



# CMA Examination Sample Questions and Essays



IMA's Certification for  
Accountants and  
Financial Professionals  
in Business

# CMA Part 1

## Financial Reporting, Planning, Performance, and Analytics - Examination Sample Questions

---

- The statement of shareholders' equity shows a
  - reconciliation of the beginning and ending balances in shareholders' equity accounts.
  - listing of all shareholders' equity accounts and their corresponding dollar amounts.
  - computation of the number of shares outstanding used for earnings per share calculations.
  - reconciliation of the beginning and ending balances in the Retained Earnings account.
- Three years ago, James Company purchased stock in Zebra Inc. at a cost of \$100,000. This stock was sold for \$150,000 during the current fiscal year. The result of this transaction should be shown in the Investing Activities Section of James' Statement of Cash Flows as
  - Zero.
  - \$50,000.
  - \$100,000.
  - \$150,000.
- Which one of the following items would **most** likely cause the planning and budgeting system to fail? The lack of
  - historical financial data.
  - input from several levels of management.
  - top management support.
  - adherence to rigid budgets during the year
- In order to analyze sales as a function of advertising expenses, the sales manager of Smith Company developed a simple regression model. The model included the following equation, which was based on 32 monthly observations of sales and advertising expenses with a related coefficient of determination of .90.

$$S = \$10,000 + \$2.50A$$

S = sales

A = advertising expenses

If Smith Company's advertising expenses in one month amounted to \$1,000, the related point estimate of sales would be

- \$2,500.
  - \$11,250.
  - \$12,250.
  - \$12,500.
- The following performance report was prepared for Dale Manufacturing for the month of April.

	<u>Actual Results</u>	<u>Static Budget</u>	<u>Variance</u>
Sales units	<u>100,000</u>	<u>80,000</u>	<u>20,000F</u>
Sales dollars	\$190,000	\$160,000	\$30,000F
Variable costs	125,000	96,000	29,000U
Fixed costs	<u>45,000</u>	<u>40,000</u>	<u>5,000U</u>
Operating income	<u>\$ 20,000</u>	<u>\$ 24,000</u>	<u>\$ 4,000U</u>

Using a flexible budget, Dale's total sales-volume variance is

- \$4,000 unfavorable.
- \$6,000 favorable.
- \$16,000 favorable.
- \$20,000 unfavorable.

# CMA Part 1

## Sample Essay Question

---

**Brown Printing:**

Brown Printing, a small family-owned business, began operations on March 1, manufacturing premium quality books. The owners have expertise in printing but no accounting knowledge or experience. The company's independent accountant compiled the following data for the month of March. They have also requested an income statement.

Sales price	\$90 per book
Number of units produced	15,000 books
Number of units sold	10,000 books
Direct materials cost	\$15 per book
Direct labor cost	\$6 per book
Variable manufacturing overhead	\$4 per book
Fixed manufacturing overhead	\$240,000 per month
Selling cost	3 per book
Administrative expenses	\$160,000 per month

The owners want to understand these numbers and how they can use the information to run the business.

**REQUIRED:**

1. Define and explain absorption costing and variable costing.
2. Calculate the unit cost of goods sold and prepare the income statement for March using variable costing.
3. Calculate the unit cost of goods sold and prepare the income statement for March using absorption costing.
4. Identify and describe two advantages of using variable costing and two limitations of using absorption costing.
5. Explain why there is a difference in net income between variable costing and absorption costing. Show your calculations.
6. Define and explain throughput costing.

## CMA Part 2

### Strategic Financial Management - Examination Sample Questions

---

1. Gordon has had the following financial results for the last four years.

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>
Sales	\$1,250,000	\$1,300,000	\$1,359,000	\$1,400,000
Cost of goods sold	750,000	785,000	825,000	850,000
Gross profit	500,000	515,000	534,000	550,000
Inflation factor	1.00	1.03	1.07	1.10

Gordon has analyzed these results using vertical common-size analysis to determine trends. The performance of Gordon can **best** be characterized by which one of the following statements?

- a. The common-size gross profit percentage has decreased as a result of an increasing common-size trend in cost of goods sold.
  - b. The common-size trend in sales is increasing and is resulting in an increasing trend in the common-size gross profit margin.
  - c. The common-size trend in cost of goods sold is decreasing which is resulting in an increasing trend in the common-size gross profit margin.
  - d. The increased trend in the common-size gross profit percentage is the result of both the increasing trend in sales and the decreasing trend in cost of goods sold.
2. The functional currency of an entity is defined as the currency
- a. of the entity's parent company.
  - b. of the primary country in which the entity is physically located.
  - c. in which the books of record are maintained for all entity operations.
  - d. of the primary economic environment in which the entity operates.
3. James Hemming, the chief financial officer of a mid-western machine parts manufacturer, is considering splitting the company's stock, which is currently selling at \$80.00 per share. The stock currently pays a \$1.00 per share dividend. If the split is two-for-one, Mr. Hemming may expect the post split price to be
- a. exactly \$40.00, regardless of dividend policy.
  - b. greater than \$40.00, if the dividend is changed to \$0.45 per new share.
  - c. greater than \$40.00, if the dividend is changed to \$0.55 per new share.
  - d. less than \$40.00, regardless of dividend policy.
4. After a competitive bidding process, a company's purchasing director awarded a contract to the lowest bidder, an organization in which she had a personal interest. Since the winning bidder had the lowest price, she did not disclose her relationship with the entity. In fact, she frequently highlighted the fact that the winning bidder had the most experience servicing contracts of this nature. Which one of the values of ethical decision making did the purchasing director violate?
- a. None, because a competitive bidding process was utilized.
  - b. Fairness, because she did not tell the truth about her relationship with the vendor.
  - c. Integrity, because her relationship with the bidder could have impaired her judgment.
  - d. Honesty, because she was not being truthful about the experience of the bidder.

## CMA Part 2

### Strategic Financial Management - Examination Sample Questions

---

5. Garner Products is considering a new accounts payable and cash disbursement process which is projected to add 3 days to the disbursement schedule without having significant negative effects on supplier relations. Daily cash outflows average \$1,500,000. Garner is in a short-term borrowing position for 8 months of the year and in an investment position for 4 months. On an annual basis, bank lending rates are expected to average 7% and marketable securities yields are expected to average 4%. What is the maximum annual expense that Garner could incur for this new process and still break even?
- a. \$90,000.
  - b. \$180,000.
  - c. \$270,000.
  - d. \$315,000.

## CMA Part 2

### Strategic Financial Management - Examination Sample Essay Question

---

**Grandeur Industries:**

Grandeur Industries is currently in the process of reviewing capital budget submissions from its various divisions. Grandeur uses the Capital Asset Pricing Model (CAPM) for a variety of purposes, including the determination of benchmark investment returns. The company's overall cost of capital is 16% and its beta value is 1.2. The risk-free rate is 4% and the expected return on the market is 14%. The following projects from different divisions are under consideration and there is no capital rationing in effect.

<u>Project</u>	<u>Internal Rate of Return</u>	<u>Project Beta</u>
A	16%	1.4
B	18%	1.6
C	12%	0.7
D	17%	1.1

**REQUIRED:**

1. Calculate the required return for all four projects. Show your calculations.
2. Identify which of the four projects under consideration should Grandeur accept. Support your decision.
3. Define and explain beta.
4. Describe four factors that would impact the beta value that is chosen for use in evaluating a project.
5. Identify alternative approaches to dealing with risk in capital budgeting.

# Answers

## CMA Part 1 - Sample Questions

---

- 1. Correct answer a.** Firms are required to present reconciliations of the beginning and ending balances of their shareholder accounts; this is accomplished by presenting a Statement of Shareholders' Equity
- 2. Correct answer d.** James should include the total value of the sale (\$150,000) in the Investing Activities Section of the Cash Flow Statement.
- 3. Correct answer c.** A budget that is not supported by top management has very little chance of success as subordinates will attach little importance to the budget and will focus on what management considers to be important.
- 4. Correct answer d.**
$$\begin{aligned}\text{Sales (S)} &= \$10,000 + \$2.50A \quad (A = \$1,000) \\ &= \$10,000 + \$2.50 (\$1,000) \\ &= \$10,000 + \$2,500 \\ &= \underline{\underline{\$12,500}}\end{aligned}$$
- 5. Correct answer c.** The sales-volume variance is \$16,000 favorable as shown below.

	Flexible Budget	Static Budget
<u>Units</u>	<u>100,000</u>	<u>80,000</u>
Sales dollars	\$200,000	\$160,000
Variable costs	120,000	96,000
Fixed costs	<u>40,000</u>	<u>40,000</u>
Operating income	<u>\$40,000</u>	<u>\$24,000</u>

$$\text{Sales volume variance} = \$40,000 - \$24,000 = \underline{\underline{\$16,000 F}}$$

# Answers

## CMA Part 1 - Sample Essay Question

---

### Brown Printing:

1. Absorption costing (also called full costing) includes fixed manufacturing overhead cost in the cost of inventory. This method is required by GAAP and has been prepared using the traditional external reporting format (gross margin format). Under this method, the fixed manufacturing overhead was treated as a product cost. Only the portion of fixed manufacturing overhead assigned to the sold units was expensed in the current period.

Variable costing includes only variable costs (direct labor, direct material, variable manufacturing cost) in the cost of inventory. Fixed manufacturing overhead is included in the income statement as a period cost.

2. Direct materials \$15 + Direct labor \$6 + Variable manufacturing overhead \$4 = Unit Cost of Goods sold \$25.

Sales	\$900,000
Variable cost of goods sold (\$25 x 10,000 units)	250,000
Variable selling	30,000
Contribution margin	620,000
Fixed manufacturing overhead	240,000
Administrative expenses	160,000
Net income	<u>\$220,000</u>

3. The unit cost of goods sold is calculated as follows:

Direct materials + Direct labor + Variable manufacturing overhead + Fixed manufacturing overhead = \$15 + 6 + 4 + (\$240,000/15,000 books) = \$15 + 6 + 4 + \$16 = \$41.

Sales revenue	\$900,000
Cost of goods sold	<u>410,000</u>
Gross margin	490,000
Selling expenses	30,000
Administrative expenses	160,000
Net income	<u>\$300,000</u>

4. Advantages of variable costing

- It makes better sense to expense fixed manufacturing overhead since it will be incurred each period regardless of the number of units sold or produced.
- No incentive to overproduce inventory because profit is strictly a function of sales volume (not production volume).
- Better for internal decision making since this method breaks costs out into variable and fixed components.
- Contribution format supports cost-volume-profit analysis and other short-run decision making.

### Limitations of absorption costing

- The fixed manufacturing overhead assigned to the unsold units has been absorbed on the balance sheet as part of the inventory cost.
- Any difference between the number of units produced and the number of units sold will change the results.
- This method can lead to managers overproducing inventory to obtain better financial results.
- This method is not useful for internal decision making since it does not break out variable and fixed costs to support cost-volume-profit analysis.



## Answers

### CMA Part 1 - Sample Essay Question

---

- 5.** The \$80,000 difference in net income under the two methods represents the value of the fixed manufacturing overhead included ending inventory. 5,000 more books were produced than sold. The fixed manufacturing overhead at \$16 per unit means  $\$16 * 5,000 = \$80,000$  more is included in ending inventory under absorption. Under variable, this \$80,000 is expensed, reducing net income.
- 6.** Throughput costing is known as an extreme version of variable costing. It is also known as super-variable costing. Under throughput costing, direct material is the only inventoriable cost. Direct labor and variable manufacturing overhead are treated as period costs. Fixed manufacturing overhead is treated as a period cost, the same as under variable costing.

# Answers

## CMA Part 2 - Sample Questions

---

1. **Correct answer a.** Gordon's common-size gross profit percentage has decreased as a result of an increasing common-size trend in cost of goods sold as shown below.

	Year 1	Year 2	Year 3	Year 4
Sales	100%	100%	100%	100%
Cost of goods sold (÷ Sales)	60.0%	60.3%	60.7%	60.7%
Gross profit (÷ Sales)	40.0%	39.6%	39.2%	39.2%

2. **Correct answer d.** A firm's functional should be the currency of the primary economic environment in which the firm operates and should be selected on the basis of several economic factors including cash flow, sales price, and financing indicators.
3. **Correct answer c.** The post-split price of the stock should be greater than \$40.00 if the dividend changed to \$.55 as the dividend yield will have increased.
4. **Correct answer c.** Integrity refers to being whole, sound and in an unimpaired condition. It relates to open communication, transparency and relationships. The Director of Purchasing's relationship with the winning bidder could have impaired her judgment and her lack of transparency implies that she knew such behavior was inappropriate.
5. **Correct answer c.** Garner could incur up to \$270,000 of expense and still break even due to savings of \$270,000 as shown below.

Interest expense avoided	=	(3 × \$1,500,000) × [(0.07 ÷ 12) × 8]
	=	\$4,500,000 × .046666
	=	\$210,000
Additional income earned	=	(3 × \$1,500,000) × [(0.04 ÷ 12) × 4]
	=	\$4,500,000 × .013333
	=	\$60,000
Total savings	=	\$210,000 + \$60,000
	=	\$270,000

# Answers

## CMA Part 2 - Sample Essay Question

---

### Grandeur Industries:

1. The Capital Asset Pricing Model (CAPM) when used in an investment analysis context postulates that the return on an investment should be at least equal to the Risk-Free Rate plus a Risk Premium. The Risk Premium is based on the risk (volatility) of the investment relative to the overall market (as measured by Beta) times the incremental return on the market above the risk-free rate. The model can be expressed as follows;

$$\text{Required Return} = r_f + (r_m - r_f) \times \beta$$

Where:  $r_f$  = the Risk-Free rate

$r_m$  = return on the market

$\beta$  = the Beta value for the investment, a measure of risk

For the various projects:

Project A: Required Return =  $4\% + (14\% - 4\%) \times 1.4 = 18\%$

Since the Internal Rate of Return (IRR) of 16% is less than the required 18%, the project should be REJECTED.

Project B: Required Return =  $4\% + (14\% - 4\%) \times 1.6 = 20\%$

Since the Internal IRR of 18% is less than the required 20%, it should be REJECTED

Project C: Required Return =  $4\% + (14\% - 4\%) \times 0.7 = 11\%$

Since the IRR of 12%, is greater than the required 11%, it should be ACCEPTED.

Project D: Required Return =  $4\% + (14\% - 4\%) \times 1.1 = 15\%$

Since the IRR of 17%, is greater than the required 15%, it should be ACCEPTED.

The capital asset pricing model allows firms (users) to assess the size of risk premium necessary to compensate for bearing risk. It is a way to estimate the required rate of return on a security or investment. Once the required return has been determined it lets the user know of the expected return from the investment is sufficient to warrant acceptance of the investment.

2. Grandeur should accept project C and D since the both the IRRs of the projects are greater than their required rate of return.
3. Beta = Measure of a stock's volatility in relation to market.

Market beta = 1

A stock that moves > market, beta > 1; if < market, < 1.

High beta stocks are riskier but potential for higher returns and vice versa.

4. Factors that have an influence on the Beta value for a project include:

- The industry that the Division undertaking the project is in and its risk characteristics.
- Experience the division has with similar projects, if any.
- Ability of the Division to realize estimated returns on projects in the past.
- Strength of the management team of the division.
- Level of competition expected.
- The geographical location of the project. Certain countries are riskier to operate in than others.
- The degree to which the project involves new technology or unproven operating conditions.

## Answers

### CMA Part 2 - Sample Essay Question

---

- 5.**
- a. Informal method. NPVs are calculated at the firms' desired rate of return, and the possible projects are individually reviewed.
  - b. Risk-adjusted discount rates. Adjusting the rate of return upward as the investment becomes riskier
  - c. Certainty equivalent adjustments. Decision maker needs to specify the indifferent point to choose between a certain sum of money and the expected value of a risky sum.
  - d. Simulation analysis. Based on different assumptions, computer is employed to generate many examples of results.
  - e. Sensitivity analysis. Forecasts of NPVs under different scenarios are compared to each other to evaluate how assumption changes about a certain variable may alter the NPV.