appropriate, unless you believe there is a clear violation of the law.
- Clarify relevant ethical issues with confidential discussion with an IMA Ethics Counselor, or other impartial advisor to obtain a better understanding of possible courses of action.
- Consult your own attorney as to legal obligations and rights concerning the ethical conflict.

Sample Essay Question #2.

RealTalk Inc. manufactures standard and specialized video-conferencing equipment. Production of specialized units is generally performed under contract while standard units are produced in accordance with marketing projections. Maintenance of customer equipment is an essential service provided by RealTalk, and accounts for a significant portion of revenue. Recent economic conditions have caused a decline in RealTalk's business. Below is RealTalk's Income Statement for the fiscal year just ended:

RealTalk, Inc.  
Income Statement (\$000 omitted)  
For the Year Ended June 30, Year 4

|                                    |                      |
|------------------------------------|----------------------|
| Equipment sales                    | \$6,000              |
| Revenue from maintenance contracts | <u>1,800</u>         |
| Total sales                        | <u>7,800</u>         |
| <br>                               |                      |
| Cost of goods sold                 | 4,600                |
| Customer maintenance expense       | 1,000                |
| Selling expense                    | 600                  |
| Administrative expense             | 900                  |
| Interest expense                   | <u>150</u>           |
| Total expenses                     | <u>7,250</u>         |
| Income before income taxes         | 550                  |
| Income taxes                       | <u>220</u>           |
| Net income                         | <u><u>\$ 330</u></u> |

RealTalk's return on sales before interest and taxes was 9% for the year just ended, while the industry average was 12%. The company's total asset turnover was 3 times, and its return on average assets before interest and taxes was 27%, both well below industry averages. To improve performance and raise these ratios nearer to, or above, industry averages, the president of RealTalk has established the following goals for the coming year: (1) 11% return on sales before interest and taxes, (2) 4 times total asset turnover, and (3) 35% return on total assets before interest and taxes.

To achieve these goals, RealTalk's management team took into consideration the growing international video-conferencing market and proposed the following actions for the coming year:

- Increase sales prices for equipment by 10%.
- Increase the cost of each unit sold by 3% for needed technology and quality improvements.
- Increase maintenance inventory by \$250,000 at the beginning of the year and add two maintenance technicians at a total cost of \$130,000 to improve customer service and response time. The increased inventory will be financed at an annual interest rate of 12%; no other borrowings or loan reductions are contemplated during the coming year. All other assets will be held to the same levels as the year just ended.
- Increase selling expenses by \$250,000 but hold administrative expenses to the same level as the year just ended.

It is expected that these actions will increase equipment unit sales by 6%, with a corresponding 6% growth in maintenance contracts.

Answer all of the following requirements:

1. Prepare a Pro Forma Income Statement for RealTalk Inc. for the fiscal year ending June 30, Year 5, on the assumption that the proposed actions are implemented as planned and that the increased sales objectives will be met. (Assume a 40% effective tax rate and round all numbers to the nearest thousand, i.e., \$000 omitted.)
2. Determine if the president's goals will be achieved by calculating the following ratios for the year ended June 30, Year 5:
  - a) Return on sales before interest and taxes
  - b) Total asset turnover (use year-end total assets)
  - c) Return on total assets before interest and taxes.
3. Discuss the limitations and difficulties that can be encountered in using ratio analysis, particularly when making comparisons to industry averages.

Suggested Answers - RealTalk

1.

RealTalk Inc.  
Pro Forma Income Statement  
For the Year Ending June 30, Year 5  
(\$000 omitted)

|                              |                         |               |
|------------------------------|-------------------------|---------------|
| Equipment sales              | (\$6,000 x 1.06 x 1.10) | \$6,996       |
| Maintenance contracts        | (\$1800 x 1.06)         | <u>1,908</u>  |
| Total sales                  |                         | 8,904         |
| Cost of goods sold           | (\$4,600 x 1.03 x 1.06) | 5,022         |
| Customer maintenance expense | (\$1,000 + \$130)       | 1,130         |
| Selling expense              | (\$600 + \$250)         | 850           |
| Administrative expense       |                         | 900           |
| Interest expense             | [\$150 + (\$250 x .12)] | <u>180</u>    |
| Total expenses               |                         | 8,082         |
| Income before taxes          |                         | 822           |
| Income taxes                 | (\$822 x .4)            | <u>329</u>    |
| Net income                   |                         | <u>\$ 493</u> |

2a. Return on sales before interest and taxes = EBIT / Sales

$$(\$493k + \$329k + \$180k) / \$8,904k = \$1,002k / \$8,904k = 11.25\%$$

Exceeds 11% goal

b. Total asset turnover = Sales / Total assets at year end

$$\text{Year 4: } 3 = \$7,800k / \text{Total assets at year end}$$

$$\$7,800k / 3 = \$2,600k = \text{Total assets at end of Year 4}$$

$$\text{Year 5: Total asset turnover} = \$8,904k / (\$2,600k + \$250k) = \$8,940k / \$2,850k = 3.12 \text{ times}$$

Does not achieve goal of 4.0

c. Return on total assets before interest and taxes = EBIT / Total assets at year end

$$(\$493k + \$329k + 180k) / (\$2,600k + \$250k) = \$1,002k / \$2,850k = 35.25\%$$

Exceeds 35% goal

3. Identical companies may use different valuation or expense methods, making comparability difficult. Special circumstances not encountered by the industry may be the cause of deviation from the industry. A blend of techniques should be used with ratio analysis when making comparisons to the industry.

Sample Question #3.

AnySport is a wholesale distributor supplying a wide range of moderately priced sporting equipment to large retail stores. About 60% of AnySport's products are purchased from other companies while the remainder of the products are manufactured by AnySport. The company has a Plastics Department that is currently manufacturing molded fishing tackle boxes. AnySport is able to manufacture and sell 8,000 tackle boxes annually, making full use of its direct labor capacity at available work stations. The selling price and costs associated with AnySport's tackle boxes are:

|                            |              |                |
|----------------------------|--------------|----------------|
| Selling price per box      |              | \$86.00        |
| Costs per box              |              |                |
| Molded plastic             | \$ 8.00      |                |
| Hinges, latches, handle    | 9.00         |                |
| Direct labor (\$15.00/hr.) | 18.75        |                |
| Manufacturing overhead     | 12.50        |                |
| Selling expense            | <u>17.00</u> | <u>65.25</u>   |
| Profit per box             |              | <u>\$20.75</u> |

Because AnySport believes it could sell 12,000 tackle boxes if it had sufficient manufacturing capacity, the company has looked into the possibility of purchasing the tackle boxes for distribution. Maple Products, a steady supplier of quality products, would be able to provide up to 9,000 tackle boxes per year at a price of \$68.00 per box delivered to AnySport's facility.

Mark Rochet, AnySport's product manager, has suggested that the company could make better use of its Plastics Department by manufacturing skateboards. To support his position, Rochet has a market study that indicates an expanding market for skateboards and a need for additional suppliers. Rochet believes that AnySport could expect to sell 17,500 skateboards annually at a price of \$45.00 per skateboard. Rochet's estimate of the costs to manufacture the skateboards is:

|                              |             |                |
|------------------------------|-------------|----------------|
| Selling price per skateboard |             | \$45.00        |
| Costs per skateboard         |             |                |
| Molded plastic               | \$5.50      |                |
| Wheels, hardware             | 7.00        |                |
| Direct labor (\$15.00/hr.)   | 7.50        |                |
| Manufacturing overhead       | 5.00        |                |
| Selling expense              | <u>9.00</u> | <u>34.00</u>   |
| Profit per skateboard        |             | <u>\$11.00</u> |

In the Plastics Department, AnySport uses direct labor hours as the application base for manufacturing overhead. Included in the manufacturing overhead for the current year is \$50,000 of factory-wide, fixed manufacturing overhead that has been allocated to the Plastics Department. The unit variable overhead cost associated with the manufactured tackle box is \$6.25 and \$2.50 for the manufactured skateboard. In addition, for each unit of product that AnySport sells, regardless of whether the product has been purchased or is manufactured by AnySport, there is an allocated \$6.00 fixed overhead cost per unit for distribution that is included in the selling cost for all products. Total selling costs for the purchased tackle boxes would be \$10.00 per unit.

Answer all of the following requirements:

1. Calculate the variable overhead per unit for the:
  - a. Purchased Tackle Box.
  - b. Manufactured Tackle Box.
  - c. Skateboard.
  
2. Calculate the contribution margin for the:
  - a. Purchased Tackle Box.
  - b. Manufactured Tackle Box.
  - c. Skateboard.
  
- c. In order to maximize the company 's profitability, AnySport decided to employ linear programming.
  - a. Define Linear Programming.
  - b. Specify the objective function AnySport should use.
  - c. Explain the purpose of the objective function.

Suggested Answers – AnySport

1. Calculation of variable overhead

- a. Purchased Tackle Box. = 0 variable overhead
- b. Manufactured Tackle Box
- |                    |   |   |
|--------------------|---|---|
| Direct labor hours | = | $\$18.75/\$15.00 = 1.25$ hours          |
| Overhead/DLH       | = | $\$12.50/1.25 = \$10.00$                |
| Capacity           | = | 8,000 boxes x 1.25 hours = 10,000 hours |
| Total overhead     | = | 10,000 x \$10.00 = \$100,000            |
| Total VOH          | = | \$100,000 - \$50,000 = \$50,000         |
| VOH per hour       | = | $\$50,000/10,000 = \$5.00$              |
| VOH per box        | = | $\$5.00 \times 1.25 = \$6.25$           |
- c. Skateboard
- |                    |   |                              |
|--------------------|---|------------------------------|
| Direct labor hours | = | $\$7.50/\$15.00 = 0.5$ hours |
| VOH per unit       | = | $\$5.00 \times .5 = \$2.50$  |

2. Unit contribution:

|                        | <u>a. Purchased<br/>Tackle Box</u> | <u>b. Manufactured<br/>Tackle Box</u> | <u>c. Manufactured<br/>Skateboard</u> |
|------------------------|------------------------------------|---------------------------------------|---------------------------------------|
| Selling price          | \$86.00                            | \$86.00                               | \$45.00                               |
| Less:                  |                                    |                                       |                                       |
| Material               | 68.00                              | 17.00                                 | 12.50                                 |
| Direct labor           | --                                 | 18.75                                 | 7.50                                  |
| Manufacturing overhead | --                                 | 6.25                                  | 2.50                                  |
| Selling cost*          | <u>4.00</u>                        | <u>11.00</u>                          | <u>3.00</u>                           |
| Contribution           | <u>\$14.00</u>                     | <u>\$33.00</u>                        | <u>\$19.50</u>                        |

\*\$6 of fixed overhead must be deducted from selling cost.

3.a. Linear programming is used to find the optimal solution to a case where there are multiple constraints.

b. Objective function: Maximize CM = \$14 PTB + \$33MBT + \$19.50S

PTB = Purchased Tackle Box

MBT = Manufactured Tackle Box

S = Skateboards

c. The objective function expresses the goal or objective of the situation. It normally involves either a maximizing (such as total contribution margin) or a minimizing (such as total cost.)