Chapter 2

COST CONCEPTS AND THE COST ACCOUNTING INFORMATION SYSTEM

MULTIPLE CHOICE

Question Nos. 14, 15, 17, and 20-26 are AICPA adapted.
Question Nos. 13, 18, and 19 are ICMA adapted.
Question No. 16 is CIA adapted.

C **1.** **A cost accounting information system necessarily should accomplish all of the following *except*:**
- **A. reflect the division of authority so that individual managers can be held accountable**
- **B. provide management with information that facilitates prompt identification of activities needing attention**
- **C. be more sophisticated than is required by legal, regulatory, and contractual requirements**
- **D. be tailored to give the most efficient blend of sophistication and simplicity**
- **E. focus management's attention**

A **2.** **Cost classifications are based on the relationship of costs to all of the following *except*:**
- **A. ledger accounts**
- **B. accounting periods**
- **C. products**
- **D. volume of production**
- **E. manufacturing departments**

B **3.** **Direct materials and direct labor are considered to be:**
- **A. selling expenses**
- **B. prime costs**
- **C. administrative expenses**
- **D. conversion costs**
- **E. factory overhead**

E **4.** **Depreciation on factory buildings and equipment is classified as:**
- **A. selling expense**
- **B. administrative expense**
- **C. direct labor**
- **D. indirect materials**
- **E. factory overhead**

A **5.** **A typical marketing expense is:**
- **A. freight out**
- **B. indirect labor**
- **C. audit fees**
- **D. uncollectible accounts expense**
- **E. direct labor**

E **6.** **A typical indirect labor cost for a manufacturer is:**
- **A. sales office salaries**
- **B. freight out**
- **C. factory insurance**
- **D. sales commissions**
- **E. materials handling**

D **7.** **Usually, a cost easy to assign accurately to a specific operating department is a:**
- **A. standard cost**
- **B. common cost**
- **C. fixed cost**
- **D. variable cost**
- **E. joint cost**

C **8.** **In constructing a chart of accounts, all of the following guidelines should be adhered to *except*:**
- **A. using numbers rather than letters in coding the accounts**
- **B. dividing charts into balance sheet accounts and income statement accounts**
- **C. using account titles that reflect a maximum level of detail about each item**
- **D. giving maximum information with a minimum of supplementary analysis**
- **E. providing sufficient classification to enable cost assignment to responsible managers**

C **9.** **An expense that is likely to contain both fixed and variable components is:**
- **A. security guard wages**
- **B. supplies**
- **C. heat, light, and power**
- **D. small tools**
- **E. taxes on real estate**

C **10.** **A type of employee whose wages are not a component of indirect labor is a(n):**
- **A. inspector**
- **B. supervisor**
- **C. assembler**
- **D. maintenance worker**
- **E. shop clerk**

B **11.** **Pitino Company has a beginning inventory of direct materials on March 1 of $30,000 and an ending inventory on March 31 of $36,000. The following additional manufacturing cost data were available for the month of March:**

Direct materials purchased	**$84,000**
Direct labor	**60,000**
Factory overhead	**80,000**

During March, prime cost added to production was:

A. **$140,000**
B. **$138,000**
C. **$144,000**
D. **$150,000**
E. **none of the above**

SUPPORTING CALCULATION:

$84,000 + $60,000 - ($36,000 - $30,000) = $138,000

C **12.** **Pitino Company has a beginning inventory of direct materials on March 1 of $30,000 and an ending inventory on March 31 of $36,000. The following additional manufacturing cost data were available for the month of March:**

Direct materials purchased	**$84,000**
Direct labor	**60,000**
Factory overhead	**80,000**

During March, conversion cost added to production was:

A. **$80,000**
B. **$144,000**
C. **$140,000**
D. **$138,000**
E. **none of the above**

SUPPORTING CALCULATION: $60,000 + $80,000 = $140,000

A **13.** **The term "variable costs" refers to:**

A. **all costs whose total amounts change in proportion to changes in activity within a relevant range**
B. **all costs that are likely to respond to the amount of attention devoted to them by a specified manager**
C. **all costs that are associated with marketing, shipping, warehousing, and billing activities**
D. **all costs that do not change in total for a given period and relevant range, but become progressively smaller on a per-unit basis as volume increases**
E. **all manufacturing costs incurred to produce units of output**

C **14.** **The following statement that best describes a fixed cost is:**
- **A. it may change in total when such change depends on production within the relevant range**
- **B. it increases on a per-unit basis as production increases**
- **C. it decreases on a per-unit basis as production increases**
- **D. it may change in total when such change is related to changes in production**
- **E. it is constant per unit of production**

A **15.** **The term "relevant range" as used in cost accounting means the range over which:**
- **A. cost relationships are valid**
- **B. production may vary**
- **C. relevant costs are incurred**
- **D. costs may fluctuate**
- **E. none of the above**

B **16.** **When the number of units manufactured increases, the most significant change in average unit cost will be reflected as:**
- **A. a decrease in the variable element**
- **B. a decrease in the nonvariable element**
- **C. an increase in the semivariable element**
- **D. an increase in the variable element**
- **E. an increase in the nonvariable element**

C **17.** **Within a relevant range, the amount of variable cost per unit:**
- **A. moves in the same direction as fixed cost per unit**
- **B. differs at each production level**
- **C. remains constant at each production level**
- **D. increases as production increases**
- **E. decreases as production increases**

B **18.** **The term "prime costs" refers to:**
- **A. the sum of direct labor costs and all factory overhead costs**
- **B. the sum of direct materials costs and direct labor costs**
- **C. manufacturing costs incurred to produce units of output**
- **D. all costs associated with manufacturing other than direct labor and direct materials costs**
- **E. cost standards that are predetermined and should be attained**

B **19.** **The term "conversion costs" refers to:**
- **A. costs that are associated with marketing, shipping, warehousing, and billing activities**
- **B. the sum of direct labor costs and all factory overhead costs**
- **C. the sum of direct materials costs and direct labor costs**
- **D. manufacturing costs incurred to produce units of output**
- **E. all costs associated with manufacturing other than direct labor costs and direct materials costs**

A 20. Direct labor is a:

	Conversion Cost	Manufacturing Cost	Prime Cost
A.	**Yes**	**Yes**	**Yes**
B.	**No**	**Yes**	**Yes**
C.	**No**	**No**	**No**
D.	**No**	**No**	**Yes**
E.	**Yes**	**Yes**	**No**

C 21. A factory overhead cost:

A. **is a direct cost**
B. **is a prime cost**
C. **can be a variable cost or a fixed cost**
D. **can only be a fixed cost**
E. **includes all factory labor**

A 22. Prime cost and conversion cost share what common element of total cost?

A. **direct labor**
B. **commercial expense**
C. **variable overhead**
D. **fixed overhead**
E. **direct materials**

E 23. Factory overhead includes:

A. **indirect materials but not indirect labor**
B. **indirect labor but not indirect materials**
C. **prime costs**
D. **all manufacturing costs**
E. **all manufacturing costs, *except* direct materials and direct labor**

C 24. Indirect materials are a(n):

A. **fixed cost**
B. **irrelevant cost**
C. **factory overhead cost**
D. **direct cost**
E. **prime cost**

C 25. Wages of the security guard for a small plant are an example of:

	Indirect Labor	Fixed Factory Overhead
A.	**No**	**Yes**
B.	**No**	**No**
C.	**Yes**	**Yes**
D.	**Yes**	**No**

E. **none of the above**

B 26. Wages paid to factory machine operators of a manufacturing plant are an element of:

	Prime Cost	Conversion Cost
A.	Yes	No
B.	Yes	Yes
C.	No	No
D.	No	Yes

E. none of the above

E 27. Common costs are:

A. costs that occur when the production of one product is possible only if one or more other products are manufactured at the same time
B. intended to benefit future periods
C. variable in direct proportion to the level of production
D. chargeable directly to the product
E. costs of facilities or services employed by two or more operations

D 28. Joint costs are:

A. direct costs
B. costs of facilities or services employed by two or more operations
C. revenue expenditures
D. incurred when the production of one product is possible only if other products are produced at the same time
E. always variable

B 29. All of the following are examples of nonfinancial performance measures *except*:

A. the number of defective units produced
B. the gross margin on a product line income statement
C. hours of machine downtime
D. number of days on schedule
E. weight of scrap material produced

E 30. Reasons for the increased attention being given to nonfinancial performance measures include:

A. dissatisfaction with exclusive reliance on financial measures
B. dissatisfaction with financial measures of plant utilization
C. dissatisfaction with financial measures of processing efficiency
D. dissatisfaction with the slow pace at which a company's data processing system can modify traditional financial measures
E. all of the above

E 31. Of the following items, a cost object is:

A. a unit of product
B. a customer order
C. a project
D. a division of the company
E. all of the above

E **32.** **General corporate-level costs, such as bond interest and taxes, would be readily traceable to:**
- **A. each unit of product**
- **B. each division of the company**
- **C. each batch of production**
- **D. all units of product ever produced**
- **E. none of the above**

D **33.** **A revenue expenditure is one that:**
- **A. varies with the volume of production**
- **B. is intended to benefit future periods**
- **C. is reported as an asset**
- **D. benefits the current period only**
- **E. remains the same in total as production changes**

B **34.** **An example of a cost that is irrelevant to a future decision is a(n):**
- **A. differential cost**
- **B. sunk cost**
- **C. out-of-pocket cost**
- **D. opportunity cost**
- **E. variable cost**

PROBLEMS

PROBLEM

1.
Identification of Variable, Fixed, and Semivariable Costs. Place a check mark in the appropriate column to indicate whether the following costs are variable, fixed, or semivariable.

Item		Variable	Fixed	Semivariable
1.	Small tools			
2.	Patent amortization			
3.	Health and accident insurance			
4.	Heat, light, and power			
5.	Straight-line depreciation			
6.	Maintenance of buildings and grounds			
7.	Royalties			
8.	Materials handling			
9.	Property and liability insurance			
10.	Maintenance of factory equipment			

SOLUTION

1. Variable
2. Fixed
3. Semivariable
4. Semivariable
5. Fixed
6. Fixed
7. Variable
8. Variable
9. Fixed
10. Semivariable

PROBLEM

2.
Classification of Costs. Place a check mark in the appropriate column to indicate the proper classification of each of the following costs.

Item		Indirect Materials	Indirect Labor	Other Indirect Factory Costs	Marketing Expenses	Administrative Expenses
1.	Factory heat, light, and power					
2.	Advertising					
3.	Wages of stockroom clerk.....					
4.	Freight out					
5.	Oil for machines.....					
6.	Salary of vice president of human relations.....					
7.	Legal expenses.....					
8.	Salary of the factory manager					
9.	Employer payroll taxes on controller's salary					
10.	Idle time due to assembly line breakdown.....					

SOLUTION

1. **Other indirect factory costs**
2. **Marketing expenses**
3. **Indirect labor**
4. **Marketing expenses**
5. **Indirect materials**
6. **Administrative expenses**
7. **Administrative expenses**
8. **Indirect labor**
9. **Administrative expenses**
10. **Indirect labor**

PROBLEM

3.
Fixed and Variable Costs. In 19A, the Lin Company had sales of $2,500,000, with $1,250,000 variable and $900,000 fixed costs. In 19B, sales are expected to decrease 10% and the fixed costs are not expected to change.

Required: **Determine Lin Company's expected operating income or loss for 19B.**

SOLUTION

Sales	**($2,500,000 x 90%)**		**$ 2,250,000**
Less:	**Variable costs**		
	($1,250,000 x 90%)	**$1,125,000**	
	Fixed costs	**900,000**	**2,025,000**
Operating income			**$ 225,000**

PROBLEM

4.
Determination of per Unit Total Costs. The estimated unit costs for Hoteling Industries, when operating at a production and sales level of 10,000 units, are as follows:

Cost Item	Estimated Unit Cost
Direct materials	**$15**
Direct labor	**10**
Variable factory overhead	**8**
Fixed factory overhead	**5**
Variable marketing	**4**
Fixed marketing	**3**

Required:

(1) Identify the estimated conversion cost per unit.
(2) Identify the estimated prime cost per unit.
(3) Determine the estimated total variable cost per unit.
(4) Compute the total cost that would be incurred during a month with a production level of 10,000 units and a sales level of 12,000 units.

SOLUTION

(1) $10 + $8 + $5 = $23 conversion cost per unit
(2) $15 + $10 = $25 prime cost per unit
(3) $15 + $10 + $8 + $4 = $37 variable cost per unit
(4) [($15 + $10 + $8 + $5 + $3) x 10,000] + ($4 x 12,000)
= $410,000 + $48,000 = $458,000 total cost

PROBLEM

5.
Components of Manufacturing Cost. Myerson Inc. produces video cameras. The direct labor cost of one camera is $200, and the total manufacturing cost is $650. The overhead cost of one camera is two-thirds as large as its conversion cost.

Required:

(1) Compute the conversion cost per unit.
(2) Determine the factory overhead cost per unit.
(3) Determine the direct materials cost per unit.

SOLUTION

(1) Let x = Conversion cost per unit

$x = \$200 + 2/3\ x$

$1/3\ x = \$200$

$x = \$600$

(2) Factory overhead = 2/3 x $600 = $400
(3) Direct materials = $650 - $200 - $400 = $50