

**Certified Management Accountant**  
**Learning Outcome Statements (effective 7/1/04)**  
**(Updated 11-06)**

**PART 1 – BUSINESS ANALYSIS**

**Section A. Business Economics (Levels A and B)**

Part 1 – Section A.1. Factors affecting the individual firm

The candidate should be able to:

- a. demonstrate an understanding of the laws of supply and demand
- b. interpret a graph of supply and demand
- c. demonstrate an understanding of how prices are determined by the interaction of supply and demand
- d. differentiate between changes in demand and changes in the quantity demanded
- e. differentiate between changes in supply and changes in the quantity supplied
- f. identify the market equilibrium price
- g. demonstrate an understanding of how surpluses and shortages affect the market price
- h. calculate the price elasticity of demand
- i. define elastic and inelastic demand and identify each on a graph
- j. estimate total revenue given changes in prices and demand as well as elasticity coefficients
- k. calculate the price elasticity of supply
- l. calculate the cross elasticity of demand and the income elasticity of demand
- m. define externalities and identify their impacts
- n. apply the law of supply and demand and the concepts of elasticity of supply and demand to government intervention in the market; such as price supports, minimum wages, rent control, mandated regulation, etc.
- o. identify the major provisions of U.S. Federal antitrust legislation, including the Sherman Act, the Clayton Act, the Robinson-Patman Act, the Federal Trade Commission Act, and other relevant legislation
- p. list the objectives of antitrust legislation
- q. identify antitrust enforcement sanctions available to the Federal government
- r. demonstrate an understanding of government regulation of natural monopolies
- s. identify the impact of antitrust regulation on a firm
- t. identify the impact of antitrust regulation on an industry
- u. identify the impact of government regulation on a firm's sales, prices, and costs,
- v. identify the impact of government regulation on an industry
- w. determine the impact of economic factors on the demand for a firm's product
- x. determine the impact of economic factors on the market price and supply of a firm's factors of production (labor, materials, services, etc)

### Part 1 – Section A.2. Consumption of goods

The candidate should be able to:

- a. define the term utility
- b. differentiate between total utility and marginal utility and show the difference between the two on a graph
- c. demonstrate an understanding of the law of diminishing marginal utility
- d. analyze the relationship of marginal utility theory to the demand curve and to the price elasticity of demand
- e. identify the point of utility maximization
- f. demonstrate an understanding of indifference curves, including the marginal rate of substitution and the consumer's equilibrium position

### Part 1 – Section A.3. Production cost functions

The candidate should be able to:

- a. define explicit and implicit costs
- b. demonstrate an understanding of normal profit as a cost
- c. identify and calculate economic profit
- d. differentiate short-run costs from long-run costs
- e. distinguish between fixed costs and variable costs
- f. identify and calculate total product, marginal product, and average product
- g. define the law of diminishing returns and graphically identify the point of diminishing return
- h. identify and calculate total cost, average fixed cost, average variable cost, and average total cost
- i. identify and calculate marginal cost
- j. interpret the graphical relationship of marginal cost, average variable cost, average fixed cost, and average total cost
- k. demonstrate an understanding of the long-run average total cost curve
- l. define economies of scale, constant returns to scale, and diseconomies of scale
- m. identify and calculate fixed costs and variable costs
- n. contrast economic profit with accounting profit and calculate economic profit given financial statement information and opportunity costs

### Part 1 – Section A.4. Market structures and pricing

The candidate should be able to:

- a. identify the defining characteristics of pure competition, monopoly, monopolistic competition, and oligopoly
- b. differentiate the demand curve of an individual firm in a purely competitive market from the demand curve of the market itself
- c. identify, calculate, and graphically represent average, total, and marginal revenue for a firm in a purely competitive market

- d. identify and define the point of profit maximization for the purely competitive firm in the short-run
- e. identify, calculate, and graphically represent average, total, and marginal cost for a firm in a purely competitive market
- f. demonstrate an understanding of the short-run equilibrium price for the firm and for the industry in a purely competitive market
- g. demonstrate an understanding of profit maximization in the long run for the purely competitive firm
- h. identify, calculate, and graphically represent the demand, marginal revenue, and total revenue of a pure monopolist
- i. determine the point of profit maximization for a monopolist
- j. determine the economic consequences of monopoly
- k. identify and graphically represent the demand curve for a monopolistically competitive firm
- l. identify and define the point of profit maximization for a monopolistically competitive firm in the short run
- m. explain the long-run profit for a monopolistically competitive firm
- n. identify forms of non-price competition
- o. demonstrate an understanding of the kinked demand curve of an oligopoly
- p. predict the likely effects of boycotts and cartels on prices and output
- q. demonstrate an understanding of the factors impacting a firm in an oligopoly
- r. determine the impact of market structures on a firm

Part 1 – Section A.5. The economy as a system of markets

The candidate should be able to:

- a. explain the nature and significance of resource planning
- b. define derived demand
- c. define and calculate marginal revenue product and marginal revenue cost
- d. identify the determinants of resource demand
- e. define substitution resources and complementary resources
- f. apply the principles of elasticity to resource demand
- g. demonstrate an understanding of the profit maximizing combination of resources
- h. contrast nominal wages and real wages
- i. describe how productivity affects the level of wages
- j. compare labor demand and labor supply in a purely competitive market and in a monopoly
- k. determine the impact of unions on the level of wages
- l. demonstrate an understanding of the issues related to the minimum wage
- m. identify the impact of unionization on a firm
- n. identify the extent to which the minimum wage impacts a firm

## Part 1 – Section A.6. Issues in macroeconomics

The candidate should be able to:

- a. identify the controversies surrounding the issues of inflation, unemployment, and economic growth
- b. define the rate of inflation
- c. distinguish nominal from real income
- d. list the macroeconomic effects of inflation
- e. define demand-pull inflation and cost-push inflation
- f. define the unemployment rate
- g. identify and define the different types of unemployment, including frictional unemployment, structural unemployment, and cyclical unemployment
- h. explain full employment, including the concepts of the natural rate of unemployment and the economy's potential output
- i. describe the macroeconomic effects of unemployment
- j. interpret the graphical representation of the trade-off between inflation and unemployment
- k. demonstrate an understanding of aggregate demand and aggregate supply both in the short run and long run, including the graphical representation of both
- l. define economic growth and explain why it is an economic goal
- m. interpret the production possibilities curve
- n. demonstrate an understanding of demand-side and supply-side policies as used to increase economic growth and identify the limitations of each
- o. determine the impact of demand-side and supply-side policies on a firm
- p. determine the impact of inflation on the demand for and price of a firm's output
- q. determine the impact of inflation on the supply and cost of a firm's factors of production

## Part 1 – Section A.7. Domestic output, national income, and price levels

The candidate should be able to:

- a. define Gross Domestic Product (GDP) and demonstrate an understanding of its components
- b. calculate GDP using the expenditures approach and the income approach
- c. define Net Domestic Product (NDP), National Income (NI), Personal Income (PI), and Disposable Income (DI)
- d. distinguish among GDP, NDP, NI, PI, and DI and calculate one from another given relevant data
- e. demonstrate an understanding of the importance of GDP as a measure of a country's economic prosperity
- f. identify the challenges inherent in the calculation of GDP, including data collection and accuracy limitations
- g. demonstrate an understanding of the price level and how it affects the measures of domestic output and national income
- h. define Consumer Price Index (CPI)

- i. differentiate between Nominal GDP and Real GDP
- j. demonstrate an understanding of the index of leading economic indicators as a forecast of GDP

#### Part 1 – Section A.8. Business cycles

The candidate should be able to:

- a. define the term business cycle
- b. define and identify on a graph the phases of the business cycle, including the peak, recession, the trough, and recovery
- c. identify and describe possible causes of business cycles
- d. describe the macroeconomic characteristics of the different phases of the business cycle
- e. determine the impacts of business cycles on a firm's prices and output

#### Part 1 – Section A.9. Fiscal policy

The candidate should be able to:

- a. define fiscal policy and distinguish discretionary from non-discretionary fiscal policy
- b. identify the tools of fiscal policy
- c. infer the macroeconomic consequences of both expansionary and contractionary fiscal policies, including the effect on aggregate demand when the level of government spending and/or taxes are changed
- d. interpret the graphical representation of expansionary and contractionary actions
- e. explain the effects of changes in taxation policies, including the effect on the distribution of income and the effect on resource allocation
- f. explain the effects of public expenditure on the economy, including the redistribution of income and the impact on resource allocation
- g. differentiate a budget deficit from a budget surplus
- h. identify means of financing a budget deficit
- i. define and identify built-in stabilizers
- j. demonstrate an understanding of how a progressive tax system acts as a built-in stabilizer
- k. compare and contrast cyclical and structural deficits
- l. define recognition lag and the crowding-out effect
- m. demonstrate an understanding of how inflation can arise from an expansionary fiscal policy
- n. define supply-side fiscal policy
- o. determine the impact that fiscal policies have on a firm (supply, demand, prices, and costs)

## Part 1 – Section A.10. Money and monetary policy

The candidate should be able to:

- a. define the nature of money, including its functions as a medium of exchange, a unit of account, and a store of value
- b. demonstrate an understanding of the relationship between the interest rate and the demand for money
- c. define and identify the components of M1, M2, and M3
- d. define the velocity of money
- e. identify the role and functions of the Federal Reserve System (the Fed), including the Board of Governors and the Federal Open Market Committee, and demonstrate an understanding of how the Fed operates
- f. demonstrate an understanding of the commercial banking system and the creation of money
- g. define required reserves and excess reserves
- h. explain the monetary multiplier
- i. identify the goal of monetary policy as achieving a full-employment, noninflationary level of total output
- j. list the tools of monetary policy
- k. define money supply and be able to identify the graphical representation of the supply of and demand for money
- l. demonstrate an understanding of how open-market operations, a change in the reserve requirements ratio, and/or a change in the discount rate affect the money supply
- m. identify both the strengths and weaknesses of monetary policy
- n. determine the impact of monetary policy on a firm's availability and cost of funds

## **Section B. Global Business (Levels A and B)**

### Part 1 – Section B.1. Global trade

The candidate should be able to:

- a. define terms commonly associated with global trade, including net exports and net imports
- b. define and demonstrate an understanding of the terms of trade (or exchange ratio)
- c. interpret the production possibilities curves and determine the cost ratio for the two products on the graph
- d. determine the gains from trade and the resulting trading possibilities curve
- e. define and demonstrate an understanding of the principle of comparative advantage
- f. identify the advantages and disadvantages of free trade from the point of view of a country and the point of view of an individual firm
- g. define protectionism and identify the barriers to free trade

- h. define and analyze the effects of tariffs, import quotas, nontariff barriers, voluntary export restrictions, trigger pricing and antidumping rules on a country, an industry, and an individual firm
- i. analyze domestic policies to promote exports, including export subsidies
- j. identify the function of the Export-Import Bank
- k. discuss the arguments used to support protectionism
- l. identify the economic and social costs of protectionism
- m. estimate the impact of protectionism on industries and firms
- n. graphically analyze the supply and demand of exports and imports
- o. differentiate among a customs union, a common market, and an economic union
- p. identify the key international agreements on trade including the European Union, General Agreement on Tariffs and Trade (GATT), North American Free Trade Agreement (NAFTA), and the World Trade Organization (WTO)

#### Part 1 – Section B.2. Foreign exchange

The candidate should be able to:

- a. demonstrate an understanding of a nation's balance of payments
- b. define and identify the components of the current account, the capital account, and the official reserves account
- c. define trade deficits, identify their causes, and explain their implications
- d. calculate the balance of payment deficit or surplus
- e. compare and contrast a flexible or floating exchange-rate system and a fixed exchange-rate system
- f. graphically determine the exchange rate under a flexible exchange-rate system
- g. calculate whether a currency has depreciated or appreciated against another currency over a period of time
- h. infer the effect on the price of goods with a change in the exchange rate
- i. calculate the effective interest rate on a foreign currency loan
- j. identify the determinants of exchange rates under a flexible exchange-rate system
- k. list the advantages and disadvantages of a flexible exchange-rate system
- l. explain the methods used to maintain a fixed exchange rate system, including the use of reserves, trade policies, exchange controls, exchange rationing, and domestic macroeconomic adjustments
- m. describe managed floating exchange rates
- n. analyze the impact of changes in foreign exchange rates on a firm
- o. identify mechanisms available to firms to mitigate the impact of changes in exchange rates

#### Part 1 – Section B.3. Other global topics

The candidate should be able to:

- a. summarize the functions of the World Bank and the International Monetary Fund
- b. define direct foreign investment and demonstrate an understanding of how it can benefit a firm
- c. define an American Depository Receipt (ADR)

- d. identify and explain the benefits of international diversification
- e. define Direct Foreign Investment
- f. identify the risks of direct foreign investment, including political risk and exchange rate risk
- g. demonstrate an understanding of the issues inherent in multinational capital budgeting and financing
- h. calculate the overall expected return and variance of a “portfolio” of projects
- i. identify and explain methods of payment for international trade, including prepayment, letters of credit, sight drafts, time drafts, consignment, and open account
- j. identify and explain common trade financing methods, including cross-border factoring, letters of credit, banker’s acceptances, forfaiting, and countertrade
- k. demonstrate an understanding of how transfer pricing is used by multinational firms to manage their effective worldwide tax rate
- l. identify legal and ethical issues in conducting business worldwide

### **Section C. Internal Controls (Level A)**

#### Part 1 – Section C.1 Risk assessment and controls

The candidate should be able to:

- a. demonstrate an understanding of internal control risk assessment and the management of internal control risk
- b. explain how a company’s organizational structure, policies, objectives, and goals, as well as its management philosophy and style, influence the scope and effectiveness of the control environment
- c. demonstrate an understanding of how the organizational structure defines the key areas of authority and responsibility
- d. identify the Board of Directors’ responsibilities with respect to ensuring that the company is operated in the best interest of shareholders
- e. describe how internal controls are designed to provide reasonable assurance regarding achievement of an entity’s objectives involving (i) effectiveness and efficiency of operations, (ii) reliability of financial reporting, and (iii) compliance with applicable laws and regulations
- f. identify reasons why personnel policies and procedures, particularly with the employment and promotion of competent personnel, are integral to an efficient control environment
- g. define and give examples of segregation of duties
- h. identify and explain why the following four types of functional responsibilities should be performed by different organizations or people: (i) authority to execute transactions, (ii) recording transactions, (iii) custody of assets involved in the transactions, and (iv) periodic reconciliations of the existing assets to recorded amounts
- i. demonstrate an understanding of the importance of independent checks and verification
- j. identify examples of safeguarding controls

- k. explain how the use of pre-numbered forms, as well as specific policies and procedures detailing who is authorized to receive specific documents, is a means of control
- l. define inherent risk, control risk, and detection risk
- m. demonstrate an understanding that risk encompasses both the total dollar value of assets that are exposed to loss, as well as the probability that such a loss will occur
- n. state that controls designed to prevent fraud make perpetration of fraud more difficult, but they are not complete insurance against fraud
- o. identify the major internal control provisions of the Foreign Corrupt Practices Act
- p. identify the major internal control provisions of Sarbanes-Oxley

Part 1 – Section C.2 Internal auditing

The candidate should be able to:

- a. define the internal audit function and identify its functions
- b. demonstrate an understanding of the scope of internal auditing
- c. identify incidents that internal auditors should report to management or the Board of Directors
- d. define a compliance audit and identify its objectives
- e. define an operational audit and identify its objectives

Part 1 – Section C.3 Systems controls and security measures

The candidate should be able to:

- a. identify threats to information systems, including input manipulation, program alteration, direct file alteration, data theft, sabotage, viruses, Trojan horses, and theft
- b. demonstrate an understanding of how systems development controls are used to enhance the accuracy, validity, safety, security, and adaptability of systems input, processing, output, and storage functions
- c. identify procedures to limit access to physical hardware
- d. identify means by which management can protect programs and databases from unauthorized use
- e. identify input controls, processing controls, and output controls and describe why each of these controls is necessary
- f. identify the similarities and relationships between output controls and input controls
- g. identify and describe the types of storage controls and demonstrate an understanding of when and why they are used
- h. outline the inherent risks of using the internet as compared to data transmissions over secured transmission lines
- i. define data encryption and describe why there is a much greater need for data encryption methods when using the internet
- j. identify a firewall and its uses
- k. demonstrate an understanding of how flowcharts of activities are used

- l. outline the reasons why all program and data files should be backed up regularly and frequently and stored at a secure remote site
- m. develop an outline of a disaster recovery plan
- n. define the objective of a disaster recovery plan

## **Section D. Quantitative Methods (Levels A and B)**

### Part 1 – Section D.1. Forecasting analysis

The candidate should be able to:

- a. demonstrate an understanding of a simple regression equation and the measures associated with it
- b. define a multiple regression equation
- c. identify the assumptions of simple and multiple regression analyses
- d. calculate the result of a simple regression equation as applied to a specific situation
- e. demonstrate an understanding of learning curve analyses
- f. calculate the results under a cumulative average-time learning model and under an incremental unit-time learning model
- g. demonstrate an understanding of exponential smoothing and calculate a forecast using this method
- h. demonstrate an understanding of time series analyses, including objectives and patterns, i.e., trend, cyclical, seasonal, and irregular
- i. list the benefits and shortcomings of regression analysis, learning curve analysis, and time series analysis

### Part 1 - Section D.2. Linear programming

The candidate should be able to:

- a. demonstrate an understanding of the objectives of linear programming
- b. define and identify the objective function
- c. demonstrate an understanding of the mathematical formulation of a constraint
- d. calculate the optimal solution by the use of linear programming using the graphical method and the algebraic method
- e. identify the benefits and shortcomings of linear programming

### Part 1 – Section D.3. Network analysis

The candidate should be able to:

- a. define PERT and explain how it is used for scheduling projects
- b. develop a project network analysis
- c. identify the critical path after a network is developed
- d. calculate the critical path through a network and all the related start, finish, and slack times
- e. demonstrate an understanding of what makes critical activities different from other activities

- f. demonstrate an understanding of the cost impact of shortening a critical path
- g. identify the benefits and shortcomings of network analysis

#### Part 1 – Section D.4. Probability concepts

The candidate should be able to:

- a. demonstrate an understanding as to why probabilities for all values of a random variable must equal one
- b. develop and interpret a probability distribution table
- c. calculate the expected value of random variables
- d. identify the benefits and shortcomings of probability concepts and expected value techniques

#### Part 1 – Section D.5. Decision tree analysis

The candidate should be able to:

- a. construct a decision tree analysis, analyze decisions, and infer results based on the decision tree
- b. define and identify the assumptions of the decision tree analysis technique
- c. explain the relationship between decision trees and investment decisions
- d. describe the process used to estimate the cash flow and probability values used in decision tree analysis
- e. identify the benefits and shortcomings of a decision tree analysis

#### Part 1 – Section D.6. Other quantitative techniques

The candidate should be able to:

- a. identify the uses of sensitivity analysis
- b. identify situations when sensitivity analysis is useful
- c. perform a sensitivity analysis with different values for the probabilities of the states of nature and/or the payoffs
- d. identify the benefits and shortcomings of sensitivity analysis
- e. demonstrate an understanding of the uses of simulation models, including the Monte Carlo technique
- f. define controllable inputs and probabilistic inputs
- g. demonstrate an understanding of the simulation approach called what-if analysis
- h. demonstrate an understanding of how simulations can be used to model and learn about the behavior of complex systems
- i. identify the benefits and shortcomings of simulation models
- j. define and identify applications of queuing theory and Markov analysis

## **Section E. Financial Statement Analysis (Levels A and B)**

### Part 1 – Section E.1. Development of accounting standards

The candidate should be able to:

- a. demonstrate an understanding of the development of U.S. accounting standards
- b. describe the organizational structure of the Financial Accounting Standards Board (FASB)
- c. identify the due process steps of developing U.S. accounting standards
- d. identify the qualitative characteristics of accounting information
- e. distinguish between the primary qualities of relevance and reliability and the secondary qualities of comparability and consistency
- f. identify the ingredients of each of the primary qualities
- g. identify the user groups that influence accounting standards, including the investing public and financial community, business entities and industrial associations, the Institute of Management Accountants (IMA), the American Institute of Certified Public Accountants (AICPA), CPA firms, government agencies, the American Accounting Association (AAA), the Financial Executive Institute (FEI), and other professional accounting and finance organizations
- h. demonstrate an understanding of the FASB's relationship with the Securities and Exchange Commission (SEC) and the SEC's role in standard setting
- i. identify the different types of statements that constitute U.S. Generally Accepted Accounting Principles (GAAP) and identify which is most authoritative
- j. describe in general terms the structure and work products of the International Accounting Standards Board (IASB) and its relationship with the FASB

### Part 1 – Section E.2. Financial statement assurance

The candidate should be able to:

- a. demonstrate an understanding of the distinct responsibilities of management and of independent auditors for the financial statements
- b. identify the type of audit report that would be issued given a specific set of facts
- c. identify related provisions of the Sarbanes-Oxley Act of 2002 and the related rulings of the Public Company Accounting Oversight Board (PCAOB)

### Part 1 – Section E.3. Short-term liquidity

The candidate should be able to:

- a. define and calculate current assets, current liabilities, and working capital
- b. analyze working capital by calculating the current ratio, the quick (acid test) ratio, the cash ratio, the cash flow ratio, and the cash to current liabilities ratio
- c. calculate and interpret accounts receivable turnover and inventory turnover and demonstrate an understanding of the effects on these ratios of changes in one or more elements in the financial statement

- d. calculate and interpret days sales outstanding in receivables, days sales in inventory, and days purchases in accounts payable
- e. define the operating cycle of a firm
- f. demonstrate an understanding of the liquidity of current liabilities
- g. identify the liquidity index as a measure of short-term liquidity

Part 1 – Section E.4. Capital structure and solvency

The candidate should be able to:

- a. define capital structure
- b. define solvency
- c. distinguish debt from equity and demonstrate an understanding of the effect on the capital structure and solvency of a company with a change in the composition of debt vs. equity
- d. define operating leverage and financial leverage
- e. calculate and interpret the financial leverage ratio and identify the effects on this ratio with changes in capital structure
- f. calculate and interpret the following ratios: total debt to total capital, total debt to equity capital, equity capital to total debt, long-term debt to equity capital (debt to equity ratio), and debt to total assets
- g. demonstrate an understanding of the effect on these capital structure ratios with a change in one or more elements of the financial statement
- h. define, calculate, and interpret common-size statements
- i. define asset coverage
- j. calculate and interpret the following ratios: fixed assets to equity capital, net tangible assets to long-term debt, and total liabilities to net tangible assets
- k. calculate and interpret the following ratios: earnings to fixed charges, times interest earned, and cash flow to fixed charges
- l. discuss how capital structure decisions affect the risk profile of a firm

Part 1 – Section E.5. Return on invested capital

The candidate should be able to:

- a. identify and define the components of return on invested capital (ROI)
- b. identify uses for ROI
- c. demonstrate an understanding of the factors that contribute to inconsistent definitions of “invested capital” and “return” when using ROI to measure performance
- d. identify and calculate adjustments that should be made to capital and income
- e. calculate and interpret the return on total assets ratio and return on common equity ratio
- f. analyze return on assets and return on equity using the DuPont model
- g. calculate and interpret profit margin on sales and total asset turnover and demonstrate an understanding of the relationship between these two ratios
- h. infer the effect on return on total assets of a change in one or more elements of the financial statements

- i. disaggregate return on common equity into profit margin on sales, total asset turnover, and equity multiplier (leverage) and be able to calculate these ratios given financial statement data
- j. calculate and interpret sustainable equity growth, dividend yield and the dividend payout ratio
- k. calculate and interpret return on common equity

#### Part 1 – Section E.6. Profitability analysis

The candidate should be able to:

- a. identify factors to be considered in measuring income, including estimates, accounting methods, disclosure incentives, and the different needs of users
- b. explain the importance of the source, stability, and trend of sales and revenue
- c. demonstrate an understanding of the relationship between revenue and receivables and revenue and inventory
- d. infer the effect on revenue with changes in revenue recognition and measurement methods
- e. analyze company cost of sales by calculating and interpreting the gross profit margin
- f. interpret changes in gross profit
- g. analyze company expenses using common-size income statements
- h. identify and define the major expense categories for a company, including selling expenses, depreciation expense, maintenance, amortization, general and administrative expenses, financing expenses, and income taxes
- i. infer reasons for increases over time in any of these expenses as a percent of revenue
- j. distinguish between gross profit margin, operating profit margin and net profit margin and analyze the effects of changes in the components of each
- k. calculate and interpret book value per share

#### Part 1 – Section E.7. Earnings-based analysis

The candidate should be able to:

- a. identify the determinants and indicators of earnings quality
- b. define earnings persistence and identify its determinants
- c. recast earnings to show persistent earnings for a company, excluding erratic, unusual, and nonrecurring items
- d. demonstrate an understanding of the relationship between accounting data and stock prices
- e. calculate and interpret the fundamental valuation multiples of the market/book ratio and the price/earnings ratio
- f. calculate and interpret basic and diluted earnings per share
- g. define the concept of earnings power
- h. calculate and interpret earnings yield, dividend yield, and dividend payout

Part 1 – Section E.8. Other analytical issues

The candidate should be able to:

- a. analyze common-size financial statements
- b. identify other factors in financial statement analysis, including international considerations, inflation, and nonfinancial considerations
- c. demonstrate the impact of inflation and foreign exchange fluctuations on financial ratios
- d. identify limitations of ratio analysis
- e. distinguish between accounting profit and economic profit
- f. distinguish between book value and market value

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**PART 2 –MANAGEMENT ACCOUNTING AND REPORTING**

**Section A. Budget Preparation (Levels A, B and C)**

Part 2 – Section A.1. Budgeting concepts

The candidate should be able to:

- a. demonstrate an understanding of the role that budgeting plays in the overall planning and performance evaluation process of an organization
- b. demonstrate an understanding of the interrelationships between economic conditions, industry situation, and a firm's plans and budgets
- c. identify the role that budgeting plays in formulating short-term objectives and planning and controlling operations to meet those objectives
- d. identify the characteristics that define successful budgeting processes
- e. demonstrate an understanding of the role that budgets play in measuring performance against established goals
- f. explain how the budgeting process facilitates communication among organizational units and enhances coordination of organizational activities
- g. describe the concept of a controllable cost as it relates to both budgeting and performance evaluation
- h. prepare an operational budget
- i. prepare a capital expenditure budget
- j. demonstrate an understanding of the concept of management-by-objective and how it relates to performance evaluation
- k. identify the benefits and limitations of management-by-objective
- l. demonstrate an understanding of how the planning process coordinates the efficient allocation of organizational resources
- m. identify the appropriate time frame for various types of budgets
- n. identify who should participate in the budgeting process for optimum success
- o. describe the role of top management in successful budgeting
- p. identify the role of top management or the budget committee in providing appropriate guidelines for the budget and identify items that should be included in these guidelines
- q. demonstrate an understanding of the use of cost standards in budgeting
- r. differentiate between ideal (theoretical) standards and currently attainable (practical) standards
- s. differentiate between authoritative standards and participative standards
- t. identify the steps to be taken in developing standards for both direct material and direct labor
- u. define the role of benchmarking in standard setting
- v. demonstrate an understanding of the techniques that are used to develop standards such as activity analysis and the use of historical data

- w. discuss the importance of a policy that allows budget revisions that accommodate the impact of significant changes in budget assumptions
- x. demonstrate an understanding of the role of budgets in monitoring and controlling expenditures to meet strategic objectives

#### Part 2 – Section A.2. Budget systems

For each of the budget systems identified (Annual/Master budgets, Project budgeting, Activity-based budgeting, Zero-based budgeting, Continuous budgeting, Kaizen budgeting, and Flexible budgeting), the candidate should be able to:

- a. define its purpose, appropriate use, and time frame
- b. identify the budget components and explain the interrelationships among the components
- c. demonstrate an understanding of how the budget is developed
- d. compare and contrast the benefits and limitations of the budget system
- e. calculate budget components on the basis of information presented
- f. evaluate a business situation and recommend the appropriate budget solution

#### Part 2 – Section A.3. Annual profit plan and supporting schedules

The candidate should be able to:

- a. demonstrate an understanding of the role the sales budget plays in the development of an annual profit plan
- b. identify the factors that should be considered when preparing a sales forecast and evaluate the feasibility of the sales forecast based on business and economic information provided
- c. identify the components of a sales budget and prepare a sales budget based on relevant information provided
- d. demonstrate an understanding of the relationship between the sales budget and the production budget
- e. identify the role that inventory levels play in the preparation of a production budget and define other factors that should be considered when preparing a production budget
- f. prepare a production budget based on relevant information provided and evaluate the feasibility of achieving sales goals on the basis of production plans
- g. demonstrate an understanding of the relationship between the direct materials budget, the direct labor budget, and the production budget
- h. define the use of inventory levels and procurement policies in developing a direct materials budget and the role that labor skills, union contracts, and hiring policies play in the development of a direct labor budget
- i. prepare direct materials and direct labor budgets based on relevant information provided and evaluate the feasibility of achieving production goals on the basis of these budgets
- j. prepare a forecast of employee related costs and benefits such as employer contributions to social security, employment related taxes, health and life insurance, and pension contributions based on relevant information provided

- k. demonstrate an understanding of alternative ways of allocating employee benefit expense, e.g., as a portion of direct labor expense or as overhead, and the effect that allocation has on the financial statements
- l. demonstrate an understanding of the relationship between the overhead budget and the production budget
- m. identify the fixed and variable expenses in an overhead budget
- n. define the components of overhead expense and prepare an overhead budget based on relevant information provided
- o. identify the components of the cost of goods sold budget and demonstrate an understanding of the relationship between the cost of goods sold budget, the pro forma income statement, and the pro forma statement of financial position
- p. demonstrate an understanding of contribution margin per unit and total contribution margin, identify the appropriate use of these concepts, and calculate both unit and total contribution margin
- q. prepare a cost of goods sold budget based on relevant information provided
- r. identify the components of the selling and administrative budget and demonstrate an understanding of the nature of these expenses
- s. describe the relationship between the selling and administrative budget, the pro forma income statement, and the pro forma statement of financial position
- t. demonstrate an understanding of how specific components of the selling and administrative budget may affect the contribution margin
- u. demonstrate an understanding of the relationship between the budget for acquisition of capital assets, the cash budget, and the pro forma financial statements
- v. define the purposes of the cash budget and describe the relationship between the cash budget and all other budgets
- w. identify the elements of a cash budget and demonstrate an understanding of the relationship between credit policies and purchasing (payables) policies and the cash budget
- x. prepare a cash budget from information given and recommend the optimal investment/financing strategy
- y. define the purpose of a pro forma income statement, a pro forma statement of financial position, and a pro forma cash flow statement and understand the relationship among these statements and all other budgets
- z. prepare a pro forma income statement, a pro forma statement of financial position, and a pro forma cash flow statement from relevant information provided

## **Section B. Cost Management (Levels A, B and C)**

### Part 2 – Section B.1. Terminology

The candidate should be able to:

- a. identify and differentiate all cost items reported on the income statement
- b. identify and calculate those costs incurred to complete a product and reported as cost of goods sold

- c. identify and calculate those costs incurred for current operations (period costs) but not included in cost of goods sold
- d. identify and calculate the components of cost concepts such as prime cost, conversion cost, overhead cost, carrying cost, sunk cost, discretionary cost, and opportunity cost
- e. demonstrate an understanding of the characteristics that differentiate fixed costs, variable costs, and mixed costs and evaluate the effect that changes in production volume have on these costs
- f. identify, differentiate, and calculate direct vs. indirect costs
- g. describe the importance of timely and accurate costing information as a tool for strategic planning and management decision making

Part 2 – Section B.2. Measurement concepts

The candidate should be able to:

- a. demonstrate an understanding of the behavior of fixed and variable costs in the long and short terms and how a change in assumptions regarding cost type or relevant range affects these costs
- b. identify cost objects and cost pools and assign costs to appropriate activities
- c. demonstrate an understanding of the nature and types of cost drivers and the causal relationship that exists between cost drivers and costs incurred
- d. demonstrate a thorough understanding of the various methods for measuring costs and accumulating work-in-process and finished goods inventories and a basic understanding of how inventories are relieved
- e. identify and calculate the components of cost measurement techniques such as actual costing, normal costing, and standard costing; identify the appropriate use of each technique; and describe the benefits and limitations of each technique
- f. demonstrate an understanding of the characteristics of variable costing and absorption costing and the benefits and limitations of these measurement concepts
- g. calculate inventory costs using both variable costing and absorption costing
- h. demonstrate an understanding of how the use of variable costing or absorption costing affects the value of inventory, cost of goods sold, and operating income
- i. determine the appropriate use of joint product and by-product costing and demonstrate an understanding of concepts such as split-off point and separable costs
- j. determine the allocation of joint product and by-product costs using the physical measure method, the sales value at split-off method, gross profit (gross margin) method, and the net realizable value method; and describe the benefits and limitations of each method
- k. demonstrate an understanding of costing systems used by service sector companies

### Part 2 – Section B.3. Accumulation systems

For each cost accumulation system identified (Job order costing, Process costing, Activity-based costing, Life-cycle costing), the candidate should be able to:

- a. define the nature of the system, understand the cost flows of the system, and identify its appropriate use
- b. calculate inventory values and cost of goods sold
- c. demonstrate an understanding of the proper accounting for normal and abnormal spoilage
- d. discuss the strategic value of cost information regarding products and services, pricing, overhead allocations, and other issues
- e. identify the benefits and limitations of each cost accumulation system
- f. demonstrate an understanding of the concept of equivalent units in process costing and calculate the value of equivalent units
- g. define the elements of activity-based costing such as cost pool, cost driver, resource driver, activity driver, and value-added activity
- h. calculate product cost using an activity-based system and compare and analyze the results with costs calculated using a traditional system
- i. demonstrate an understanding of the concept of life-cycle costing and the strategic value of including upstream costs, manufacturing costs, and downstream costs
- j. describe how operation costing is a hybrid cost system utilizing characteristics of both job costing and process costing and identify industry settings where operation costing is appropriate
- k. demonstrate an understanding of backflush costing and describe why it is appropriate in a just-in-time setting where manufacturing cells are utilized
- l. demonstrate an understanding of how activity based costing can be utilized in service firms

### Part 2 – Section B.4. Overhead costs

The candidate should be able to:

- a. demonstrate an understanding of the fixed and variable nature of overhead expenses
- b. determine the appropriate time frame for classifying both variable and fixed overhead expenses
- c. demonstrate an understanding that overhead rates can be determined in a variety of ways, e.g., plant-wide rates, departmental rates, and individual cost driver rates and describe the benefits and limitations of each of these methods
- d. identify the components of variable overhead expense
- e. determine the appropriate allocation base for variable overhead expenses
- f. calculate the per unit variable overhead expense
- g. identify the components of fixed overhead expense
- h. identify the appropriate allocation base for fixed overhead expense and demonstrate an understanding that because the allocation base is generally variable (e.g., direct labor hours), fixed overhead is often over or under applied

- i. calculate the fixed overhead application rate
- j. demonstrate an understanding of overhead control accounts, overhead allocation accounts, and the expensing of over or under applied overhead expenses
- k. compare and contrast traditional overhead allocation with activity-based overhead allocation
- l. calculate overhead expense in an activity-based setting and describe the benefits derived from activity-based overhead allocation
- m. demonstrate an understanding of the need to allocate the cost of service departments such as Human Resources or Information Technology to divisions, departments, or activities
- n. demonstrate an understanding of the direct method, the reciprocal method, and the step-down method to allocate service or support department costs

### **Section C. Information Management (Level A)**

#### Part 2 – Section C.1. Nature and purpose of an information system

The candidate should be able to:

- a. identify the different types of business information systems, e.g., transaction processing, management information, decision support, etc.
- b. explain the functions of information systems, including business processing and data analysis
- c. differentiate between centralized and decentralized information systems and identify the advantages and disadvantages of each
- d. identify and define the two basic ways that transaction processing systems process data; i.e., (i) batch processing and (ii) real-time processing
- e. explain how information systems are used for competitive advantage in organizations by solving temporal and financial problems

#### Part 2 – C.2. Systems development and design

The candidate should be able to:

- a. explain why end-users and information technology specialists should design information systems based on an analysis of an organization's business processes and information requirements and that the business process should be well defined and documented
- b. define a systems development life cycle (SDLC)
- c. outline the steps of an SDLC and explain how they are related
- d. define prototyping as a systems development tool and demonstrate when prototyping techniques are preferable to traditional SDLC techniques
- e. define rapid application development (RAD) tools
- f. define object-oriented analysis and design (OOAD)
- g. demonstrate an understanding of systems feasibility studies, i.e. cost/benefit analyses which include both tangible and intangible benefits
- h. identify both the tangible and intangible benefits of a cost/benefit analysis

### Part 2 – C.3. Technology of information systems

The candidate should be able to:

- a. identify the advantages of using telecommunications systems, which allow companies to move data from distant points and process information on a global basis at multiple locations, generally at relatively low cost
- b. demonstrate an understanding of the different types of communications networks
- c. describe a wide area network (WAN) and a local area network (LAN)
- d. demonstrate an understanding of client/server networks
- e. define “peer to peer” networks
- f. distinguish between mainframe systems and client/server applications and identify the advantages and disadvantages of each
- g. demonstrate an understanding of a database management system and describe its characteristics
- h. distinguish between a flat database and a relational database
- i. demonstrate an understanding of a relational database system
- j. demonstrate an understanding of Decision Support Systems, how they operate, and the types of decisions that these systems support
- k. define Artificial Intelligence, including expert systems, fuzzy logic, neural networks, etc. and explain how they can capture management reasoning in software
- l. demonstrate how to use a spreadsheet for business analysis, planning, and modeling
- m. construct a spreadsheet used for accounting, business reporting, or analysis purposes
- n. analyze the details of a spreadsheet report and determine which formulas are causing errors, and how to correct the formulas
- o. describe the internet and identify the components of the internet’s backbone
- p. define “browser” software
- q. define the term intranet and explain its uses
- r. identify how intranets enable companies to share expertise among the organizational units
- s. define a virtual private network and identify how it can be used

### Part 2 – Section C.4. Electronic commerce

The candidate should be able to:

- a. define and identify the major characteristics of Electronic Data Interchange (EDI)
- b. explain how EDI differs from internet-based electronic commerce applications
- c. define public key cryptography and identify how it is used within networks
- d. define Business-To-Business (B2B) commerce and its characteristics
- e. summarize the importance of the internet for (B2B) commerce
- f. demonstrate an understanding of how B2B electronic commerce has affected the supply chain
- g. demonstrate an understanding of other e-commerce technologies, including Online Transaction Processing and Electronic Funds Transfer

## Part 2 – Section C.5. Integrated enterprise-wide data model

The candidate should be able to:

- a. define enterprise-wide planning (ERP) and its characteristics, including its reliance on an enterprise-wide database
- b. explain why business processes must generally be reengineered and highly integrated to utilize ERP
- c. describe an enterprise-wide database (data warehouse)
- d. define data mining
- e. demonstrate an understanding of how data warehousing facilitates data mining
- f. define data marts
- g. define object-oriented databases
- h. demonstrate an understanding of how Structured Query Language (SQL) is used to retrieve, update, and append information to a relational database
- i. define online analytical processing

## **Section D. Performance Measurement (Levels A, B and C)**

### Part 2 – Section D.1. Cost and variance measures

The candidate should be able to:

- a. analyze performance against operational goals using a variety of methods, including measures based on revenue, manufacturing costs, non-manufacturing costs, and profit depending on the type of center or unit being measured
- b. explain why performance evaluation measures should be directly related to strategic and operational goals and objectives and why timeliness of feedback is critical
- c. explain the reasons for variances (as opposed to only generating numerical results) within a performance monitoring system
- d. explain why performance measures should be related to the factors that drive the element being measured, e.g., cost drivers and revenue drivers
- e. recommend performance measures and a periodic reporting methodology given operational goals and actual results
- f. prepare a performance analysis by comparing actual results to the master budget, calculate favorable and unfavorable variances from budget, and provide explanations for variances based on the situation presented
- g. identify the benefits and limitations of measuring performance by comparing actual results to the master budget
- h. prepare a flexible budget based on actual sales (output) volume
- i. determine the sales-volume variance and the sales-price variance by comparing the flexible budget to the master (static) budget
- j. determine the flexible-budget variance by comparing actual results to the flexible budget
- k. investigate the flexible-budget variance to determine individual differences between actual and budgeted input prices and input quantities

- l. explain Management by Exception and demonstrate how budget variance reporting is utilized in this environment
- m. define a standard cost system and identify the reasons for adopting a standard cost system
- n. demonstrate an understanding of price (rate) variances and calculate the price variances related to direct material and direct labor inputs
- o. demonstrate an understanding of efficiency (usage) variances and calculate the efficiency variances related to direct material and direct labor inputs
- p. demonstrate an understanding of spending and efficiency variances as they relate to fixed and variable overhead
- q. calculate a sales-mix variance and explain its impact on revenue and contribution margin
- r. demonstrate an understanding that the efficiency (usage) variances can be further analyzed as mix and yield variances
- s. explain how a mix variance results from using direct material and/or labor inputs in a ratio that differs from standard specifications and calculate a mix variance
- t. calculate a yield variance
- u. demonstrate how price, efficiency, spending, and mix variances can be applied in service companies as well as manufacturing companies
- v. analyze variances, identify causes, and recommend corrective actions

Part 2 – Section D.2. Responsibility centers and reporting segments

The candidate should be able to:

- a. identify and explain the different types of responsibility centers (strategic business units)
- b. recommend appropriate responsibility centers given a business scenario
- c. demonstrate an understanding of contribution margin reporting as used for performance evaluation
- d. analyze a contribution margin report and evaluate performance
- e. identify segments that organizations evaluate, including product lines, geographical areas, or other meaningful segments
- f. explain why the allocation of common costs among segments can be an issue in performance evaluation
- g. identify methods for allocating common costs such as stand-alone cost allocation and incremental cost allocation
- h. define transfer pricing and identify the objectives of transfer pricing
- i. identify the methods for determining transfer prices and list the advantages and disadvantages of each method
- j. explain how transfer pricing is affected by business issues such as the presence of outside suppliers and the opportunity costs associated with capacity usage
- k. describe how special issues such as tariffs, exchange rates, and the availability of materials and skills affect performance evaluation in multinational companies
- l. describe how special issues such as taxes, currency restrictions, and expropriation risk affect transfer pricing in multinational companies

## Part 2 – Section D.3. Financial measures

The candidate should be able to:

- a. demonstrate an understanding of the issues involved in determining product profitability, business unit profitability, and customer profitability, including cost measurement, cost allocation, investment measurement, and valuation
- b. calculate product-line profitability, business unit profitability, and customer profitability given a set of data and assumptions
- c. evaluate customers and products on the basis of profitability and identify ways to improve profitability and/or drop unprofitable customers and products
- d. define and calculate return on investment (ROI)
- e. calculate ROI based on the Dupont Model and describe how this model enhances the analysis of ROI calculations
- f. analyze and interpret ROI calculations and evaluate performance on the basis of the analysis
- g. define and calculate residual income (RI)
- h. analyze and interpret RI calculations and evaluate performance on the basis of the analysis
- i. compare and contrast the benefits and limitations of ROI and RI as measures of performance
- j. define economic value added (EVA<sup>®</sup>) and calculate it based on a simple (non-complex) scenario
- k. compare and contrast ROI measures using corporation data and external market data.
- l. demonstrate an understanding of how EVA<sup>®</sup> differs from ROI and residual income measures
- m. define market value added
- n. explain how revenue and expense recognition policies may affect the measurement of income and reduce comparability among business units and companies
- o. explain how inventory measurement policies, joint asset sharing, and overall asset measurement may affect the measurement of investment and reduce comparability among business units and companies
- p. define cash flow return on investment
- q. demonstrate an understanding of the effect international operations can have on performance measurement

## Part 2 – Section D.4. Balanced scorecard

The candidate should be able to:

- a. define the concept of a balanced scorecard and identify its components
- b. define critical success factors and discuss the importance of these factors in evaluating a firm
- c. identify financial measures, such as operating income, revenue growth, revenues from new products, gross margin percentage, cost reductions, EVA<sup>®</sup>, ROI, RI, etc. and evaluate their relevance in a specific corporate situation

- d. identify customer satisfaction measures, such as market share, retention, response time, delivery performance, defects, lead time, etc. and evaluate their relevance in a specific corporate situation
- e. identify internal business process measures, such as new product introductions, technological capability, cycle time, etc. and evaluate their relevance in a specific corporate situation
- f. identify innovation and learning measures, such as employee skill sets, organizational learning, industry leadership, etc. and evaluate their relevance in a specific corporate situation
- g. describe the characteristics of successful implementation and use of a balanced scorecard
- h. analyze and interpret a balanced scorecard and evaluate performance on the basis of the analysis

Part 2 – Section D.5. Quality considerations

The candidate should be able to:

- a. identify the core principles of total quality management (TQM)
- b. identify the opportunity costs associated with poor quality management
- c. demonstrate an understanding of the role that communication and training play in successful TQM programs
- d. describe the relationship between quality management and productivity and explain why misconceptions about this relationship can lead to poor decisions
- e. demonstrate an understanding of methods to analyze quality problems such as control charts, Pareto diagrams, and cause-and-effect (fishbone) diagrams
- f. identify how quality considerations factor into the firm's overall performance measurement and evaluation process
- g. identify the purpose of quality audits and gap analyses
- h. define quality as it relates to customer expectations
- i. define conformance as it relates to quality and identify the characteristics of goalpost quality conformance and absolute quality conformance
- j. describe and identify the components of the costs of quality commonly referred to as prevention costs, appraisal costs, internal failure costs, and external failure costs

**Section E. External Financial Reporting (Levels A and B)**

Part 2 – Sections E.1. Objectives of external financial reporting; and E.2. Financial accounting fundamentals

The candidate should be able to:

- a. identify the objectives of external financial reporting, i.e., providing information on resources and obligations, comprehensive income, and cash flow
- b. identify and demonstrate an understanding of basic accounting assumptions and conventions, including going concern, historical cost, accrual accounting, and conservatism

- c. demonstrate an understanding of recognition and measurement concepts as they relate to revenue, expenses, fixed assets, current assets, current liabilities, long-term liabilities, and equity transactions
- d. differentiate between realization and recognition
- e. identify financial statement elements for each of the financial statements
- f. Special topics: leases, pensions and other post-retirement benefits, deferred income taxes, stock options, discontinued operations, extraordinary items, accounting changes, early extinguishment of debt, business combinations, consolidated financial statements, and accounting for derivatives

For each special topic, the candidate should be able to:

- Define and describe its characteristics
- Demonstrate a basic understanding of the relevant accounting issues
- Describe the impact on a firm's financial statements

Note: in depth application knowledge of the accounting rules for these special topic transactions and events is not required. Candidates are, however, expected to have an understanding of the basic concepts.

### Part 2 – Section E.3. Financial statements and statement users

For the Statement of Financial Position (balance sheet), the Statement of Earnings (income statement), Statement of Cash Flows, and the Statement of Changes in Shareholders' Equity, the candidate should be able to:

- a. identify the users of these financial statements and their needs
- b. demonstrate an understanding of the purposes and uses of each statement
- c. identify the major components and classifications of each statement
- d. identify the limitations of each financial statement
- e. identify financial statement information that requires supplemental disclosure in the body of the statement or in the footnotes
- f. prepare financial statements in the correct format
- g. calculate and classify components of each financial statement
- h. for the Statement of Cash Flows, demonstrate an understanding of both the "direct" and "indirect" methods
- i. identify how a financial transaction affects the elements of each of the financial statements and determine the proper classification of the transaction
- j. identify the basic disclosures related to each of the statements (footnotes, supplementary schedules, etc.)

Part 2 – Section E.4. Recognition, measurement, valuation, and disclosure

**Required knowledge for each of the subtopics listed:**

The candidate should be able to:

- define the subtopic and describe the characteristics of its components
- demonstrate an understanding of appropriate valuation techniques for the components of each subtopic
- demonstrate an understanding of the appropriate accounting conventions for the components of each subtopic
- compare and contrast valuation techniques and accounting methods
- show the correct financial statement presentation
- identify the appropriate disclosure requirements in the body of the financial statements and/or in the footnotes or supplemental schedules

I. Cash and marketable securities

- a. Subtopic components\*: cash, cash equivalents, marketable (trading) securities
- b. determine when cash is restricted

II. Accounts receivable

- a. Subtopic components\* : current, noncurrent, trade, and nontrade receivables; trade discounts, cash (sales) discounts, sales returns and allowances, net realizable value, promissory note, factoring receivables, write-offs and collection of write-offs
- b. identify issues related to the valuation of accounts receivable
- c. calculate cash discounts using both the gross method and the net method
- d. identify two methods of recording uncollectibles and describe why the allowance method is the generally accepted approach
- e. calculate the allowance for uncollectibles using both the percentage-of-sales (income statement) approach and the percentage-of-receivables (balance sheet) approach
- f. discount a long-term note using the time value of money tables and indicate its correct valuation at time of sale
- g. calculate the interest revenue and discount amortized for each time period of the note
- h. define and be able to compute an imputed interest rate
- i. demonstrate an understanding of receivables when they are used as collateral
- j. distinguish between receivables sold on a with-recourse basis and those sold on a without-recourse basis

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\* See required knowledge at the beginning of Section E.4.

### III. Inventories

- a. Subtopic components\* : raw material inventory, work-in-process inventory, finished goods inventory, merchandise inventory; perpetual, modified perpetual, and periodic inventory systems; cost of goods sold, cost of goods available for sale, goods in transit, consigned goods
- b. identify issues in inventory valuation, including which goods to include, what costs to include, and which cost assumption to use
- c. identify the costs included in inventory
- d. differentiate between f.o.b. shipping point and f.o.b. destination
- e. demonstrate an understanding of special sale agreements, including sales with a buyback agreement (product financing arrangement), sales with high rates of returns, and sales on installment
- f. calculate and indicate the correct entries and financial statement presentation for purchase discounts using the gross method and using the net method
- g. identify accounting issues related to purchase commitments
- h. identify and compare cost flow assumptions used in accounting for inventories
- i. calculate ending inventory and cost of goods sold using the specific identification, average cost, first-in-first-out (FIFO), and last-in-last-out (LIFO) methods
- j. calculate the effect on income and on assets of using different inventory methods
- k. analyze the effects of inventory errors
- l. demonstrate an understanding of the LIFO reserve and LIFO liquidation
- m. calculate ending inventory and cost of goods sold using dollar-value LIFO
- n. identify advantages and disadvantages of the different inventory methods
- o. apply the lower of cost or market rule
- p. identify when inventories are valued at net realizable value
- q. demonstrate an understanding of the relative sales value method
- r. determine ending inventory by using the gross profit method and by using the retail inventory method
- s. recommend the inventory method and cost flow assumption that should be used for a firm in a specific industry given a set of facts and management goals

### IV. Investments

- a. Subtopic components\* : debt securities: held-to-maturity, trading, and available-for-sale securities; equity securities: less than 20% holdings (available-for-sale and trading), between 20% and 50% holdings, and holdings more than 50%
- b. calculate discounts, premiums, and interest on debt securities using the effective interest method and utilizing time value of money tables
- c. define holding gain or loss
- d. calculate the realized gain/loss on the sale of a debt or equity security
- e. calculate the securities fair value adjustment for available-for-sale and trading debt securities
- f. identify and describe the fair value method, equity method, and consolidated method for equity securities

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\* See required knowledge at the beginning of Section E.4

- g. compare the equity method with the fair value method
  - h. demonstrate an understanding of reclassification adjustments
  - i. account for impairment of value and indicate the correct cost basis for the impaired security
  - j. identify and describe the proper accounting for transfers of investment securities between categories
- V. Property, plant and equipment
- a. Subtopic components\* : land, buildings, equipment, and self-constructed assets; additions, improvements, replacements, reinstallations, and repairs; nonmonetary exchanges; depreciation; depletion; impairment
  - b. calculate depreciation using the activity method, the straight-line method, the sum-of-the years'-digits method, declining-balance method, the group method, and the composite method
  - c. calculate and record the gain or loss on the disposition of tangible assets
  - d. identify the basis on which tangible assets would be valued when payment is in the form of stock
  - e. demonstrate an understanding of the correct accounting treatment for interest costs incurred for the construction or acquisition of tangible assets
  - f. determine the effect on the financial statements of using different depreciation methods
  - g. recommend a depreciation method given a set of data and management goals
  - h. calculate a depletion base given acquisition, exploration, development, and restoration costs
- VI. Intangibles
- a. Subtopic components\* : intangible assets: patents, copyrights, trademarks and trade names, leaseholds, franchises and licensees; purchased intangibles and internally-created intangibles; goodwill; internally created goodwill and purchased goodwill; negative goodwill; amortization; research and development; start-up costs, initial operating losses, advertising costs, and computer software costs
  - b. demonstrate an understanding of the accounting for impairment of intangible assets
  - c. determine the effect on the financial statements of various intangible asset transactions
- VII. Current liabilities
- a. Subtopic components\*: current liability: notes payable, accounts payable, current maturities of long-term debt, short-term obligations expected to be refinanced, dividends payable, returnable deposits, unearned (or deferred) revenues, taxes payable, and employee-related liabilities; loss contingencies; warranty costs; premiums and coupons
  - b. identify the classification issues of short-term debt expected to be refinanced

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\* See required knowledge at the beginning of Section E.4

- c. identify the different types of employee-related liabilities
- d. apply both the expense warranty approach and the sales warranty approach

VIII. Long-term liabilities and bonds payable

- a. Subtopic components\*: long-term liabilities/debt: bonds, long-term notes payable, mortgage notes payable, zero-interest-bearing notes, convertible debt
- b. calculate interest expense, interest payable, bond discount and premium using the straight-line method and the effective interest method (time value of money tables)
- c. identify the proper classification of bond discount and premium as an adjunct account
- d. identify the proper accounting treatment of debt issuance expenses
- e. define implicit interest rate and compute imputed interest
- f. account for notes issued for property, goods, and services
- g. calculate imputed fair value and note discount where the stated interest rate is unreasonable
- h. define off-balance sheet financing and identify different forms of this type of borrowing
- i. indicate the disclosure requirements for off-balance sheet financing

IX. Equity transactions and earnings per share

- a. Subtopic components\* : preferred stock and common stock; capital stock, additional paid-in capital and retained earnings; treasury stock (cost method and par value method); property dividends, scrip dividends; liquidating dividends; stock dividends (large and small); retained earnings
- b. apply the accounting procedures for issuing shares of stock, including par value stock, no-par stock, stock sold on a subscription basis, lump sum sales, and stocks issued in noncash transactions
- c. apply the accounting procedures for the declaration and payment of common stock and preferred stock dividends
- d. define stock options, warrants, and rights and determine the correct presentation in the financial statements for these instruments
- e. identify transactions that affect paid-in capital and those that affect retained earnings
- f. infer the effect on shareholders' equity of large and small stock dividends
- g. define stock split and distinguish from stock dividend
- h. identify reasons for the appropriation of retained earnings
- i. calculate earnings per share (basic and diluted)

X. Revenues and expenses

- a. apply the revenue recognition principles to various types of transactions
- b. identify issues involved with revenue recognition at point of sale, including sales with buyback agreements, sales when right of return exists, and trade loading (or channel stuffing)
- c. identify instances where revenue is recognized before delivery

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\* See required knowledge at the beginning of Section E.4.

- d. distinguish between percentage-of-completion and completed-contract methods for recognizing revenue
  - e. apply the percentage-of-completion and the completed-contract methods
  - f. compare and contrast the recognition of costs of construction, progress billings, collections, and gross profit recognized under the two long-term contract accounting methods
  - g. demonstrate an understanding of the proper accounting for losses on long-term contracts
  - h. identify instances where revenue is recognized after delivery
  - i. identify the situations in which each of the following revenue recognition methods would be used: installment sales method, cost recovery method, and deposit method
  - j. demonstrate an understanding of the accounting procedures under the installment method, the cost recovery method, and the deposit method
  - k. define gains and losses and indicate the proper financial statement presentation
  - l. discuss the issues and concerns that have been identified with respect to revenue recognition practices
  - m. demonstrate an understanding of the matching principle with respect to revenues and expenses and be able to apply it to a specific situation
  - n. demonstrate an understanding of expense recognition practices
- XI. Comprehensive income
- a. define comprehensive income and other comprehensive income
  - b. identify the three alternative ways that other comprehensive income may be displayed in the financial statements
  - c. calculate comprehensive income
- XII. Segment reporting
- a. define operating segment
  - b. identify the disclosures required for a reportable operating segment
  - c. determine if a segment is reportable given a set of data
- XIII. Multinational considerations
- a. identify the challenges inherent in translating foreign entities' financial statements to the parent's reporting currency
  - b. define functional currency
  - c. distinguish between the monetary/nonmonetary method and the current rate method
  - d. translate a foreign entity's financial statements from the entity's functional currency to the reporting currency
  - e. re-measure a foreign entity's financial statement to the functional currency
  - f. describe the significance of a foreign currency transaction gain (loss) on the financial statements
  - g. define "highly inflationary economy" and identify which currency should be used as the reporting currency for a company in this environment

- h. identify disclosure requirements for translation of foreign currency financial statements

#### Part 2 – Section E.5. The SEC and its reporting requirements

The candidate should be able to:

- a. identify the two major Acts establishing the SEC and its powers (Securities Act of 1933 and the Securities Exchange Act of 1934); and demonstrate knowledge of the major provisions of each
- b. describe the general reporting requirements of public companies
- c. define the integrated disclosure system, standardized financial statements, and Management Discussion and Analysis
- d. identify other disclosures regarding business operations
- e. identify and describe the SEC disclosure requirements, including the registration with SEC (initial filing and subsequent filings when issuing securities), the annual report to SEC or Form 10-K, the quarterly report or Form 10-Q, disclosure of material events or Form 8-K, and proxy statements and solicitations
- f. identify and explain the major provisions of the Sarbanes-Oxley Act of 2002
- g. identify the functions and responsibilities of the Public Company Accounting Oversight Board (PCAOB)

#### Part 2 – Section E.6. The annual report

The candidate should be able to:

- a. identify audit services related to the annual report
- b. identify the basic components of the annual report, including management's statement of responsibility for the financial statements and the independent auditor's report
- c. describe the Audit Committee's level of responsibility for the integrity of the financial information presented in the annual reports
- d. identify the Audit Committee's functions to include (a) nominating the public accounting firm that will conduct the annual external audit, (b) participating in the process of setting the scope of internal and external audits, and (c) inviting direct audit communications on major problems encountered during the course of internal and external audits
- e. discuss how the audit opinion letter published in the annual report can impact the market perception of the firm
- f. identify and describe other sections in the annual report, including the letter to shareholders, management discussion and analysis, and the statement on social responsibility

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**PART 3 – STRATEGIC MANAGEMENT**

**Section A. Strategic Planning (Level B)**

Part 3 – Section A.1. Strategic and tactical planning

The candidate should be able to:

- a. discuss how strategic planning determines the path an organization chooses for attaining its long-term goals and missions
- b. identify the time frame appropriate for a strategic plan
- c. identify the external factors that should be analyzed during the strategic planning process and understand how this analysis leads to recognition of organizational opportunities, limitations, and threats
- d. identify the internal factors that should be analyzed during the strategic planning process and explain how this analysis leads to recognition of organizational strengths, weaknesses, and competitive advantages
- e. demonstrate an understanding of how the analysis of external and internal factors leads to the development of the overall organizational mission and that this mission leads to the formulation of long-term business objectives such as business diversification, the addition or deletion of product lines, or the penetration of new markets
- f. identify the role of capital budgeting and capacity planning in the strategic planning process
- g. explain why short-term objectives, tactics for achieving these objectives, and operational planning (master budget) must be congruent with the strategic plan and contribute to the achievement of long-term strategic goals
- h. explain why performance measurement and other reporting systems must be congruent with and support measurement of progress on strategic and operational measures
- i. identify the characteristics of successful strategic/tactical planning
- j. define contingency planning and discuss its importance, particularly where changes in external factors might adversely impact strategic plans

Part 3 – Section A.2. Manufacturing paradigms

The candidate should be able to:

- a. define a just-in-time system and describe its central purpose
- b. identify the operational benefits of implementing a just-in-time system
- c. define the term kanban and describe how kanban is used in a just-in-time system
- d. demonstrate an understanding of work cells and how they relate to just-in-time processes
- e. define material resource planning (MRP) and identify its benefits

- f. calculate subunits needed to complete an order for a finished product using MRP
- g. demonstrate an understanding of the concept of outsourcing and identify the benefits and limitations of choosing this option
- h. demonstrate an understanding of the theory of constraints and the steps involved in theory of constraints analysis
- i. define and calculate throughput contribution and demonstrate an understanding of its relationship to the theory of constraints
- j. demonstrate an understanding of a drum-buffer-rope system as a tool for managing product flow
- k. discuss how the theory of constraints and activity-based costing are complementary analytical tools
- l. identify other contemporary productivity concepts such as automation and the use of robots, computer-aided design, computer-integrated manufacturing, and flexible manufacturing systems

### Part 3. A.3. Business process performance

The candidate should be able to:

- a. define value chain analysis
- b. identify the steps in value chain analysis
- c. demonstrate an understanding of how value chain analysis is used to better understand a firm's competitive advantage
- d. define a value-added activity and explain how the value-added concept is related to improving performance
- e. demonstrate an understanding of process analysis and how to improve business process performance through business process reengineering
- f. analyze a sequence of tasks, activities, and processes
- g. define the Pareto principle
- h. demonstrate an understanding of benchmarking process performance
- i. identify the benefits of benchmarking in creating a competitive advantage
- j. apply activity-based management principles to recommend process performance improvements
- k. demonstrate an understanding of the relationship among continuous improvement techniques, activity-based management, and quality performance
- l. demonstrate an understanding of the concept of continuous improvement (kaizen) and how it relates to implementing ideal standards and quality improvements
- m. define best practice analysis and discuss how it can be used by an organization to improve performance

## **Section B. Strategic Marketing (Level A)**

### Part 3 - Section B.1. Strategic role within the firm

The candidate should be able to:

- a. identify the interrelationships between a firm's overall strategy and its marketing process
- b. demonstrate an understanding of the process of setting company marketing strategies, as well as the objectives and tactics to reach those strategic marketing goals
- c. demonstrate an understanding of Strengths/Weaknesses/Opportunities/Threats (SWOT) analysis
- d. explain the critical importance of identifying customer needs and providing value to satisfy those customer needs
- e. define and demonstrate an understanding of business portfolio concepts
- f. demonstrate an understanding of the marketing process, including analyzing marketing opportunities, selecting target markets, developing the marketing mix, and managing the marketing effort
- g. demonstrate an understanding of the interrelationships among marketing analysis, planning, implementation, and control
- h. define strategic groups within industries and discuss why they require unique marketing strategies
- i. identify Porter's three generic strategies
- j. demonstrate an understanding of competitive changes during an industry's evolution
- k. differentiate among embryonic industries, growth industries, industry shakeout, mature industries, and declining industries
- l. demonstrate an understanding of the effect of globalization on industry structure
- m. identify internal competitive advantage and its components, including efficiency, quality, innovation, and customer satisfaction
- n. demonstrate an understanding of the value creation chain
- o. identify distinctive competencies, resources and capabilities
- p. identify reasons that marketing strategies fail and identify ways to sustain competitive advantage, including continuous improvement and benchmarking

### Part 3 - Section B.2. Managing marketing information

The candidate should be able to:

- a. identify marketing information needs
- b. demonstrate an understanding of the marketing information development process, including internal data collection, marketing intelligence, and marketing research
- c. define customer relationship management
- d. identify efficient methods of compiling, distributing, and using marketing information

### Part 3 - Section B.3. Market segmentation, targeting, and positioning

The candidate should be able to:

- a. identify target marketing steps, including market segmentation, targeting, and positioning
- b. identify and define mass marketing, segment marketing, niche marketing, and micromarketing
- c. demonstrate an understanding of segmenting consumer markets, business markets, and international markets
- d. identify requirements for effective segmentation
- e. demonstrate an understanding of market targeting, including evaluating and selecting market segments
- f. define positioning strategy

### Part 3 - Section B.4. Managing products and services

The candidate should be able to:

- a. distinguish between products and services
- b. classify products and services, including consumer products, industrial products, and other marketable entities
- c. demonstrate an understanding of product attributes, branding, packaging, labeling, and product support services
- d. demonstrate an understanding of product line decisions and product mix decisions
- e. demonstrate an understanding of services marketing including the nature and characteristics of service marketing strategies
- f. demonstrate an understanding of new product development strategy and product life-cycle strategies

### Part 3 - Section B.5. Pricing strategy

The candidate should be able to:

- a. identify internal and external factors affecting pricing decisions
- b. demonstrate an understanding of general pricing approaches, including cost-based pricing, value-based pricing, and competition-based pricing
- c. discuss the role of the management accountant in pricing decisions
- d. demonstrate an understanding of new product pricing strategies, including market skimming pricing and market penetration pricing
- e. demonstrate an understanding of product mix pricing strategies including product line pricing, optional product pricing, captive product pricing, by-product pricing, and product bundle pricing
- f. demonstrate an understanding of price adjustment strategies including discount and allowance pricing, segmented pricing, psychological pricing, promotional pricing, geographical pricing, and international pricing
- g. demonstrate an understanding of how elasticity and the bargaining power of either the buyer or seller can impact the price

### Part 3 - Section B.6. Promotional mix and distribution strategy

The candidate should be able to:

- a. define marketing communication mix
- b. demonstrate an understanding of the integrated marketing communication process, including the need for integrated marketing communications
- c. identify and define the components of the overall communication mix, including advertising, sales promotion, public relations, and personal selling
- d. demonstrate an understanding of the advertising process, including setting advertising objectives, setting the advertising budget, developing advertising strategy, and advertising evaluation
- e. demonstrate an understanding of the sales promotion process, including sales promotion objectives, tools, strategy, and evaluation
- f. demonstrate an understanding of public relations and identify related tools
- g. demonstrate an understanding of the role of the personal selling process as an element of promotional mix
- h. identify the most effective component of the marketing mix (advertising, sales promotion, public relations, or personal selling) to use in a given situation
- i. define relationship marketing
- j. demonstrate an understanding of the direct marketing model, its benefits, forms of direct marketing, integrated campaign process, and ethical issues
- k. define the nature and functions of distribution channels
- l. demonstrate an understanding of distribution channel behavior and organization, including vertical, horizontal, and hybrid marketing systems and channel disintegration trends
- m. demonstrate an understanding of distribution channel design decisions, including analysis of consumer service needs, defining channel objectives and constraints, identifying and evaluating major alternatives, and global implementation

### **Section C. Corporate Finance (Levels A and B)**

#### Part 3 – Section C.1. Risk and return

The candidate should be able to:

- a. calculate rates of return
- b. identify and demonstrate an understanding of the different types of risk (systematic (market), unsystematic (company), industry, country, etc.)
- c. demonstrate an understanding of the relationship between risk and return
- d. calculate expected return, standard deviation of return and coefficient of variation
- e. identify the different types of attitudes toward risk and infer how attitude might affect the management of risk
- f. define a portfolio and distinguish between individual security risk and portfolio risk
- g. define Value at Risk (VAR)
- h. demonstrate an understanding of diversification
- i. differentiate between systematic and unsystematic risk

- j. demonstrate an understanding of how individual securities affect portfolio risk
- k. define beta and identify the meaning of a security's beta
- l. calculate the expected risk-adjusted returns using the Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Theory (APT)
- m. define hedging and demonstrate how hedging can be used to manage financial risk

### Part 3 – Section C.2. Financial instruments

The candidate should be able to:

- a. define and identify the characteristics of bonds, common stock, and preferred stock
- b. identify and describe the basic features of a bond such as maturity, par value, coupon rate, provisions for redeeming, covenants, options granted to the issuer or investor, indentures, and restrictions
- c. define the different types of dividends, including cash dividends, stock dividends, and stock splits
- d. identify and discuss the factors that influence the dividend policy of a firm
- e. demonstrate an understanding of the dividend payment process for both common and preferred stock
- f. value bonds, common stock, and preferred stock using discounted cash flow methods
- g. demonstrate an understanding of the dividend discount model
- h. demonstrate an understanding of relative or comparable valuation methods, such as Price/Earnings (P/E) ratios, Market/Book ratios, and Price/Sales ratios
- i. demonstrate an understanding of duration as a measure of bond interest rate sensitivity
- j. demonstrate an understanding of how income taxes impact financing decisions
- k. define and demonstrate an understanding of derivatives, their payoff structures, and their uses
- l. distinguish between futures and forwards
- m. demonstrate an understanding of options
- n. demonstrate a basic understanding of the Black-Scholes and the binomial option-valuation models and how a change in one variable will affect the value of the option (calculation not required)
- o. define and identify characteristics of other sources of long-term financing, such as leases, convertible securities, warrants, and retained earnings

### Part 3. Section C.3. Cost of capital

The candidate should be able to:

- a. define the cost of capital and demonstrate an understanding of its applications in capital structure decisions
- b. determine the weighted average (historical) cost of capital and the cost of its individual components

- c. calculate the marginal cost of capital and demonstrate an understanding of the significance of using the marginal cost as opposed to the historical cost
- d. demonstrate an understanding of the use of the cost of capital in capital investment decisions
- e. demonstrate an understanding of how income taxes impact capital structure and capital investment decisions

Part 3 – Section C.4. Managing current assets

The candidate should be able to:

- a. define working capital and identify its components
- b. explain the benefit of short-term financial forecasts in the management of working capital
- c. identify factors influencing the levels of cash
- d. identify and explain the three motives for holding cash
- e. demonstrate an understanding of how firms monitor cash inflows and outflows and prepare forecasts of future cash flows
- f. identify methods of speeding up cash collections
- g. calculate the net benefit of a lockbox system
- h. define concentration banking and discuss how firms utilize it
- i. demonstrate an understanding of the uses of compensating balances
- j. identify methods of slowing down disbursements
- k. define payable through draft and zero balance account
- l. demonstrate an understanding of disbursement float and overdraft systems
- m. define electronic commerce and discuss its use by firms
- n. define the different types of marketable securities, including money market instruments, T-bills, Treasury notes, Treasury bonds, repurchase agreements, Federal agency securities, bankers' acceptances, commercial paper, negotiable CDs, Eurodollars, and other marketable securities
- o. demonstrate an understanding of the variables in marketable security selections, including safety, marketability, yield, maturity, and taxability
- p. demonstrate an understanding of the risk and return trade-off in the selection of marketable securities
- q. list reasons for holding marketable securities
- r. identify reasons for carrying accounts receivable and the factors influencing the level of receivables
- s. demonstrate an understanding of the impact of changes in credit terms
- t. define default risk
- u. demonstrate an understanding of the factors involved in determining an optimal credit policy
- v. calculate the average collection period
- w. identify reasons for carrying inventory and the factors influencing its level
- x. identify and calculate the costs related to inventory
- y. define lead time and safety stock
- z. demonstrate an understanding of Economic Order Quantity (EOQ) and how a change in one variable would affect the EOQ (calculation not required)

- aa. define Just-in-Time and Kanban inventory management systems

### Part 3 – Section C.5. Financing current assets

The candidate should be able to:

- a. demonstrate an understanding of how risk affects a firm's approach to its current asset financing policy (aggressive, conservative, etc.)
- b. describe the different types of short-term credit, including trade credit, short-term bank loans, commercial paper, lines of credit, and bankers' acceptances and identify their advantages and disadvantages
- c. estimate the annual cost and effective annual interest rate of not taking a cash discount
- d. calculate the effective annual interest rate of a bank loan with a compensating balance requirement and/or a commitment fee
- e. describe the different types of secured short-term credit, including accounts receivable financing and inventory financing
- f. demonstrate an understanding of factoring accounts receivable and calculate the cost of factoring
- g. demonstrate an understanding of the maturity matching or hedging approach to financing

### **Section D. Decision Analysis (Levels A, B, and C)**

#### Part 3 – Section D.1 Decision process

The candidate should be able to:

- a. identify and demonstrate an understanding of the steps needed to reach a decision, i.e., (i) obtain and analyze information, (ii) identify alternative courses of action, (iii) make predictions about future scenarios, (iv) choose and justify an alternative, (v) implement a decision, and (vi) evaluate performance to provide feedback
- b. demonstrate an understanding of how management should evaluate decision results

#### Part 3 – Section D.2 Relevant data concepts

The candidate should be able to:

- a. differentiate between economic concepts of revenues and costs and accounting concepts of revenues and costs
- b. define relevant revenues (expected future revenues) and relevant costs (expected future costs)
- c. identify cost behavior patterns, define cost traceability, and demonstrate an understanding of cost relevance as it relates to various cost objects for which decisions are to be made

- d. demonstrate an understanding of various costs incurred in the value chain and the composition of such costs for decisions such as pricing, alternative operating options, contract negotiations, and outsourcing decisions
- e. differentiate between costs that are avoidable or unavoidable in a decision process setting
- f. identify relevant costs as the incremental, marginal, or differential costs among alternative courses of action and calculate the relevant costs given a numerical scenario
- g. define sunk costs and explain why they are not relevant
- h. distinguish between quantitative factors (e.g., cost of direct labor) and qualitative factors (e.g., reduction in new-product development time)
- i. define qualitative factors as outcomes that cannot be measured in numerical terms, e.g., employee morale
- j. demonstrate an understanding of opportunity costs as the contribution to income that is forgone by not using a limited resource in its best alternative use
- k. demonstrate an understanding of the impact of income taxes on the relevant revenue and cost data employed in the decision process

Part 3 – Section D.3 Cost/volume/profit analysis

The candidate should be able to:

- a. demonstrate an understanding of how cost/volume/profit (CVP) analysis (break-even analysis) is used to examine the behavior of total revenues, total costs, and operating income as changes occur in output levels, selling prices, variable costs per unit, or fixed costs
- b. differentiate between costs that are fixed and costs that are variable with respect to levels of output
- c. demonstrate an understanding of the behavior of total revenues and total costs in relation to output within a relevant range
- d. explain why the classification of fixed vs. variable costs is affected by the time-frame being considered
- e. demonstrate an understanding of how contribution margin per unit is used in CVP analysis
- f. calculate contribution margin per unit and total contribution margin
- g. calculate the breakeven point in units and dollar sales to achieve targeted operating income or targeted net income
- h. demonstrate an understanding of how changes in unit sales mix affect operating income in multiple-product situations
- i. demonstrate an understanding of why there is no unique break-even point in multiple-product situations
- j. analyze and recommend a course of action using CVP analysis
- k. demonstrate an understanding of the impact of income taxes on CVP analysis

### Part 3 – Section D.4 Marginal analysis

The candidate should be able to:

- a. demonstrate proficiency in the use of marginal analysis for decisions such as (a) introducing a new product or changing output levels of existing products, (b) accepting or rejecting special orders, (c) making or buying a product or service, (d) selling a product or performing additional processes and selling a more value-added product, and (e) adding or dropping a segment
- b. identify relevant information as the future revenues and future costs that will differ between the decisions in any type of marginal analysis
- c. explain why any cost, including any allocated costs, that does not differ between alternatives, should be ignored in marginal decision analyses
- d. demonstrate an understanding of opportunity cost in marginal analysis
- e. calculate the effect of opportunity cost in a marginal analysis decision
- f. recommend a course of action using marginal analysis
- g. calculate the effect on operating income when changes in output levels occur
- h. calculate the effect on operating income of a decision to accept or reject a special order when there is idle capacity and the order has no long-run implications
- i. identify qualitative factors in make-or-buy decisions, such as product quality and dependability of suppliers
- j. calculate the effect on operating income of a decision to make-or-buy a product or service
- k. differentiate between avoidable and unavoidable costs in the decision to drop or add a segment
- l. demonstrate an understanding of the impact of income taxes on marginal analysis decisions

### Part 3. Section D.5 Cost-based pricing

The candidate should be able to:

- a. demonstrate an understanding of cost-behavior patterns, cost traceability, cost drivers, and cost relevance in measuring the costs of products
- b. demonstrate an understanding of how the pricing of a product or service is affected by the demand for the product or service, as well as the supply availability
- c. discuss how pricing decisions in the short-run can differ from pricing decisions in the long-run
- d. calculate the relevant costs associated with short-run special product purchase orders
- e. discuss the importance of stable and predictable costs over an extended time period for long-run pricing decisions
- f. demonstrate an understanding of the market-based approach to the pricing decision
- g. differentiate between a cost-based approach and a market-based approach to setting prices

- h. explain why market-based pricing strategies are generally used when operating in a competitive commodities type market
- i. define and demonstrate an understanding of target pricing and target costing
- j. identify techniques used to set prices based on understanding customers' perceptions of value, competitors' technologies, products, costs, and financial conditions
- k. identify the main steps in developing target prices and target costs
  - l. define value engineering
- m. calculate the target operating income per unit and target cost per unit
- n. define and distinguish between a value-added cost and a nonvalue-added cost
- o. define the pricing technique of cost plus target rate of return
- p. define a product life cycle and life-cycle costing
- q. define peak-load pricing
- r. evaluate and recommend pricing strategies under specific market conditions or opportunities

## **Section E. Investment Decisions (Levels A, B, and C)**

### Part 3 – Section E.1. Capital budgeting process

The candidate should be able to:

- a. define capital budgeting
- b. demonstrate an understanding of capital budgeting applications in making decisions for project investments
- c. identify the steps or stages undertaken in developing and implementing a capital budget for a project
- d. identify and calculate the relevant cash flows of a capital investment project on both a pretax and after-tax basis
- e. demonstrate an understanding of how income taxes affect cash flows
- f. distinguish between cash flows and accounting profits and discuss the relevance to capital budgeting of the following: incremental cash flow, sunk cost, and opportunity cost
- g. explain the importance of changes in net working capital in the capital budgeting process
- h. discuss how the effects of inflation are reflected in capital budgeting analysis
- i. describe the role of the post-audit in the capital budgeting process

### Part 3 – Section E.2. Discounted cash flow analysis

The candidate should be able to:

- a. demonstrate an understanding of the two main discounted cash flow (DCF) methods, net present value (NPV) and internal rate of return (IRR)
- b. demonstrate an understanding of the weighted average cost of capital approach to NPV calculations
- c. calculate the NPV and IRR using time value of money tables

- d. demonstrate an understanding of the decision criteria used in NPV and IRR analyses to determine acceptable projects
- e. compare NPV and IRR focusing on the relative advantages and disadvantages of each method, particularly with respect to independent versus mutually exclusive projects, the “multiple IRR problem” and the cash flow pattern that causes the problem, and why NPV and IRR methods can produce conflicting rankings for capital projects if not applied properly
- f. identify assumptions of the different methods of evaluating capital investment projects
- g. recommend project investments on the basis of DCF analysis

### Part 3 – Section E.3. Payback and discounted payback

The candidate should be able to:

- a. demonstrate an understanding of the payback method
- b. identify the advantages and disadvantages/limitations of the payback method
- c. calculate payback periods and discounted paybacks
- d. identify the advantages and disadvantages/limitations of the discounted payback method

### Part 3 – Section E.4. Ranking investment projects

The candidate should be able to:

- a. define capital rationing and mutually exclusive projects
- b. rank capital investment projects and recommend optimal investments using the profitability index
- c. determine when the profitability index would be recommended over the NPV rule (i.e., independent projects with capital rationing)
- d. identify and discuss the problems inherent in comparing projects of unequal scale and/or unequal lives
- e. demonstrate an understanding of the advantages and disadvantages of the different methods of evaluating alternate capital investment projects
- f. identify alternative solutions to the ranking problem, including internal capital markets and linear programming

### Part 3 – Section E.5. Risk analysis in capital investment

The candidate should be able to:

- a. identify alternative approaches to dealing with risk in capital budgeting
- b. demonstrate an understanding of sensitivity analysis and certainty equivalents
- c. identify qualitative considerations in making capital investment decisions
- d. explain why a rate specifically adjusted for risk should be used when project cash flows are more or less risky than is normal for a firm
- e. distinguish among sensitivity analysis, scenario analysis, and Monte Carlo simulation as risk analysis techniques
- f. describe how the CAPM can be used in the capital budgeting process

### Part 3 – Section E.6. Real options in capital investments

The candidate should be able to:

- a. demonstrate an understanding of the concept of real options in the capital budgeting process
- b. identify the four common real options, e.g., the option to (a) make follow-on investments if the immediate investment project succeeds, (b) abandon a project, (c) wait and learn before investing, or (d) vary a firm's output or its production methods
- c. identify these real options as either put or call options
- d. demonstrate an understanding of the variables and factors that affect the value of options

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**PART 4 – BUSINESS APPLICATIONS**

Part 4 will consist of several business-oriented essay questions and problems requiring both written and quantitative responses. Candidates should be able to use word processing software and electronic spreadsheets.

The candidate should be able to apply principles and practices from Parts 1, 2 and 3 in realistic business situations, which is the primary emphasis of Part 4. In addition, the candidate should be able to synthesize the material from Parts 1, 2 and 3 and incorporate the following topics into their responses.

At least one essay question will include the topic of ethics. Candidates are expected to apply **IMA's Statement of Ethical Professional Practice** to business situations.

**A. Organization Management (Levels A, B and C)**

1. Organization structures

The candidate should be able to:

- a. define departmentalization, division of labor, and task specialization
- b. identify the various ways to departmentalize tasks, including by process, by product or service, by customer, and by geography
- c. define span of control
- d. distinguish between line and staff authority
- e. distinguish between centralization and decentralization
- f. define matrix organization and determine when it might be appropriate to use this organizational structure
- g. define bureaucracy
- h. identify and define the four management functions of planning, organizing, directing, and controlling
- i. define reengineering and determine the best way to reengineer a process
- j. demonstrate an understanding of how strategic partnering and outsourcing can benefit a business firm
- k. define lean thinking and demonstrate an understanding of its implications for organizational structure
- l. apply the principles of organizational design to a managerial scenario
- m. analyze a management structure and recommend improvements

## 2. Jobs and teams

The candidate should be able to:

- a. define job design, job specialization, and job rotation
- b. compare and contrast job enlargement and job enrichment
- c. differentiate teams from groups
- d. contrast formal and informal teams
- e. summarize the benefits and costs of teams in organizations
- f. identify different types of teams
- g. explain issues inherent in the team model, including empowerment, leadership issues, consensus building, and decision-making
- h. identify top management support as one of the critical factors in the success of a team
- i. analyze the effectiveness of a team and recommend changes to improve performance

## 3. Leadership styles and sources of power

The candidate should be able to:

- a. distinguish between management and leadership
- b. identify and explain the various types of leadership styles, including autocratic and democratic leadership
- c. contrast task or job-centered leader behavior with employee-centered leader behavior
- d. infer the leadership style and/or behavior given an organizational situation
- e. explain the major features of Fiedler's contingency (or LPC) theory of leadership, the path-goal theory of leadership, and the Vroom-Yetton-Jago model of leadership
- f. define transformational leadership
- g. apply theories of leadership to organizational scenarios
- h. identify the types and sources of power, including legitimate power, reward power, coercive power, expert power, and referent or charismatic power
- i. discuss the importance of informal power and influence
- j. define and explain delegation of authority
- k. identify sources of resistance to change at an individual level, as well as at the group level and the organizational level
- l. recommend methods to accept, encourage, and bring about change from a leadership perspective

## 4. Motivational theories

The candidate should be able to:

- a. explain Frederick Taylor's scientific approach to motivation in the business organization

- b. demonstrate an understanding of the need-based theories of motivation, including Maslow's hierarchy, Existence-Relatedness-Growth theory, Herzberg's two-factor (or dual-structure) theory, and McClelland's achievement/power theory
- c. apply the above need-based theories to organizational situations and recommend a course of action based on a particular theory
- d. demonstrate an understanding of the process-based theories of motivation, including equity theory, expectancy theory, reinforcement theory, intrinsic motivation, and goal-setting theory
- e. apply process-based theories to organizational situations and recommend a course of action based on a particular theory
- f. explain and interpret McGregor's Theory X and Theory Y and Ouchi's Theory Z

5. Diversity issues

The candidate should be able to:

- a. discuss the importance of organizational culture
- b. define workforce diversity and infer some of the possible organizational advantages and disadvantages of cultural diversity
- c. identify management issues resulting from the increasing rate of globalization

**B. Organization Communication (Levels A, B and C)**

- 1. Communication models
- 2. Deterrents to effective communication

The candidate should be able to:

- a. describe the basic communication model of sender – communication method – receiver
- b. define encoding, transmission, decoding, noise, and feedback
- c. classify the different types of communication networks, including the wheel, chain, circle, Y, and all-channel networks and identify which network is present within a given organizational context
- d. identify different roles within communication networks, including the gatekeeper, the opinion leader, and the liaison
- e. distinguish between formal and informal channels of communication
- f. identify deterrents to effective communication, including semantics, noise, the grapevine, inadequate listening skills, screening, bias, stereotyping, organizational structure, cultural context, perception, skill level, overload, and lack of feedback
- g. explain how a particular communication process could be improved by eliminating deterrents to communication, understanding the other's viewpoint, and using other communication skills

## **C. Behavioral Issues (Levels A, B, and C)**

### **1. Alignment of organizational goals**

The candidate should be able to:

- a. define the concept of goal congruence and explain the concept of agency theory and how it relates to goal congruence
- b. identify the purposes for goal setting as they relate to employee behavior (motivation)
- c. explain how goal congruence relates to the success or failure of budgetary plans
- d. describe the relationship between employee goals and needs and the goals of the firm
- e. differentiate between responsibility and authority
- f. demonstrate an understanding of the issues surrounding responsibility without authority
- g. identify ways in which authority is established (formal and informal)
- h. evaluate a given management situation for its behavioral implications and suggest alternate approaches

### **2. Issues in budgeting and standard setting**

The candidate should be able to:

- a. differentiate between authoritative (top-down) and participative (bottom-up) processes for developing budgets and standards
- b. identify the advantages and disadvantages of authoritative budget/standards development
- c. describe the likely behavior of employees responsible for implementing and achieving authoritative budgets and standards
- d. describe the role that top management should play in an effective participative budgeting process
- e. identify the advantages and disadvantages of participative budget and standards development
- f. describe the likely behavior of employers responsible for implementing and achieving participative budgets and standards
- g. demonstrate an understanding of the role that communication plays in effective budgeting and standard setting
- h. define the term budgetary slack
- i. describe how budgetary slack can have both positive and negative effects on the budgeting process
- j. describe the behavioral issues that should be considered when adopting ideal (theoretical) standards
- k. describe the likely behavior of employees being measured by practical (currently attainable) standards
- l. evaluate a given management situation for its behavioral implications and suggest alternate approaches

### 3. Issues in reporting and performance evaluation

The candidate should be able to:

- a. identify and explain the objectives of management compensation/recognition
- b. identify and define the various types of management compensation/recognition
- c. describe how the various types of compensation affect employee behavior
- d. discuss the importance of management compensation plans being grounded in the firm's strategic direction and life cycle
- e. identify timely feedback as the link between planning, control, and evaluation
- f. describe the purposes of feedback and identify alternative means of feedback such as reports, interviews, and team meetings
- g. demonstrate an understanding of the issues surrounding the controllability of costs, motivation, and performance evaluation
- h. demonstrate an understanding of how the methods used to allocate common costs can affect behavior and performance
- i. describe the role of a flexible budgeting process and variance analysis in performance evaluation
- j. explain that there is an hierarchy to variances and that the investigation of variances should positively influence behavior rather than fix blame
- k. identify the advantages and disadvantages of using multiple performance measures
- l. explain that goal congruence will more likely be optimized by using a combination of both financial and non-financial performance measures
- m. demonstrate an understanding of how the method used to establish transfer prices can affect motivation and divisional performance
- n. describe the likely behavior of employees under varying types of transfer pricing
- o. evaluate a given management situation for its behavioral implications and suggest alternate approaches

#### **D. Ethical considerations (Levels A, B, and C)**

Ethics may be tested in conjunction with any topic area.

1. Provisions of **IMA's Statement of Ethical Professional Practice**
2. Corporate responsibility for ethical conduct
3. Evaluation and resolution of ethical issues

Using the standards outlined in **IMA's Statement of Ethical Professional Practice**, the candidate should be able to:

- a. evaluate a given business situation for its ethical implications
- b. identify specific standards that may have been violated in a given business situation
- c. recommend a course of action for management accountants or financial managers to take when confronted with an ethical dilemma in the business environment
- d. discuss corporate responsibility for ethical conduct

- e. evaluate and propose resolutions for ethical issues such as fraudulent reporting, manipulation of analyses and results, unethical behavior in developing budgets and standards, manipulation of decision factors, and other unethical conduct in a business environment