## Chapter 2 An Introduction to Cost Terms and Purposes

Objective 2.1

1) Cost objects include:
A) products
B) customers
C) departments
D) All of these answers are correct.

Answer: D
Diff: 2
Terms: cost object
Objective: 1
AACSB: Reflective thinking
2) Actual costs are:
A) the costs incurred
B) budgeted costs
C) estimated costs
D) forecasted costs

Answer: A
Diff: 1
Terms: actual costing
Objective: 1
AACSB: Reflective thinking
3) The general term used to identify both the tracing and the allocation of accumulated costs to a cost object is:
A) cost accumulation
B) cost assignment
C) cost tracing
D) conversion costing

Answer: B
Diff: 1
Terms: cost assignment
Objective: 1
AACSB: Reflective thinking
4) In order to make decisions, managers need to know:
A) actual costs
B) budgeted costs
C) both costs
D) neither cost

Answer: C
Diff: 1
Terms: budgeted costs
Objective: 1
AACSB: Ethical reasoning
5) The collection of accounting data in some organized way is:
A) cost accumulation
B) cost assignment
C) cost tracing
D) conversion costing

Answer: A
Diff: 1
Terms: cost accumulation
Objective: 1
AACSB: Reflective thinking
6) Budgeted costs are:
A) the costs incurred this year
B) the costs incurred last year
C) planned or forecasted costs
D) competitor's costs

Answer: C
Diff: 2
Terms: budgeted costs
Objective: 1
AACSB: Reflective thinking
7) Cost assignment :
A) is always arbitrary
B) is includes tracing and allocating
C) is the same as cost accumulation
D) is finding the difference between budgeted and actual costs

Answer: B
Diff: 2
Terms: cost assignment
Objective: 1
AACSB: Reflective thinking
8) A cost system determines the cost of a cost object by:
A) accumulating and then assigning costs
B) accumulating costs
C) assigning and then accumulating costs
D) assigning costs

Answer: A
Diff: 2
Terms: cost accumulation
Objective: 1
AACSB: Reflective thinking
9) Products, services, departments, and customers may be cost objects.

Answer: TRUE
Diff: 1
Terms: cost object
Objective: 1
AACSB: Reflective thinking
10) Costs are accounted for in two basic stages: assignment followed by accumulation.

Answer: FALSE
Explanation: Costs are accounted for in two basic stages: accumulation followed by assignment.
Diff: 1
Terms: cost accumulation
Objective: 1
AACSB: Reflective thinking
11) Actual costs and historical costs are two different terms referring to the same thing.

Answer: TRUE
Diff: 1
Terms: budgeted costs
Objective: 1
AACSB: Reflective thinking
12) Accountants define a cost as a resource to be sacrificed to achieve a specific objective.

Answer: TRUE
Diff: 1
Terms: cost
Objective: 1
AACSB: Reflective thinking
13) A cost object is always either a product or a service.

Answer: FALSE
Explanation: A cost object could be anything management wishes to determine the cost of, for example, a department.
Diff: 2
Terms: cost object
Objective: 1
AACSB: Reflective thinking
14) A customer could be considered a cost object.

Answer: TRUE
Diff: 2
Terms: cost object
Objective: 1
AACSB: Analytical skills
15) Lucas Manufacturing has three cost objects that it uses to accumulate costs for its manufacturing plants. They are:

Cost object \#1: The physical buildings and equipment
Cost object \#2: The use of buildings and equipment
Cost object \#3: The availability and use of manufacturing labor
The following manufacturing overhead cost categories are found in the accounting records:
a. Depreciation on buildings and equipment
b. Lubricants for machines
c. Property insurance
d. Supervisors salaries
e. Fringe benefits
f. Property taxes
g. Utilities

## Required:

Assign each of the above costs to the most appropriate cost object.
Answer:
Cost object \# 1 includes categories $\mathrm{a}, \mathrm{c}$, and f .
Cost object \# 2 includes categories b and g .
Cost object \# 3 includes categories d and e.
Diff: 2
Terms: cost object
Objective: 1
AACSB: Analytical skills
Objective 2.2

1) Which of the following does NOT affect the direct/indirect classification of a cost?
A) the level of budgeted profit for the next year
B) the materiality of the cost in question
C) available technology to gather information about the cost
D) the design of the operation

Answer: A
Diff: 2
Terms: direct costs of a cost object, indirect costs of a cost object
Objective: 2
AACSB: Analytical skills
2) Which of the following statements about the direct/indirect cost classification is NOT true?
A) Indirect costs are always traced.
B) Indirect costs are always allocated.
C) The design of operations affects the direct/indirect classification.
D) The direct/indirect classification depends on the choice of cost object.

Answer: A
Diff: 2
Terms: indirect manufacturing costs, cost allocation
Objective: 2
AACSB: Analytical skills
3) Cost tracing is:
A) the assignment of direct costs to the chosen cost object
B) a function of cost allocation
C) the process of tracking both direct and indirect costs associated with a cost object
D) the process of determining the actual cost of the cost object

Answer: A
Diff: 2
Terms: cost tracing
Objective: 2
AACSB: Reflective thinking
4) Cost allocation is:
A) the process of tracking both direct and indirect costs associated with a cost object
B) the process of determining the actual cost of the cost object
C) the assignment of indirect costs to the chosen cost object
D) a function of cost tracing

Answer: C
Diff: 2
Terms: cost allocation
Objective: 2
AACSB: Reflective thinking
5) The determination of a cost as either direct or indirect depends upon the:
A) accounting system
B) allocation system
C) cost tracing system
D) cost object chosen

Answer: D
Diff: 2
Terms: direct costs of a cost object, indirect costs of a cost object
Objective: 2
AACSB: Reflective thinking
6) Classifying a cost as either direct or indirect depends upon:
A) the behavior of the cost in response to volume changes
B) whether the cost is expensed in the period in which it is incurred
C) whether the cost can be easily identified with the cost object
D) whether an expenditure is avoidable or not in the future

Answer: C
Diff: 2
Terms: direct costs of a cost object, indirect costs of a cost object
Objective: 2
AACSB: Reflective thinking
7) A manufacturing plant produces two product lines: golf equipment and soccer equipment. An example of direct costs for the golf equipment line are:
A) beverages provided daily in the plant break room
B) monthly lease payments for a specialized piece of equipment needed to manufacture the golf driver
C) salaries of the clerical staff that work in the company administrative offices
D) utilities paid for the manufacturing plant

Answer: B
Diff: 2
Terms: direct costs of a cost object
Objective: 2
AACSB: Analytical skills
8) A manufacturing plant produces two product lines: golf equipment and soccer equipment. An example of indirect cost for the soccer equipment line is:
A) material used to make the soccer balls
B) labor to shape the leather used to make the soccer ball
C) shift supervisor for the soccer line
D) plant supervisor

Answer: D
Diff: 2
Terms: indirect costs of a cost object
Objective: 2
AACSB: Analytical skills
9) Which one of the following items is a direct cost?
A) Customer-service costs of a multiproduct firm; Product A is the cost object.
B) Printing costs incurred for payroll check processing; payroll check processing is the cost object.
C) The salary of a maintenance supervisor in a multiproduct manufacturing plant; Product B is the cost object.
D) Utility costs of the administrative offices; the accounting department is the cost object.

Answer: B
Diff: 2
Terms: direct costs of a cost object
Objective: 2
AACSB: Reflective thinking
10) Indirect manufacturing costs:
A) can be traced to the product that created the costs
B) can be easily identified with the cost object
C) generally include the cost of material and the cost of labor
D) may include both variable and fixed costs

Answer: D
Diff: 2
Terms: indirect manufacturing costs
Objective: 2
AACSB: Reflective thinking
11) All of the following are true EXCEPT that indirect costs:
A) may be included in prime costs
B) are not easily traced to products or services
C) vary with the selection of the cost object
D) may be included in manufacturing overhead

Answer: A
Diff: 2
Terms: indirect manufacturing costs
Objective: 2
AACSB: Reflective thinking
12) Which statement is true?
A) All variable costs are direct costs.
B) Because of a cost-benefit tradeoff, some direct costs may be treated as indirect costs.
C) All fixed costs are indirect costs.
D) All direct costs are variable costs.

Answer: B
Diff: 3
Terms: variable costs, fixed costs, indirect costs of a cost object
Objective: 2
AACSB: Reflective thinking
13) Which statement is true?
A) A direct cost of one cost object cannot be an indirect cost of another cost object.
B) All variable costs are direct costs.
C) A direct cost of one cost object can be an indirect cost of another cost object.
D) All fixed costs are direct costs.

Answer: C
Diff: 3
Terms: direct costs, indirect costs
Objective: 2
AACSB: Reflective thinking
14) The same cost may be direct for one cost object and indirect for another cost object.

Answer: TRUE
Diff: 3
Terms: cost object
Objective: 2
AACSB: Analytical skills
15) Assigning direct costs poses more problems than assigning indirect costs.

Answer: FALSE
Explanation: Tracing direct costs is quite straightforward, whereas assigning indirect costs to a number of different cost objects can be very challenging.
Diff: 2
Terms: direct costs of a cost object, indirect costs of a cost object
Objective: 2
AACSB: Analytical skills
16) Improvements in information-gathering technologies are making it possible to trace more costs as direct.
Answer: TRUE
Diff: 2
Terms: direct costs of a cost object
Objective: 2
AACSB: Use of Information Technology
17) Misallocated indirect costs may lead to NOT promoting profitability.

Answer: TRUE
Diff: 2
Terms: cost allocation
Objective: 2
AACSB: Analytical skills
18) The materiality of the cost is a factor in classifying the cost as a direct or indirect cost.

Answer: TRUE
Diff: 2
Terms: direct costs of a cost object, indirect costs of a cost object
Objective: 2
AACSB: Reflective thinking
19) The cost of electricity used in the production of multiple products would be classified as a indirect cost.
Answer: TRUE
Diff: 1
Terms: direct costs of a cost object
Objective: 2
AACSB: Analytical skills
20) Some fixed costs may be classified as direct manufacturing costs.

Answer: TRUE
Diff: 1
Terms: fixed costs, direct costs of a cost object
Objective: 2
AACSB: Analytical skills
21) The distinction between direct and indirect costs is clearly set forth in Generally Accepted Accounting Principles (GAAP).
Answer: FALSE
Explanation: The distinction between direct and indirect costs is not set forth in GAAP. Direct costs of a cost object are related to the particular cost object and can be traced to it in an economically feasible (cost-effective) way. Indirect costs of a cost object are related to the particular cost object but cannot be traced to it in an economically feasible (cost-effective) way.
Diff: 2
Terms: direct costs of a cost object, indirect costs of a cost object
Objective: 2
AACSB: Reflective thinking
22) Archambeau Products Company manufactures office furniture. Recently, the company decided to develop a formal cost accounting system and classify all costs into three categories. Categorize each of the following items as being appropriate for (1) cost tracing to the finished furniture, (2) cost allocation of an indirect manufacturing cost to the finished furniture, or (3) as a nonmanufacturing item.

| Item | Cost <br> Tracing | Cost <br> Allocation | Nonmanu- <br> facturing |
| :--- | :--- | :--- | :--- |
| Carpenter wages <br> Depreciation - office building <br> Glue for assembly | $\square$ | $\square$ | $\square$ |
| Lathe department supervisor | $\square$ | $\square$ | $\square$ |
| Lathe depreciation | $\square$ | $\square$ | $\square$ |
| Lathe maintenance | $\square$ | $\square$ | $\square$ |
| Lathe operator wages | $\square$ | $\square$ | $\square$ |
| Lumber | $\square$ | $\square$ |  |
| Samples for trade shows | $\square$ | $\square$ |  |
| Metal brackets for drawers | $\square$ | $\square$ |  |
| Factory washroom supplies | $\square$ | $\square$ |  |

Carpenter wages
Depreciation - office building
Glue for assembly
Lathe department supervisor
Lathe depreciation
Lathe maintenance
Lathe operator wages
Lumber
Samples for trade shows
Metal brackets for drawers
Factory washroom supplies

X
X
X
X
X
X
X
X

X

Diff: 2
Terms: cost tracing, cost allocation
Objective: 2
AACSB: Analytical skills
23) Why is it possible that a raw material such as glue might be considered as an indirect material for one furniture manufacturer and as a direct material for another furniture manufacture?
Answer: It is possible for a raw material such as glue to be considered as an indirect material by one furniture manufacturer and as a direct material by another furniture manufacturer. The decision is largely a choice by the manufacturer and depends on a number of factors including the materiality of the cost in question, the cost of gathering the information, and the design of the manufacturing process. If the product in question has an insignificant cost, it might not be worth the trouble to trace the cost of the glue to each piece of furniture, and the glue would be considered indirect. If the cost of tracing the cost of the glue is high in relation to the benefits received from tracing it, the glue would likely be considered as indirect material. If the design of the manufacturing process easily permits all the glue to be traced to a single type of furniture, then it would be easy for a company to consider that material to be direct. Overall, the direct/indirect classification is decided on a cost/benefit basis.
Diff: 3
Terms: direct material
Objective: 2
AACSB: Reflective thinking
24) What are the differences between direct costs and indirect costs? Give an example of each.

Answer: Direct costs are costs that can be traced easily to the product manufactured or the service rendered. Examples of direct costs include direct materials and direct manufacturing labor used in a product. Indirect costs cannot be easily identified with individual products or services rendered, and are usually assigned using allocation formulas. In a plant that manufactures multiple products, examples of indirect costs include the plant supervisor's salary and the cost of machines used to produce more than one type of product.
Diff: 2
Terms: direct costs, indirect costs
Objective: 2
AACSB: Reflective thinking

1) A mixed cost is:
A) a fixed cost
B) a cost with fixed and variable elements
C) a variable cost
D) always an indirect cost

Answer: B
Diff: 2
Terms: mixed cost
Objective: 3
AACSB: Reflective thinking
2) Which of the following is a mixed cost?
A) monthly rent payment
B) manager's salary
C) monthly electric bill
D) direct materials

Answer: C
Diff: 2
Terms: mixed cost
Objective: 3
AACSB: Analytical skills
3) Cost behavior refers to:
A) how costs react to a change in the level of activity
B) whether a cost is incurred in a manufacturing, merchandising, or service company
C) classifying costs as either inventoriable or period costs
D) whether a particular expense has been ethically incurred

Answer: A
Diff: 2
Terms: fixed cost, variable cost
Objective: 3
AACSB: Reflective thinking
4) An understanding of the underlying behavior of costs helps in all of the following EXCEPT:
A) costs can be better estimated as volume expands and contracts
B) true costs can be better evaluated
C) process inefficiencies can be better identified and as a result improved
D) sales volume can be better estimated

Answer: D
Diff: 2
Terms: fixed cost, variable cost
Objective: 3
AACSB: Analytical skills
5) At a plant where a union agreement sets annual salaries and conditions, annual labor costs usually:
A) are considered a variable cost
B) are considered a fixed cost
C) depend on the scheduling of floor workers
D) depend on the scheduling of production runs

Answer: B
Diff: 2
Terms: fixed cost
Objective: 3
AACSB: Reflective thinking
6) Variable costs:
A) are always indirect costs
B) increase in total when the actual level of activity increases
C) include most personnel costs and depreciation on machinery
D) can always be traced directly to the cost object

Answer: B
Diff: 2
Terms: variable cost
Objective: 3
AACSB: Reflective thinking
7) Fixed costs:
A) may include either direct or indirect costs
B) vary with production or sales volumes
C) include parts and materials used to manufacture a product
D) can be adjusted in the short run to meet actual demands

Answer: A
Diff: 2
Terms: fixed cost
Objective: 3
AACSB: Reflective thinking
8) Fixed costs depend on the:
A) amount of resources used
B) amount of resources acquired
C) volume of production
D) volume of sales

Answer: B
Diff: 3
Terms: fixed cost
Objective: 3
AACSB: Reflective thinking
9) Which one of the following is a variable cost for an insurance company?
A) rent
B) president's salary
C) sales commissions
D) property taxes

Answer: C
Diff: 1
Terms: variable cost
Objective: 3
AACSB: Analytical skills
10) Which of the following is a fixed cost for an automobile manufacturing plant?
A) administrative salaries
B) electricity used by assembly-line machines
C) sales commissions
D) windows for each car produced

Answer: A
Diff: 2
Terms: fixed cost
Objective: 3
AACSB: Analytical skills
11) If each motorcycle requires a belt that costs $\$ 20$ and 2,000 motorcycles are produced for the month, the total cost for belts is:
A) considered to be a direct fixed cost
B) considered to be a direct variable cost
C) considered to be an indirect fixed cost
D) considered to be an indirect variable cost

Answer: B
Diff: 3
Terms: direct costs of a cost object, variable cost
Objective: 3
AACSB: Analytical skills
12) The most likely cost driver of distribution costs is the:
A) number of parts within the product
B) number of miles driven
C) number of products manufactured
D) number of production hours

Answer: B
Diff: 2
Terms: cost driver
Objective: 3
AACSB: Analytical skills
13) The most likely cost driver of direct labor costs is the:
A) number of machine setups for the product
B) number of miles driven
C) number of production hours
D) number of machine hours

Answer: C
Diff: 2
Terms: cost driver
Objective: 3
AACSB: Analytical skills
14) Which of the following statements is FALSE?
A) There is a cause-and-effect relationship between the cost driver and the amount of cost.
B) Fixed costs have cost drivers over the short run.
C) Over the long run all costs have cost drivers.
D) Volume of production is a cost driver of direct manufacturing costs.

Answer: B
Diff: 2
Terms: cost driver
Objective: 3
AACSB: Reflective thinking
15) A band of normal activity or volume in which specific cost-volume relationships are maintained is referred to as the:
A) average range
B) cost-allocation range
C) cost driver range
D) relevant range

Answer: D
Diff: 1
Terms: relevant range
Objective: 3
AACSB: Reflective thinking
16) Within the relevant range, if there is a change in the level of the cost driver, then:
A) total fixed costs and total variable costs will change
B) total fixed costs and total variable costs will remain the same
C) total fixed costs will remain the same and total variable costs will change
D) total fixed costs will change and total variable costs will remain the same

Answer: C
Diff: 2
Terms: fixed cost, variable cost
Objective: 3
AACSB: Reflective thinking
17) Within the relevant range, if there is a change in the level of the cost driver, then:
A) fixed and variable costs per unit will change
B) fixed and variable costs per unit will remain the same
C) fixed costs per unit will remain the same and variable costs per unit will change
D) fixed costs per unit will change and variable costs per unit will remain the same

Answer: D
Diff: 2
Terms: relevant range
Objective: 3
AACSB: Reflective thinking
18) Which of the following would be LEAST likely to be a cost driver for a company's human resource costs?
A) the number of employees in the human resource department
B) the number of job applications processed
C) the number of units sold
D) the square footage of the office space used by the human resource department

Answer: C
Diff: 2
Terms: cost driver
Objective: 3
AACSB: Analytical skills
Answer the following questions using the information below:
The Singer Company manufactures several different products. Unit costs associated with Product
ICT101 are as follows:

Direct materials
Direct manufacturing labor
Variable manufacturing overhead
Fixed manufacturing overhead
Sales commissions (2\% of sales)
Total
\$ 60
1018324

Administrative salaries ..... 16\$140
19) What are the variable costs per unit associated with Product ICT101?
A) $\$ 18$
B) $\$ 22$
C) $\$ 88$
D) $\$ 92$

Answer: D
Explanation: D) $\$ 60+\$ 10+\$ 18+\$ 4=\$ 92$
Diff: 2
Terms: variable cost
Objective: 3
AACSB: Analytical skills
20) What are the fixed costs per unit associated with Product ICT101?
A) $\$ 102$
B) $\$ 48$
C) $\$ 52$
D) $\$ 32$

Answer: B
Explanation: B) $\$ 32+16=\$ 48$
Diff: 2
Terms: fixed cost
Objective: 3
AACSB: Analytical skills
Answer the following questions using the information below:
The East Company manufactures several different products. Unit costs associated with Product ORD203 are as follows:

Direct materials $\$ 50$
Direct manufacturing labor 8
Variable manufacturing overhead 10
Fixed manufacturing overhead 23
Sales commissions ( $2 \%$ of sales) 5
Administrative salaries $\underline{9}$
Total $\underline{\underline{\$ 105}}$
21) What are the variable costs per unit associated with Product ORD203?
A) $\$ 60$
B) $\$ 82$
C) $\$ 73$
D) $\$ 105$

Answer: C
Explanation: C) $\$ 50+\$ 8+\$ 10+\$ 5=\$ 73$
Diff: 2
Terms: variable cost
Objective: 3
AACSB: Analytical skills
22) What are the fixed costs per unit associated with Product ORD203?
A) $\$ 23$
B) $\$ 32$
C) $\$ 35$
D) $\$ 44$

Answer: B
Explanation: B) $\$ 23+9=\$ 32$
Diff: 2
Terms: fixed cost
Objective: 3
AACSB: Analytical skills
23) Fixed costs in total will NOT change in the short run, but may change in the long run.

Answer: TRUE
Diff: 2
Terms: fixed cost
Objective: 3
AACSB: Reflective thinking
24) Costs that are difficult to change over the short run are always variable over the long run.

Answer: TRUE
Diff: 2
Terms: variable cost
Objective: 3
AACSB: Analytical skills
25) A decision maker CANNOT adjust capacity over the short run.

Answer: TRUE
Diff: 1
Terms: fixed cost
Objective: 3
AACSB: Analytical skills
26) Variable costs per unit vary with the level of production or sales volume.

Answer: FALSE
Explanation: Variable costs per unit are constant with the level of production or sales volume.
Diff: 1
Terms: variable cost
Objective: 3
AACSB: Reflective thinking
27) Currently, most administrative personnel costs would be classified as fixed costs.

Answer: TRUE
Diff: 1
Terms: fixed cost
Objective: 3
AACSB: Reflective thinking
28) Fixed costs depend on the resources used, not the resources acquired.

Answer: FALSE
Explanation: Fixed costs depend on the resources acquired, and not whether the resources are used or not.
Diff: 2
Terms: fixed cost
Objective: 3
AACSB: Reflective thinking
29) The variable cost per unit of a product should stay the same throughout the relevant range of production.
Answer: TRUE
Diff: 2
Terms: variable cost, relevant range
Objective: 3
AACSB: Reflective thinking
30) An appropriate cost driver for shipping costs might be the number of units shipped.

Answer: TRUE
Diff: 2
Terms: cost driver
Objective: 3
AACSB: Analytical skills
31) Butler Hospital wants to estimate the cost for each patient stay. It is a general health care facility offering only basic services and not specialized services such as organ transplants.

## Required:

a. Classify each of the following costs as either direct or indirect with respect to each patient.
b. Classify each of the following costs as either fixed or variable with respect to hospital costs per day.

## Direct Indirect Fixed Variable

| Electronic monitoring |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Meals for patients |  |  |  |  |
| Nurses' salaries |  |  |  |  |
| Parking maintenance |  |  |  |  |
| Security |  |  |  |  |
| Answer: | Direct | Indirect | Fixed | Variable |
| Electronic monitoring | X |  |  | X |
| Meals for patients | X |  |  | X |
| Nurses' salaries |  | X | X |  |
| Parking maintenance |  | X | X |  |
| Security |  | X | X |  |

Diff: 2
Terms: direct costs, indirect costs, fixed costs, variable costs
Objective: 2, 3
AACSB: Analytical skills
32) The list of representative cost drivers in the right column below are randomized with respect to the list of functions in the left column. That is, they do not match.

|  | Function |  | Representative Cost Driver |
| :--- | :--- | :--- | :--- |
| 1. | Purchasing | A. | Number of employees |
| 2. | Billing | B. | Number of shipments |
| 3. | Shipping | C. | Number of customers |
| 4. | Computer Support | D. | Number of invoices |
| 5. | Personnel | E. | Number of desktop computers |
| 6. | Customer Service | F. | Number of purchase orders |

## Required:

Match each business function with its representative cost driver.

|  | Function | Insert letter of appropriate driver (A through F) |
| :--- | :--- | :--- |
| 1. | Purchasing |  |
| 2. | Billing |  |
| 3. | Shipping |  |
| 4. | Computer Support |  |
| 5. | Personnel |  |
| 6. | Customer Service |  |

Answer:

|  | Function | Insert letter of appropriate driver (A through F) |
| :--- | :--- | :---: |
| 1. | Purchasing | F |
| 2. | Billing | D |
| 3. | Shipping | B |
| 4. | Computer Support | E |
| 5. | Personnel | A |
| 6. | Customer Service | C |

Diff: 2
Terms: cost driver
Objective: 3
AACSB: Analytical skills
33) Describe a variable cost. Describe a fixed cost. Explain why the distinction between variable and fixed costs is important in cost accounting.
Answer: Total variable costs increase with increased production or sales volumes.
Fixed costs are not influenced by fluctuations in production or sales volumes.
Without the knowledge of cost behaviors, budgets and other forecasting tools will be inaccurate and unreliable. Understanding whether a cost behaves as a variable or a fixed cost is essential to estimating and planning for business success.
Diff: 2
Terms: variable cost, fixed cost
Objective: 3
AACSB: Reflective thinking

## Objective 2.4

1) A unit cost is computed by:
A) multiplying total cost by the number of units
B) dividing total cost by the number of units
C) dividing variable cost by the number of units
D) adding variable cost to fixed cost

Answer: B
Diff: 2
Terms: unit cost
Objective: 4
AACSB: Reflective thinking
2) In making product mix and pricing decisions, managers should focus on:
A) total costs
B) unit costs
C) variable costs
D) fixed costs

Answer: A
Diff: 2
Terms: total cost
Objective: 4
AACSB: Ethical reasoning
3) When 20,000 units are produced, fixed costs are $\$ 16$ per unit. Therefore, when 40,000 units are produced fixed costs will:
A) increase to $\$ 32$ per unit
B) remain at $\$ 16$ per unit
C) decrease to $\$ 8$ per unit
D) total $\$ 640,000$

Answer: C
Diff: 3
Terms: fixed cost
Objective: 4
AACSB: Analytical skills
4) When 10,000 units are produced, variable costs are $\$ 6$ per unit. Therefore, when 20,000 units are produced:
A) variable costs will total $\$ 120,000$
B) variable costs will total $\$ 60,000$
C) variable unit costs will increase to $\$ 12$ per unit
D) variable unit costs will decrease to $\$ 3$ per unit

Answer: A
Diff: 3
Terms: variable cost
Objective: 4
AACSB: Analytical skills
5) Amber Manufacturing provided the following information for last month:

| Sales | $\$ 20,000$ |
| :--- | ---: |
| Variable costs | 6,000 |
| Fixed costs | $\underline{9,000}$ |
| Operating income | $\underline{\$ 5,000}$ |

If sales double next month, what is the projected operating income?
A) $\$ 10,000$
B) $\$ 25,000$
C) $\$ 19,000$
D) $\$ 12,000$

Answer: C
Explanation:C) $(\$ 20,000 \times 2)-(\$ 6,000 \times 2)-\$ 9,000=\$ 19,000$
Diff: 3
Terms: fixed cost, variable cost
Objective: 4
AACSB: Analytical skills
6) Kym Manufacturing provided the following information for last month:

| Sales | $\$ 12,000$ |
| :--- | ---: |
| Variable costs | 4,000 |
| Fixed costs | $\underline{1,000}$ |
| Operating income | $\underline{\$ 7,000}$ |

If sales double next month, what is the projected operating income?
A) $\$ 14,000$
B) $\$ 15,000$
C) $\$ 18,000$
D) $\$ 19,000$

Answer: B
Explanation: B) $(\$ 12,000 \times 2)-(\$ 4,000 \times 2)-\$ 1,000=\$ 15,000$
Diff: 3
Terms: fixed cost, variable cost
Objective: 4
AACSB: Analytical skills
7) Wheel and Tire Manufacturing currently produces 1,000 tires per month. The following per unit data apply for sales to regular customers:

| Direct materials | $\$ 20$ |
| :--- | ---: |
| Direct manufacturing labor | 3 |
| Variable manufacturing overhead | 6 |
| Fixed manufacturing overhead | $\underline{10}$ |
| Total manufacturing costs | $\underline{\$ 39}$ |

The plant has capacity for 3,000 tires and is considering expanding production to 2,000 tires. What is the total cost of producing 2,000 tires?
A) $\$ 39,000$
B) $\$ 78,000$
C) $\$ 68,000$
D) $\$ 62,000$

Answer: C
Explanation: C) $[(\$ 20+\$ 3+\$ 6) \times 2,000$ units $]+(\$ 10 \times 1,000$ units $)=\$ 68,000$
Diff: 2
Terms: fixed cost, variable cost
Objective: 4
AACSB: Analytical skills
8) XIAN Manufacturing produces a unique valve, and has the capacity to produce 50,000 valves annually. Currently XIAN produces 40,000 valves and is thinking about increasing production to 45,000 valves next year. What is the most likely behavior of total manufacturing costs and unit manufacturing costs given this change?
A) Total manufacturing costs will increase and unit manufacturing costs will stay the same.
B) Total manufacturing costs will increase and unit manufacturing costs will decrease.
C) Total manufacturing costs will stay the same and unit manufacturing costs will stay the same.
D) Total manufacturing costs will stay the same and unit manufacturing costs will decrease.

Answer: B
Diff: 3
Terms: fixed cost, variable cost
Objective: 4
AACSB: Analytical skills
9) Tire and Spoke Manufacturing currently produces 1,000 bicycles per month. The following per unit data apply for sales to regular customers:

\[

\]

The plant has capacity for 3,000 bicycles and is considering expanding production to 2,000 bicycles. What is the per unit cost of producing 2,000 bicycles?
A) $\$ 79$ per unit
B) $\$ 158$ per unit
C) $\$ 74$ per unit
D) $\$ 134$ per unit

Answer: C
Explanation: C) $[(\$ 50+\$ 5+\$ 14) \times 2,000$ units $]+(\$ 10 \times 1,000$ units $)=\$ 148,000 / 2,000$ units $=\$ 74$
Diff: 3
Terms: unit cost
Objective: 4
AACSB: Analytical skills
Answer the following questions using the information below:
Axle and Wheel Manufacturing currently produces 1,000 axles per month. The following per unit data apply for sales to regular customers:

| Direct materials | $\$ 30$ |
| :--- | ---: |
| Direct manufacturing labor | 5 |
| Variable manufacturing overhead | 10 |
| Fixed manufacturing overhead | $\underline{40}$ |
| Total manufacturing costs | $\underline{\underline{855}}$ |

10) The plant has capacity for 3,000 axles and is considering expanding production to 3,000 axles. What is the total cost of producing 3,000 axles?
A) $\$ 135,000$
B) $\$ 225,000$
C) $\$ 175,000$
D) $\$ 255,000$

Answer: C
Explanation: C) $[(\$ 30+\$ 5+\$ 10) \times 3,000$ units $]+(\$ 40 \times 1,000$ units $)=\$ 175,000$
Diff: 2
Terms: fixed cost, variable cost
Objective: 4
AACSB: Analytical skills
11) What is the per unit cost when producing 3,000 axles?
A) $\$ 58.33$
B) $\$ 175.00$
C) $\$ 85.00$
D) $\$ 125.00$

Answer: A
Explanation: A) $\$ 175,000 / 3,000=\$ 58.33$
Diff: 2
Terms: unit cost
Objective: 4
AACSB: Analytical skills
Answer the following questions using the information below:
Pederson Company reported the following:
Manufacturing costs $\quad \$ 2,000,000$
Units manufactured $\quad 50,000$
Units sold
Beginning inventory
47,000 units sold for $\$ 75$ per unit 0 units
12) What is the average manufacturing cost per unit?
A) $\$ 40.00$
B) $\$ 42.55$
C) $\$ 0.025$
D) $\$ 75.00$

Answer: A
Explanation: A) $\$ 2,000,000 / 50,000=\$ 40.00$
Diff: 1
Terms: average cost, unit cost
Objective: 4
AACSB: Analytical skills
13) What is the amount of ending finished goods inventory?
A) $\$ 1,880,000$
B) $\$ 120,000$
C) $\$ 225,000$
D) $\$ 105,000$

Answer: B
Explanation: B) $(50,000-47,000) \times(\$ 2,000,000 / \$ 50,000)=\$ 120,000$
Diff: 2
Terms: finished-goods inventory
Objective: 4
AACSB: Analytical skills

Answer the following questions using the information below:
The following information pertains to Alleigh's Mannequins:

| Manufacturing costs | $\$ 1,500,000$ |
| :--- | :--- |
| Units manufactured | 30,000 |
| Units sold | 29,500 units sold for $\$ 85$ per unit |
| Beginning inventory | 0 units |

14) What is the average manufacturing cost per unit?
A) $\$ 50.00$
B) $\$ 50.85$
C) $\$ 17.65$
D) $\$ 85.00$

Answer: A
Explanation: A) $\$ 1,500,000 / 30,000=\$ 50.00$
Diff: 1
Terms: unit cost
Objective: 4
AACSB: Analytical skills
15) What is the amount of ending finished goods inventory?
A) $\$ 42,500$
B) $\$ 25,424$
C) $\$ 25,000$
D) $\$ 1,475,000$

Answer: C
Explanation: C) $(30,000-29,500) \times(\$ 1,500,000 / \$ 30,000)=\$ 25,000$
Diff: 2
Terms: finished-goods inventory
Objective: 4
AACSB: Analytical skills
16) When making decisions using fixed costs, the focus should be on total costs and not unit costs.

Answer: TRUE
Diff: 2
Terms: fixed cost
Objective: 4
AACSB: Reflective thinking
17) When 100,000 units are produced the fixed cost is $\$ 20$ per unit. Therefore, when 500,000 units are produced fixed costs will remain at $\$ 20$ per unit.
Answer: FALSE
Explanation: When 500,000 units are produced fixed costs will decrease to $\$ 4$ per unit.
Diff: 3
Terms: fixed cost, unit cost
Objective: 4
AACSB: Analytical skills
18) A unit cost is computed by dividing total cost by the number of units.

Answer: TRUE
Diff: 1
Terms: unit cost
Objective: 4
AACSB: Reflective thinking
19) Unit costs and average costs are really the same thing.

Answer: TRUE
Diff: 2
Terms: average cost, unit cost
Objective: 4
AACSB: Reflective thinking
20) Mirabella, Inc., reports the following information for September sales:

| Sales | $\$ 60,000$ |
| :--- | ---: |
| Variable costs | 12,000 |
| Fixed costs | $\underline{16,000}$ |
| Operating income | $\underline{32,000}$ |

## Required:

If sales double in October, what is the projected operating income?
Answer: $(\$ 60,000 \times 2)-(\$ 12,000 \times 2)-\$ 16,000=\$ 80,000$
Diff: 2
Terms: fixed cost, variable cost
Objective: 4
AACSB: Analytical skills
21) Axle and Wheel Manufacturing currently produces 1,000 axles per month. The following per unit data apply for sales to regular customers:

| Direct materials | $\$ 200$ |
| :--- | ---: |
| Direct manufacturing labor | 30 |
| Variable manufacturing overhead | 60 |
| Fixed manufacturing overhead | $\underline{40}$ |
| Total manufacturing costs | $\underline{\$ 330}$ |

The plant has capacity for 2,000 axles.

## Required:

a. What is the total cost of producing 1,000 axles?
b. What is the total cost of producing 1,500 axles?
c. What is the per unit cost when producing 1,500 axles?

Answer:
a. $[(\$ 200+\$ 30+\$ 60) \times 1,000$ units $]+(\$ 40 \times 1,000$ units $)=\$ 330,000$
b. $[(\$ 200+\$ 30+\$ 60) \times 1,500$ units $]+\$ 40,000=\$ 475,000$
c. $\$ 475,000 / 1,500=\$ 316.67$ per unit

Diff: 2
Terms: fixed cost, variable cost, unit cost
Objective: 4
AACSB: Analytical skills
22) During 2011, Favata Corporation incurred manufacturing expenses of $\$ 20,000,000$ to produce 400,000 finished units. At year-end, it was determined that 370,000 units were sold while 30,000 units remained in ending inventory.

## Required:

a. What is the cost of producing one unit?
b. What is the amount that will be reported on the income statement for cost of goods sold?
c. What is the amount that will be reported on the balance sheet for ending inventory?

Answer:
a. $\$ 20,000,000 / 400,000=\$ 50.00$
b. 370,000 units $\times \$ 50=\$ 18,500,000$
c. 30,000 units $\times \$ 50=\$ 1,500,000$

Diff: 2
Terms: unit cost, finished goods
Objective: 4
AACSB: Analytical skills

Objective 2.5
Answer the following questions using the information below:
Pederson Company reported the following:
Manufacturing costs $\quad \$ 2,000,000$
Units manufactured $\quad 50,000$
Units sold
Beginning inventory 0 units

1) What is the amount of gross margin?
A) $\$ 1,750,000$
B) $\$ 3,525,000$
C) $\$ 5,405,000$
D) $\$ 1,645,000$

Answer: D
Explanation: D) $47,000 \times(\$ 75-(\$ 2,000,000 / \$ 50,000))=\$ 1,645,000$
Diff: 3
Terms: manufacturing-sector companies
Objective: 5
AACSB: Analytical skills
2) $\qquad$ - sector companies purchase materials and components and convert them into finished goods.
A) Merchandising
B) Service
C) Manufacturing
D) Professional

Answer: C
Diff: 2
Terms: manufacturing-sector company
Objective: 5
AACSB: Analytical skills
3) $\qquad$ - sector companies purchase and then sell tangible products without changing their basic form.
A) Merchandising
B) Professional
C) Service
D) Manufacturing

Answer: A
Diff: 2
Terms: merchandising-sector companies
Objective: 5
AACSB: Analytical skills
4) $\qquad$ - sector companies provide intangible products.
A) Professional
B) Manufacturing
C) Merchandising
D) Service

Answer: D
Diff: 2
Terms: service-sector companies
Objective: 5
AACSB: Analytical skills
Answer the following questions using the information below:
The following information pertains to Alleigh's Mannequins:

| Manufacturing costs | $\$ 1,500,000$ |
| :--- | :--- |
| Units manufactured | 30,000 |
| Units sold | 29,500 units sold for $\$ 85$ per unit |
| Beginning inventory | 0 units |

5) What is the amount of gross margin?
A) $\$ 1,475,000$
B) $\$ 1,500,000$
C) $\$ 2,507,500$
D) $\$ 1,032,500$

Answer: D
Explanation: D) $29,500 \times(\$ 85-(\$ 1,500,000 / \$ 30,000))=\$ 1,032,500$
Diff: 3
Terms: manufacturing-sector company
Objective: 5
AACSB: Analytical skills
6) Which of the following companies is part of the service sector of our economy?
A) Target
B) Citibank
C) Ford
D) Amazon.com

Answer: B
Diff: 1
Terms: service-sector companies
Objective: 5
AACSB: Analytical skills
7) Which of the following companies is part of the merchandising sector of our economy?
A) Ford
B) Hewlett Packard
C) Macy's
D) Michael Toback Accounting Firm

Answer: C
Diff: 1
Terms: merchandising-sector companies
Objective: 5
AACSB: Analytical skills
8) Which of the following companies is part of the manufacturing sector of our economy?
A) Nike
B) Barnes \& Noble
C) Corvette Law Firm
D) Sears, Roebuck, and Company

Answer: A
Diff: 1
Terms: manufacturing-sector companies
Objective: 5
AACSB: Analytical skills
9) Yahoo, an Internet search firm, would be classified as:
A) a manufacturing-sector company
B) a merchandising-sector company
C) a service sector company
D) None of these answers are correct.

Answer: C
Diff: 2
Terms: service-sector companies
Objective: 5
AACSB: Use of Information Technology
10) Service-sector companies report:
A) only merchandise inventory
B) only finished goods inventory
C) direct materials inventory, work-in-process inventory, and finished goods inventory accounts
D) no inventory accounts

Answer: D
Diff: 1
Terms: service-sector companies
Objective: 5
AACSB: Reflective thinking
11) Manufacturing-sector companies report:
A) only merchandise inventory
B) only finished goods inventory
C) direct materials inventory, work-in-process inventory, and finished goods inventory accounts
D) no inventory accounts

Answer: C
Diff: 1
Terms: manufacturing-sector companies
Objective: 5
AACSB: Reflective thinking
12) For a manufacturing company, direct material costs may be included in:
A) direct materials inventory only
B) merchandise inventory only
C) both work-in-process inventory and finished goods inventory
D) direct materials inventory, work-in-process inventory, and finished goods inventory accounts

Answer: D
Diff: 3
Terms: manufacturing-sector companies, direct material costs
Objective: 5
AACSB: Reflective thinking
13) For a manufacturing company, direct labor costs may be included in:
A) direct materials inventory only
B) merchandise inventory only
C) both work-in-process inventory and finished goods inventory
D) direct materials inventory, work-in-process inventory, and finished goods inventory accounts

Answer: C
Diff: 3
Terms: manufacturing sector companies, direct manufacturing labor costs
Objective: 5
AACSB: Reflective thinking
14) For a manufacturing company, indirect manufacturing costs may be included in:
A) direct materials inventory only
B) merchandise inventory only
C) both work-in-process inventory and finished goods inventory
D) direct materials inventory, work-in-process inventory, and finished goods inventory accounts

Answer: C
Diff: 3
Terms: indirect manufacturing costs
Objective: 5
AACSB: Reflective thinking
15) For a manufacturing-sector company, the cost of factory depreciation is classified as a:
A) direct material cost
B) direct manufacturing labor cost
C) manufacturing overhead cost
D) period cost

Answer: C
Diff: 1
Terms: period costs
Objective: 5
AACSB: Reflective thinking
16) For a printing company, the cost of paper is classified as a:
A) direct material cost
B) direct manufacturing labor cost
C) manufacturing overhead cost
D) period cost

Answer: A
Diff: 1
Terms: direct material costs
Objective: 5
AACSB: Reflective thinking
17) Manufacturing overhead costs in an automobile manufacturing plant most likely include:
A) labor costs of the painting department
B) indirect material costs such as lubricants
C) sales commissions
D) steering wheel costs

Answer: B
Diff: 1
Terms: manufacturing overhead costs
Objective: 5
AACSB: Reflective thinking
18) Manufacturing overhead costs are also referred to as:
A) indirect manufacturing costs
B) prime costs
C) period costs
D) direct material

Answer: A
Diff: 1
Terms: manufacturing overhead costs
Objective: 5
AACSB: Reflective thinking
19) Merchandising companies normally report:
A) only merchandise inventory
B) only finished goods inventory
C) direct materials inventory, work-in-process inventory, and finished goods inventory accounts
D) no inventory accounts

Answer: A
Diff: 1
Terms: merchandising-sector companies
Objective: 5
AACSB: Reflective thinking
20) Direct materials inventory would normally include:
A) direct materials in stock and awaiting use in the manufacturing process
B) goods partially worked on but not yet fully completed
C) goods fully completed but not yet sold
D) products in their original form intended to be sold without changing their basic form

Answer: A
Diff: 1
Terms: direct materials inventory
Objective: 5
AACSB: Reflective thinking
21) Work-in-process inventory would normally include:
A) direct materials in stock and awaiting use in the manufacturing process
B) goods partially worked on but not yet fully completed
C) goods fully completed but not yet sold
D) products in their original form intended to be sold without changing their basic form

Answer: B
Diff: 1
Terms: work-in-process inventory
Objective: 5
AACSB: Reflective thinking
22) Finished goods inventory would normally include:
A) direct materials in stock and awaiting use in the manufacturing process
B) goods partially worked on but not yet fully completed
C) goods fully completed but not yet sold
D) products in their original form intended to be sold without changing their basic form

Answer: C
Diff: 1
Terms: finished-goods inventory
Objective: 5
AACSB: Reflective thinking
23) Finished goods inventory would normally include:
A) direct materials in stock and awaiting use in the manufacturing process
B) goods partially worked on but not yet fully completed
C) goods fully completed but not yet sold
D) products in their original form intended to be sold without changing their basic form

Answer: C
Diff: 1
Terms: manufacturing-sector companies
Objective: 5
AACSB: Reflective thinking
24) $\qquad$ are the acquisition costs of all materials that eventually become part of the cost object and can be traced to the cost object.
A) Direct manufacturing labor costs
B) Direct material costs
C) Indirect manufacturing costs
D) Manufacturing overhead costs

Answer: B
Diff: 2
Terms: direct material costs
Objective: 5
AACSB: Reflective thinking
25) $\qquad$ include the compensation of all manufacturing labor that can be traced to the cost object.
A) Direct manufacturing labor costs
B) Indirect manufacturing costs
C) Direct material costs
D) Manufacturing overhead costs

Answer: A
Diff: 2
Terms: direct manufacturing labor costs
Objective: 5
AACSB: Reflective thinking
26) $\qquad$ are all manufacturing costs that are related to the cost object but CANNOT be traced to that cost object.
A) Direct material costs
B) Period costs
C) Indirect manufacturing costs
D) Direct manufacturing labor costs

Answer: C
Diff: 2
Terms: indirect manufacturing costs
Objective: 5
AACSB: Reflective thinking
27) The income statement of a manufacturing firm reports:
A) period costs only
B) inventoriable costs only
C) both period and inventoriable costs
D) period and inventoriable costs but at different times; the reporting varies

Answer: C
Diff: 2
Terms: period costs, inventoriable costs
Objective: 5
AACSB: Reflective thinking
28) The income statement of a service-sector firm reports:
A) period costs only
B) inventoriable costs only
C) both period and inventoriable costs
D) period and inventoriable costs but at different times; the reporting varies

Answer: A
Diff: 2
Terms: service-sector companies, period costs
Objective: 5
AACSB: Reflective thinking
29) Manufacturing costs include all of the following EXCEPT:
A) costs incurred inside the factory
B) both direct and indirect costs
C) both variable and fixed costs
D) both direct and period costs

Answer: D
Diff: 2
Terms: manufacturing-sector companies
Objective: 5
AACSB: Reflective thinking
30) Inventoriable costs:
A) include administrative and marketing costs
B) are expensed in the accounting period in which the products are sold
C) are particularly useful in management accounting
D) are also referred to as nonmanufacturing costs

Answer: B
Diff: 2
Terms: inventoriable costs
Objective: 5
AACSB: Reflective thinking
31) Inventoriable costs are expensed on the income statement:
A) when direct materials for the product are purchased
B) after the products are manufactured
C) when the products are sold
D) not at any particular time, it varies

Answer: C
Diff: 2
Terms: inventoriable costs
Objective: 5
AACSB: Reflective thinking
32) Costs that are initially recorded as assets and expensed when sold are called:
A) period costs
B) inventoriable costs
C) variable costs
D) fixed costs

Answer: B
Diff: 2
Terms: inventoriable costs
Objective: 5
AACSB: Reflective thinking
33) For merchandising companies, inventoriable costs include all of the following EXCEPT:
A) the cost of the goods themselves
B) incoming freight costs
C) insurance costs for the goods
D) outgoing freight costs

Answer: D
Diff: 2
Terms: inventoriable costs, merchandising-sector companies
Objective: 5
AACSB: Reflective thinking
34) For manufacturing firms, inventoriable costs include:
A) plant supervisor salaries
B) research and development costs
C) costs of dealing with customers after the sale
D) distribution costs

Answer: A
Diff: 2
Terms: inventoriable costs, manufacturing-sector companies
Objective: 5
AACSB: Reflective thinking
35) A plant manufactures several different products. The wages of the plant supervisor can be classified as a(n):
A) direct cost
B) inventoriable cost
C) variable cost
D) period cost

Answer: B
Diff: 2
Terms: inventoriable costs
Objective: 5
AACSB: Reflective thinking
36) The cost of inventory reported on the balance sheet may include all of the following EXCEPT:
A) customer-service costs
B) wages of the plant supervisor
C) depreciation of the factory equipment
D) the cost of parts used in the manufacturing process

Answer: A
Diff: 2
Terms: inventoriable costs, period costs
Objective: 5
AACSB: Reflective thinking
37) For a automobile manufacturer, period costs include the cost of:
A) the dashboard
B) labor used for assembly
C) advertising
D) assembly-line equipment

Answer: C
Diff: 1
Terms: period costs, manufacturing-sector company
Objective: 5
AACSB: Use of Information Technology
38) Period costs:
A) include only fixed costs
B) seldom influence financial success or failure
C) include the cost of selling, delivering, and after-sales support for customers
D) should be treated as an indirect cost rather than as a direct manufacturing cost

Answer: C
Diff: 2
Terms: period costs
Objective: 5
AACSB: Reflective thinking
39) Period costs:
A) are treated as expenses in the period they are incurred
B) are directly traceable to products
C) include direct labor
D) are also referred to as manufacturing overhead costs

Answer: A
Diff: 2
Terms: period costs
Objective: 5
AACSB: Reflective thinking
40) Which of the following is NOT a period cost?
A) marketing costs
B) general and administrative costs
C) research and development costs
D) direct materials

Answer: D
Diff: 1
Terms: period costs
Objective: 5
AACSB: Analytical skills
41) Costs expensed on the income statement in the accounting period incurred are called:
A) direct costs
B) indirect costs
C) period costs
D) inventoriable costs

Answer: C
Diff: 1
Terms: period costs
Objective: 5
AACSB: Reflective thinking
42) Prime costs include:
A) direct materials and direct manufacturing labor costs
B) direct manufacturing labor and manufacturing overhead costs
C) direct materials and manufacturing overhead costs
D) only direct materials

Answer: A
Diff: 1
Terms: prime costs
Objective: 5
AACSB: Reflective thinking
43) Conversion costs include:
A) direct materials and direct manufacturing labor costs
B) direct manufacturing labor and manufacturing overhead costs
C) direct materials and manufacturing overhead costs
D) only direct materials

Answer: B
Diff: 1
Terms: conversion costs
Objective: 5
AACSB: Reflective thinking
44) Total manufacturing costs equal:
A) direct materials + prime costs
B) direct materials + conversion costs
C) direct manufacturing labor costs + prime costs
D) direct manufacturing labor costs + conversion costs

Answer: B
Diff: 2
Terms: prime costs, conversion costs
Objective: 5
AACSB: Reflective thinking
45) In the cost classification system used by manufacturing firms, assembly workers' wages would be included in all of the following EXCEPT:
A) product cost
B) prime cost
C) conversion cost
D) period cost

Answer: D
Diff: 2
Terms: prime costs, conversion costs
Objective: 5
AACSB: Analytical skills
46) In the cost classification system used by manufacturing firms, total manufacturing costs would include all of the following EXCEPT:
A) direct materials costs and conversion costs
B) direct materials costs, direct manufacturing labor costs, and manufacturing overhead costs
C) indirect materials costs, indirect manufacturing labor costs, and manufacturing overhead costs
D) prime costs and manufacturing overhead costs

Answer: C
Diff: 2
Terms: prime costs, conversion costs
Objective: 5
AACSB: Reflective thinking
47) Manufacturing overhead costs may include all of the following EXCEPT:
A) salary of the plant supervisor
B) labor that can be traced to individual products
C) material that can be traced to individual products
D) overtime premiums paid to plant workers

Answer: B
Diff: 3
Terms: manufacturing overhead costs
Objective: 5
AACSB: Reflective thinking
48) Which of the following formulas determine cost of goods sold in a merchandising entity?
A) Beginning inventory + Purchases + Ending inventory $=$ Cost of goods sold
B) Beginning inventory + Purchases - Ending inventory $=$ Costs of goods sold
C) Beginning inventory - Purchases + Ending inventory $=$ Cost of goods sold
D) Beginning inventory - Ending inventory - Purchases $=$ Cost of goods sold

Answer: B
Diff: 1
Terms: merchandising-sector companies
Objective: 5
AACSB: Reflective thinking
49) Which of the following formulas determine cost of goods sold in a manufacturing entity?
A) Beginning work-in-process inventory + Cost of goods manufactured - Ending work-in-process inventory $=$ Cost of goods sold
B) Beginning work-in-process inventory + Cost of goods manufactured + Ending work-in-process inventory $=$ Cost of goods sold
C) Cost of goods manufactured - Beginning finished goods inventory - Ending finished goods inventory = Cost of goods sold
D) Cost of goods manufactured + Beginning finished goods inventory - Ending finished goods inventory = Cost of goods sold
Answer: D
Diff: 2
Terms: manufacturing-sector companies
Objective: 5
AACSB: Reflective thinking
50) Product cost for reimbursement under government contracts may include all costs EXCEPT:
A) marketing costs
B) design costs
C) production costs
D) research and development costs

Answer: A
Diff: 2
Terms: contracting with government agencies
Objective: 5
AACSB: Reflective thinking
51) The following information pertains to the Cannady Corporation:

| Beginning work-in-process inventory | $\$ 50,000$ |
| :--- | ---: |
| Ending work-in-process inventory | 48,000 |
| Beginning finished goods inventory | 180,000 |
| Ending finished goods inventory | 195,000 |
| Cost of goods manufactured | $1,220,000$ |

What is cost of goods sold?
A) $\$ 1,235,000$
B) $\$ 1,205,000$
C) $\$ 1,218,000$
D) $\$ 1,222,000$

Answer: B
Explanation: B) $\$ 180,000+\$ 1,220,000-\$ 195,000=\$ 1,205,000$
Diff: 3
Terms: cost of goods manufactured
Objective: 5
AACSB: Analytical skills
52) The following information pertains to the Duggan Corporation:

| Beginning work-in-process inventory | $\$ 20,000$ |
| :--- | ---: |
| Ending work-in-process inventory | 23,000 |
| Beginning finished goods inventory | 36,000 |
| Ending finished goods inventory | 34,000 |
| Cost of goods manufactured | 246,000 |

What is cost of goods sold?
A) $\$ 244,000$
B) $\$ 248,000$
C) $\$ 243,000$
D) $\$ 249,000$

Answer: B
Explanation: B) $\$ 36,000+\$ 246,000-\$ 34,000=\$ 248,000$
Diff: 2
Terms: cost of goods manufactured
Objective: 5
AACSB: Analytical skills

Answer the following questions using the information below:

Beginning finished goods, 1/1/20X3 \$90,000
Ending finished goods, 12/31/20X3 77,000
Cost of goods sold 270,000
Sales revenue 500,000
Operating expenses 155,000
53) What is cost of goods manufactured for 20X3?
A) $\$ 230,000$
B) $\$ 257,000$
C) $\$ 283,000$
D) $\$ 355,000$

Answer: B
Explanation: B) $\$ 270,000+\$ 77,000-\$ 90,000=\$ 257,000$
Diff: 2
Terms: cost of goods manufactured
Objective: 5
AACSB: Analytical skills
54) What is gross margin for 20X3?
A) $\$ 283,000$
B) $\$ 355,000$
C) $\$ 230,000$
D) $\$ 257,000$

Answer: C
Explanation: C) $\$ 500,000-\$ 270,000=\$ 230,000$
Diff: 2
Terms: revenues, period costs
Objective: 5
AACSB: Analytical skills
55) What is operating income for 20X3?
A) $\$ 75,000$
B) $\$ 112,000$
C) $\$ 62,000$
D) $\$ 230,000$

Answer: A
Explanation: A) $\$ 500,000-\$ 270,000-\$ 155,000=\$ 75,000$
Diff: 2
Terms: revenues, period costs
Objective: 5
AACSB: Analytical skills

Answer the following questions using the information below:

| Beginning finished goods, 1/1/20X5 | $\$ 40,000$ |
| :--- | ---: |
| Ending finished goods, 12/31/20X5 | 33,000 |
| Cost of goods sold | 250,000 |
| Sales revenue | 600,000 |
| Operating expenses | 120,000 |

56) What is cost of goods manufactured for 20X5?
A) $\$ 257,000$
B) $\$ 350,000$
C) $\$ 243,000$
D) $\$ 250,000$

Answer: C
Explanation:C) $\$ 250,000+\$ 33,000-\$ 40,000=\$ 243,000$
Diff: 2
Terms: cost of goods manufactured
Objective: 5
AACSB: Analytical skills
57) What is gross margin for 20X5?
A) $\$ 243,000$
B) $\$ 527,000$
C) $\$ 357,000$
D) $\$ 350,000$

Answer: D
Explanation: D) $\$ 600,000-\$ 250,000=\$ 350,000$
Diff: 2
Terms: revenues
Objective: 5
AACSB: Analytical skills
58) What is operating income for 20X5?
A) $\$ 230,000$
B) $\$ 123,000$
C) $\$ 107,000$
D) $\$ 157,000$

Answer: A
Explanation: A) $\$ 600,000-\$ 250,000-\$ 120,000=\$ 230,000$
Diff: 2
Terms: revenues, period costs
Objective: 5
AACSB: Analytical skills

Answer the following questions using the information below:
The Singer Company manufactures several different products. Unit costs associated with Product ICT101 are as follows:

Direct materials $\$ 60$
Direct manufacturing labor 10
Variable manufacturing overhead 18
Fixed manufacturing overhead 32
Sales commissions ( $2 \%$ of sales) 4
Administrative salaries $\underline{16}$
Total $\underline{\underline{\$ 140}}$
59) What are the inventoriable costs per unit associated with Product ICT101?
A) $\$ 120$
B) $\$ 140$
C) $\$ 50$
D) $\$ 88$

Answer: A
Explanation: A) $\$ 60+\$ 10+\$ 18+\$ 32=\$ 120$
Diff: 2
Terms: inventoriable costs
Objective: 5
AACSB: Analytical skills
60) What are the period costs per unit associated with Product ICT101?
A) $\$ 4$
B) $\$ 16$
C) $\$ 20$
D) $\$ 52$

Answer: C
Explanation: C) $\$ 4+16=\$ 20$
Diff: 2
Terms: period costs
Objective: 5
AACSB: Analytical skills

Answer the following questions using the information below:
The East Company manufactures several different products. Unit costs associated with Product ORD203 are as follows:

| Direct materials | $\$ 50$ |
| :--- | ---: |
| Direct manufacturing labor | 8 |
| Variable manufacturing overhead | 10 |
| Fixed manufacturing overhead | 23 |
| Sales commissions (2\% of sales) | 5 |
| Administrative salaries | $\underline{9}$ |
| $\quad$ Total | $\underline{\$ 105}$ |

61) What are the inventoriable costs per unit associated with Product ORD203?
A) $\$ 60$
B) $\$ 66$
C) $\$ 48$
D) $\$ 91$

Answer: D
Explanation: D) $\$ 50+\$ 8+\$ 10+\$ 23=\$ 91$
Diff: 2
Terms: inventoriable costs
Objective: 5
AACSB: Analytical skills
62) What are the period costs per unit associated with Product ORD203?
A) $\$ 14$
B) $\$ 5$
C) $\$ 9$
D) $\$ 26$

Answer: A
Explanation: A) $\$ 5+9=\$ 14$
Diff: 2
Terms: period costs
Objective: 5
AACSB: Analytical skills
63) For last year, Wampum Enterprises reported revenues of $\$ 420,000$, cost of goods sold of $\$ 108,000$, cost of goods manufactured of $\$ 101,000$, and total operating costs of $\$ 70,000$. Operating income for that year was:
A) $\$ 319,000$
B) $\$ 312,000$
C) $\$ 249,000$
D) $\$ 242,000$

Answer: D
Explanation: D) $\$ 420,000-\$ 108,000-\$ 70,000=\$ 242,000$
Diff: 2
Terms: revenues, cost of goods manufactured, period costs
Objective: 5
AACSB: Analytical skills
64) For last year, Wampum Enterprises reported revenues of $\$ 420,000$, cost of goods sold of $\$ 108,000$, cost of goods manufactured of $\$ 101,000$, and total operating costs of $\$ 70,000$. Gross margin for last year was:
A) $\$ 319,000$
B) $\$ 312,000$
C) $\$ 249,000$
D) $\$ 242,000$

Answer: B
Explanation: B) $\$ 420,000-\$ 108,000=\$ 312,000$
Diff: 2
Terms: revenues, cost of goods manufactured, period costs
Objective: 5
AACSB: Analytical skills
Answer the following questions using the information below:
For last year, Lewisburn Manufacturing reported the following:

| Revenue | $\$ 420,000$ |
| :--- | ---: |
| Beginning inventory of direct materials, January 1 | 22,000 |
| Purchases of direct materials | 146,000 |
| Ending inventory of direct materials, December 31 | 16,000 |
| Direct manufacturing labor | 18,000 |
| Indirect manufacturing costs | 40,000 |
| Beginning inventory of finished goods, January 1 | 35,000 |
| Cost of goods manufactured | 104,000 |
| Ending inventory of finished goods, December 31 | 36,000 |
| Operating costs | 140,000 |

65) What was Lewisburn's cost of goods sold?
A) $\$ 103,000$
B) $\$ 152,000$
C) $\$ 268,000$
D) $\$ 317,000$

Answer: A
Explanation: A) $\$ 35,000+\$ 104,000-\$ 36,000=\$ 103,000$
Diff: 3
Terms: revenues, cost of goods manufactured
Objective: 5
AACSB: Analytical skills
66) What was Lewisburn's gross margin (or gross profit)?
A) $\$ 103,000$
B) $\$ 152,000$
C) $\$ 268,000$
D) $\$ 317,000$

Answer: D
Explanation: D) \$420,000-(\$35,000 + \$104,000-\$36,000)=\$317,000
Diff: 3
Terms: revenues, cost of goods manufactured
Objective: 5
AACSB: Analytical skills
67) What was Lewisburn's operating income?
A) $\$ 76,000$
B) $\$ 128,000$
C) $\$ 177,000$
D) $\$ 280,000$

Answer: C
Explanation: C) $\$ 420,000-(\$ 35,000+\$ 104,000-\$ 36,000)-\$ 140,000=\$ 177,000$
Diff: 3
Terms: revenues, cost of goods manufactured
Objective: 5
AACSB: Analytical skills
68) How much of the above would be considered period costs for Lewisburn Manufacturing?
A) $\$ 104,000$
B) $\$ 140,000$
C) $\$ 246,000$
D) $\$ 390,000$

Answer: B
Explanation: B) \$140,000
Diff: 3
Terms: period costs
Objective: 5
AACSB: Analytical skills
69) Service-sector companies provide services or intangible products to their customers.

Answer: TRUE
Diff: 1
Terms: service-sector companies
Objective: 5
AACSB: Reflective thinking
70) Google would be an example of a merchandising company.

Answer: FALSE
Explanation: Google would be an example of a service-sector company.
Diff: 2
Terms: service-sector companies, merchandising-sector companies
Objective: 5
71) Merchandising companies purchase products and sell them to customers without changing their basic form.
Answer: TRUE
Diff: 2
Terms: merchandising-sector companies
Objective: 5
AACSB: Reflective thinking
72) Merchandising companies hold only one type of inventory: direct material.

Answer: FALSE
Explanation: Merchandising companies normally hold only one type of inventory: merchandise inventory.
Diff: 2
Terms: merchandising-sector companies
Objective: 5
AACSB: Reflective thinking
73) Manufacturing sector firms normally hold three types of inventory: direct materials inventory, work-in-process inventory, and finished goods inventory.
Answer: TRUE
Diff: 2
Terms: merchandising-sector companies
Objective: 5
AACSB: Reflective thinking
74) Work-in-process inventory are goods partially worked on but not yet completed.

Answer: TRUE
Diff: 2
Terms: work-in-process inventory
Objective: 5
AACSB: Reflective thinking
75) Direct material costs are the acquisition costs of all materials that eventually become part of the cost object and CANNOT be traced to the cost object in an economically feasible way.
Answer: FALSE
Explanation: Direct material costs can be traced to the cost object.
Diff: 2
Terms: direct costs of a cost object
Objective: 5
AACSB: Reflective thinking
76) Acquisition costs of direct materials include freight-in charges, sales taxes, and custom duties.

Answer: TRUE
Diff: 2
Terms: direct material costs
Objective: 5
AACSB: Reflective thinking
77) Indirect manufacturing costs include the compensation of all manufacturing labor that can be traced to the cost object in an economically feasible way.
Answer: FALSE
Explanation: Direct manufacturing labor costs include the compensation of all manufacturing labor that can be traced to the cost object.
Diff: 2
Terms: indirect manufacturing costs
Objective: 5
AACSB: Reflective thinking
78) Direct manufacturing labor includes wages and fringe benefits paid to machine operators.

Answer: TRUE
Diff: 2
Terms: direct manufacturing labor costs
Objective: 5
AACSB: Reflective thinking
79) Inventoriable costs are reported as an expense when incurred and expensed on the income statement when the product is sold.
Answer: FALSE
Explanation: Inventoriable costs are reported as an asset when incurred and expensed on the income statement when the product is sold.
Diff: 2
Terms: inventoriable costs
Objective: 5
AACSB: Reflective thinking
80) Cost of goods sold refers to the products brought to completion, whether they were started before or during the current accounting period.
Answer: FALSE
Explanation: Cost of goods manufactured refers to the products brought to completion, whether they were started before or during the current accounting period.
Diff: 1
Terms: finished-goods inventory, cost of goods manufactured
Objective: 5
AACSB: Reflective thinking
81) Operating income is sales revenue minus operating expenses.

Answer: FALSE
Explanation: Operating income $=$ sales revenue - cost of goods sold - operating expenses
Diff: 1
Terms: operating income
Objective: 5
AACSB: Reflective thinking
82) All manufacturing costs are inventoriable costs.

Answer: TRUE
Diff: 2
Terms: inventoriable costs
Objective: 5
AACSB: Reflective thinking
83) All costs reported on the income statement of a service-sector company are period costs.

Answer: TRUE
Diff: 1
Terms: period costs
Objective: 5
AACSB: Reflective thinking
84) Period costs are never included as part of inventory.

Answer: TRUE
Diff: 1
Terms: period costs
Objective: 5
AACSB: Reflective thinking
85) Conversion costs include all direct manufacturing costs.

Answer: FALSE
Explanation: Prime costs include all direct manufacturing costs.
Diff: 1
Terms: conversion costs
Objective: 5
AACSB: Reflective thinking
86) Inventory of a manufacturing firm includes goods partially worked on but NOT yet fully completed.

Answer: TRUE
Diff: 1
Terms: work-in-process inventory
Objective: 5
AACSB: Reflective thinking
87) The wages of a plant supervisor would be classified as a period cost.

Answer: FALSE
Explanation: The wages of a plant supervisor would be classified as a product cost.
Diff: 2
Terms: period costs
Objective: 5
AACSB: Reflective thinking
88) For external reporting, GAAP requires that costs be classified as either variable or fixed.

Answer: FALSE
Explanation: For external reporting, GAAP requires that costs be classified as either product or period costs.
Diff: 2
Terms: fixed cost, variable cost
Objective: 5
AACSB: Reflective thinking
89) Depreciation can be classified as either an inventoriable cost or a period cost, depending on what is being depreciated.
Answer: TRUE
Diff: 2
Terms: inventoriable costs, period costs
Objective: 5
AACSB: Reflective thinking
90) Depreciation on a factory can be classified as a period cost.

Answer: FALSE
Explanation: Depreciation on a factory is classified as a product cost.
Diff: 2
Terms: inventoriable costs, period costs
Objective: 5
AACSB: Reflective thinking
91) Springfield Manufacturing produces electronic storage devices, and uses the following three-part classification for its manufacturing costs: direct materials, direct manufacturing labor, and indirect manufacturing costs. Total indirect manufacturing costs for January were $\$ 300$ million, and were allocated to each product on the basis of direct manufacturing labor costs of each line. Summary data (in millions) for January for the most popular electronic storage device, the Big Bertha, was:

|  | Big Bertha |
| :--- | :---: |
| Direct manufacturing costs | $\$ 4,500,000$ |
| Direct manufacturing labor costs | $\$ 1,500,000$ |
| Indirect manufacturing costs | $\$ 4,250,000$ |
| Units produced | 40,000 |

## Required:

a. Compute the manufacturing cost per unit for each product produced in January.
b. Suppose production will be reduced to 30,000 units in February. Speculate as to whether the unit costs in February will most likely be higher or lower than unit costs in January; it is not necessary to calculate the exact February unit cost. Briefly explain your reasoning.
Answer:
a. Unit costs for January were:
$(\$ 4,500,000+\$ 1,500,000+\$ 4,250,000) / 40,000=\$ 256.25$ per unit
b. Unit costs should be higher in February if only 30,000 units are to be produced. Indirect manufacturing costs most likely include both fixed and variable components. Since fewer units are expected to be produced in February, total fixed costs will be spread over fewer units. This will result in an increase in total cost per unit since variable costs per unit will most likely not change with the decreased production.
Diff: 2
Terms: unit cost
Objective: 2, 4, 5
AACSB: Analytical skills
92) Whippany manufacturing wants to estimate costs for each product they produce at its Troy plant. The Troy plant produces three products at this plant, and runs two flexible assembly lines. Each assembly line can produce all three products.

## Required:

a. Classify each of the following costs as either direct or indirect for each product.
b. Classify each of the following costs as either fixed or variable with respect to the number of units produced of each product.

Direct Indirect Fixed Variable
Assembly line labor wages
Plant manager's wages


Depreciation on the assembly line equipment
Component parts for the product Wages of security personnel for the factory

Answer:

## Direct Indirect Fixed Variable

Assembly line labor wages
X
Plant manager's wages
Depreciation on the assembly line equipment
Component parts for the product X
Wages of security personnel for the factory
X

Diff: 2
Terms: fixed cost, variable cost, direct cost, indirect cost
Objective: 2, 4, 5
AACSB: Analytical skills
93) Hammer Inc., had the following activities during 2012:

Direct materials:
Beginning inventory $\quad \$ 20,000$
Purchases
61,600
Ending inventory
10,400
Direct manufacturing labor $\quad 16,000$
Manufacturing overhead 12,000
Beginning work-in-process inventory 800
Ending work-in-process inventory $\quad 4,000$
Beginning finished goods inventory 24,000
Ending finished goods inventory 16,000

## Required:

a. What is the cost of direct materials used during 2012.
b. What is cost of goods manufactured for 2012?
c. What is cost of goods sold for 2012?
d. What amount of prime costs was added to production during 2012?
e. What amount of conversion costs was added to production during 2012?

Answer:
a. $\$ 20,000+\$ 61,600-\$ 10,400=\$ 71,200$
b. $\$ 71,200+\$ 16,000+\$ 12,000+\$ 800-\$ 4,000=\$ 96,000$
c. $\$ 96,000+\$ 24,000-\$ 16,000=\$ 104,000$
d. $\$ 71,200+\$ 16,000=\$ 87,200$
e. $\$ 16,000+\$ 12,000=\$ 28,000$

Diff: 2
Terms: direct cost, indirect cost, prime cost, conversion cost Objective: 5
AACSB: Analytical skills
94) Helmer Sporting Goods Company manufactured 100,000 units in 20 X 5 and reported the following costs:

| Sandpaper | $\$ 32,000$ | Leasing costs-plant | $\$ 384,000$ |
| :--- | ---: | :--- | ---: |
| Materials handling | 320,000 | Depreciation-equipment | 224,000 |
| Coolants \& lubricants | 22,400 | Property taxes-equipment | 32,000 |
| Indirect manufacturing labor | 275,200 | Fire insurance-equipment | 16,000 |
| Direct manufacturing labor | $2,176,000$ | Direct material purchases | $3,136,000$ |
| Direct materials, 1/1/X5 | 384,000 | Direct materials, 12/31/X5 | 275,200 |
| Finished goods, 1/1/X5 | 672,000 | Sales revenue | $12,800,000$ |
| Finished goods, 12/31/X5 | $1,280,000$ | Sales commissions | 640,000 |
| Work-in-process, 1/1/X5 | 96,000 | Sales salaries | 576,000 |
| Work-in-process, 12/31/X5 | 64,000 | Advertising costs | 480,000 |
|  |  | Administration costs | 800,000 |

## Required:

a. What is the amount of direct materials used during 20X5?
b. What manufacturing costs were added to WIP during 20X5?
c. What is cost of goods manufactured for 20X5?
d. What is cost of goods sold for 20X5?

Answer:
a. $\$ 384,000+\$ 3,136,000-\$ 275,200=\$ 3,244,800$
b. $\$ 3,244,800+\$ 2,176,000+\$ 32,000+\$ 320,000+\$ 22,400+\$ 275,200+\$ 384,000+\$ 224,000+$ $\$ 32,000+\$ 16,000=\$ 6,726,400$
c. $\$ 6,726,400+\$ 96,000-\$ 64,000=\$ 6,758,400$
d. $\$ 6,758,400+\$ 672,000-\$ 1,280,000=\$ 6,150,400$

Diff: 3
Terms: cost of goods manufactured
Objective: 5
AACSB: Analytical skills
95) Messinger Manufacturing Company had the following account balances for the quarter ending March 31, unless otherwise noted:

Work-in-process inventory (January 1) \$ 140,400
Work-in-process inventory (March 31) 171,000
Finished goods inventory (January 1) 540,000
Finished goods inventory (March 31) 510,000
Direct materials used 378,000
Indirect materials used 84,000
Direct manufacturing labor 480,000
Indirect manufacturing labor 186,000
Property taxes on manufacturing plant building 28,800
Salespersons' company vehicle costs 12,000
Depreciation of manufacturing equipment 264,000
Depreciation of office equipment 123,600
Miscellaneous plant overhead 135,000
Plant utilities 92,400
General office expenses 305,400
Marketing distribution costs 30,000

## Required:

a. Prepare a cost of goods manufactured schedule for the quarter.
b. Prepare a cost of goods sold schedule for the quarter.

Answer:

## a. <br> Messinger Manufacturing Company Cost of Goods Manufactured Schedule For quarter ending March 31

| Direct materials used | $\$ 378,000$ |  |
| :--- | ---: | ---: |
| Direct manufacturing labor | 480,000 |  |
| Manufacturing overhead |  |  |
| $\quad$ Depreciation of manufacturing equipment | $\$ 264,000$ |  |
| $\quad$ Indirect manufacturing labor | 186,000 |  |
| Indirect materials | 84,000 |  |
| $\quad$ Miscellaneous plant overhead | 135,000 |  |
| $\quad$ Plant utilities | 92,400 |  |
| $\quad$ Property taxes on building | $\underline{28,800}$ | $\underline{790,200}$ |
| Manufacturing costs incurred | $\$ 1,648,200$ |  |
| Add beginning work-in-process inventory |  | $\underline{140,400}$ |
| Total manufacturing costs | $\underline{(1788,600}$ |  |
| Less ending work-in-process inventory | $\underline{\$ 1,617,600}$ |  |
| Cost of goods manufactured |  |  |

b. Messinger Manufacturing Company Cost of Goods Sold Schedule For the quarter ending March 31

Beginning finished goods inventory \$ 540,000
Cost of goods manufactured 1,617,600
Cost of goods available for sale 2,157,600
Ending finished goods inventory $(510,000)$
Cost of goods sold
\$1,647,600
Diff: 2
Terms: cost of goods manufactured
Objective: 5
AACSB: Analytical skills
96) Using the following information find the unknown amounts. Assume each set of information is an independent case.
a. Merchandise Inventory Purchases $\$ 210,000$

Cost of goods sold 223,000
Beginning balance $\quad 41,000$
Ending balance ?
b. Direct Materials

| Beginning balance | $\$ 7,000$ |
| :--- | ---: |
| Ending balance | 14,000 |
| Purchases | 48,000 |
| Direct materials used | $?$ |

c. Work-in-process Inventory Ending balance
\$ 22,000
Cost of goods manufactured 21,000
Beginning balance $\quad 8,000$
Current manufacturing costs ?
d. Finished Goods Inventory Cost of goods manufactured $\$ 62,000$
Ending balance 20,000

Cost of goods sold $\quad 61,000$
Beginning balance ?
Answer:
a. Ending balance of merchandise inventory:
$\$ 41,000+\$ 210,000-\$ 223,000=28,000$
b. Direct materials used:
$\$ 7,000+\$ 48,000-\$ 14,000=\$ 41,000$
c. Current manufacturing costs:
$\$ 21,000+\$ 22,000-\$ 8,000=\$ 35,000$
d. Beginning balance of finished goods inventory:
$\$ 20,000+\$ 61,000-\$ 62,000=\$ 19,000$
Diff: 2
Terms: cost of goods manufactured
Objective: 5
AACSB: Analytical skills
97) Each of the following items pertains to one of these companies: Bedell Electronics (a manufacturing company), Gregory Food Retailers (a merchandising company), and Larson Real Estate (a service sector company). Classify each item as either inventoriable (I) costs or period (P) costs.

|  |  | inventoriable (I) costs <br> or period (P) costs |
| :--- | :--- | :--- |
| a. | Salary of Bedell Electronics president |  |
| b. | Depreciation on Bedell Electronics assembly <br> equipment. |  |
| c. | Salaries of Bedell's assembly line workers |  |
| d. | Purchase of frozen food for sale to customers by <br> Gregory Food Retailers |  |
| e. | Salaries of frozen food personnel at Gregory <br> Food Retailing |  |
|  | Depreciation on freezers at Gregory Food |  |
| f. | Retailing |  |

Answer:

|  |  | inventoriable (I) costs <br> or period (P) costs |
| :--- | :--- | :---: |
| a. | Salary of Bedell Electronics president | P |
| b. | Depreciation on Bedell Electronics assembly <br> equipment. | I |
| c. | Salaries of Bedell's assembly line workers | I |
| d. | Purchase of frozen food for sale to customers by <br> Gregory Food Retailers | I |
| e. | Salaries of frozen food personnel at Gregory <br> Food Retailing | I |
| f. | Depreciation on freezers at Gregory Food <br> Retailing | P |
| g. | Salary of a receptionist at Larson Real Estate | P |
| h. | Depreciation on a computer at Larson Real <br> Estate | P |
| i. | Salary of a real estate agent at Larson Real <br> Estate | P |

Diff: 2
Terms: inventoriable costs, period costs
Objective: 5
AACSB: Analytical skills
98) On the assembly floor, Cynthia Evans is paid $\$ 20$ an hour for straight-time and $\$ 30$ an hour for overtime. One week she worked 43 hours, which included 3 hours of overtime.

## Required:

a. What is Cynthia's total compensation for the week?
b. What amount of compensation would be reported as direct manufacturing labor?
c. What amount of compensation would be reported as manufacturing overhead?

Answer:
a. Direct labor (43 hours $\times \$ 20$ ) + Overtime premium ( $3 \mathrm{hrs} \times \$ 10$ ) $=\$ 890$
b. Direct manufacturing labor ( 43 hours $\times \$ 20$ ) $=\$ 860$
c. Manufacturing overhead costs $=$ Overtime premium $(3 \mathrm{hrs} \times \$ 10)=\$ 30$

Diff: 2
Terms: overtime premium
Objective: 5
AACSB: Analytical skills
99) In the manufacturing plant, Terri Bird is paid $\$ 40$ an hour for straight-time and $\$ 60$ an hour for overtime. One week she worked 46 hours, which included 6 hours of overtime, and 4 hours of idle time caused by material shortages.

## Required:

a. What is Leslie's total compensation for the week?
b. What amount of compensation would be reported as direct manufacturing labor?
c. What amount of compensation would be reported as manufacturing overhead?

Answer:
a. Direct manufacturing labor (42 hours $\times \$ 40)+$ Idle time $(4 \mathrm{hrs} \times \$ 40)+$ Overtime premium $(6 \mathrm{hrs} \times$ $\$ 20)=\$ 1,960$
b. Direct manufacturing labor ( 42 hours $\times \$ 40$ ) $=\$ 1,680$
c. Manufacturing overhead costs $=$ Idle time $(4 \mathrm{hrs} \times \$ 40)+$ Overtime premium $(6 \mathrm{hrs} \times \$ 20)=\$ 280$

## Diff: 2

Terms: overtime premium, idle time
Objective: 5
AACSB: Analytical skills
100) Bosely Manufacturing Co. wants to classify costs for the product produced at its facility. The company produces only one product at the facility and operates continually. The cost categories are:

Product cost<br>Prime cost<br>Conversion cost<br>Period cost

The following costs are found in the accounting records:
a. Quality control inspection wages
b. Raw material purchases
c. Sales commissions
d. Factory depreciation
e. Assembly wages

## Required:

Assign each of the above costs to the most appropriate cost categories.
Answer:
Product cost includes a, b, d, e.
Prime cost includes $\mathrm{a}, \mathrm{b}, \mathrm{e}$.
Conversion cost includes a, d, e.
Period cost includes c.
Diff: 2
Terms: product costs
Objective: 5
AACSB: Analytical skills
101) What is the meaning of the term "cost object"? Give an example of a cost object that would be used in a manufacturing company, a merchandising company, and a service sector company?
Answer: A cost object is anything for which a measurement of costs is desired. An example of a cost object for a manufacturing company might be the cost of manufacturing a particular product. An example of a cost object for a merchandising company might be a particular department of a retail store.
An example of a cost object for a service sector company might be the cost to serve or supply a particular customer.
Diff: 3
Terms: cost object
Objective: 1, 5
AACSB: Reflective thinking
102) Explain the difference between an inventoriable cost and a period cost. What potential problems does an inaccurate classification of product and period costs cause?
Answer: Inventoriable costs are all costs of a product that are considered as assets in the balance sheet when they are incurred and which become cost of goods sold only when the product is sold. Period costs are treated as expenses of the accounting period in which they are incurred. An inaccurate classification of inventoriable and period costs could lead to violations of the matching principle, which states that costs used in producing revenue should be matched on the income statement when the revenue is recognized. In extreme cases, net income for a given period might be significantly misstated if proper matching does not occur.
Diff: 2
Terms: inventoriable costs
Objective: 5
AACSB: Reflective thinking
Objective 2.6

1) Wages paid to machine operators on an assembly line are classified as a:
A) direct material cost
B) direct manufacturing labor cost
C) manufacturing overhead cost
D) period cost

Answer: B
Diff: 1
Terms: direct manufacturing labor costs
Objective: 6
AACSB: Reflective thinking
2) Product cost for pricing and product-mix decisions may include all costs EXCEPT:
A) research and development costs
B) customer-service costs
C) marketing costs
D) all of the above costs may be included in pricing and product mix decisions.

Answer: D
Diff: 2
Terms: product-mix decisions
Objective: 6
AACSB: Analytical skills
3) Product cost for financial statement purposes may include:
A) all costs allowed by government agencies
B) all costs included for pricing and product-mix decisions
C) production costs
D) all costs except marketing costs

Answer: C
Diff: 2
Terms: inventoriable costs
Objective: 6
AACSB: Reflective thinking
4) Product costs may refer to:
A) inventoriable costs for external reporting
B) design costs plus manufacturing costs for government contracts
C) all costs incurred along the value chain for pricing decisions
D) All of these answers are correct.

Answer: D
Diff: 3
Terms: product costs
Objective: 6
AACSB: Reflective thinking
5) Product costs used for pricing and product-mix decisions generally include:
A) manufacturing costs only
B) design costs plus manufacturing costs
C) all costs incurred along the value chain
D) distribution costs only

Answer: C
Diff: 3
Terms: product costs
Objective: 6
AACSB: Reflective thinking
6) Product costs used for government contracts generally include:
A) manufacturing costs only
B) design costs plus manufacturing costs
C) all costs incurred along the value chain
D) distribution costs only

Answer: B
Diff: 3
Terms: product costs
Objective: 6
AACSB: Reflective thinking
7) Product costs used for external reporting generally include:
A) manufacturing costs only
B) design costs plus manufacturing costs
C) all costs incurred along the value chain
D) All of these answers are correct.

Answer: A
Diff: 2
Terms: product costs
Objective: 6
AACSB: Reflective thinking
8) Inventoriable costs for external reporting purposes are also called:
A) product costs
B) period costs
C) variable costs
D) direct manufacturing costs

Answer: A
Diff: 1
Terms: inventoriable costs
Objective: 6
AACSB: Reflective thinking
9) For external reporting:
A) costs are classified as either inventoriable or period costs
B) costs reflect current values
C) there are no prescribed rules since no one is exactly sure how investors and creditors will use these numbers
D) costs include amounts that reflect both current and future benefits

Answer: A
Diff: 2
Terms: inventoriable costs, period costs
Objective: 6
AACSB: Reflective thinking
10) Which of the following statements is FALSE?
A) Product costs and inventoriable costs are interchangeable terms.
B) Inventoriable costs are important for GAAP.
C) Inventoriable costs are a special case of period costs.
D) "Product costs" refers to the particular costs of a product for the purpose at hand.

Answer: C
Diff: 3
Terms: product costs, inventoriable costs
Objective: 6
AACSB: Reflective thinking
11) Debated items that some companies include as direct manufacturing labor include:
A) fringe benefits
B) vacation pay
C) training time
D) All of these answers are correct.

Answer: D
Diff: 2
Terms: direct manufacturing labor costs
Objective: 6
AACSB: Reflective thinking
12) Mario Garcia is paid $\$ 20$ an hour for straight-time and $\$ 30$ an hour for overtime. One week she worked 42 hours, which included 2 hours of overtime. Compensation would be reported as:
A) $\$ 800$ of direct labor and $\$ 60$ of manufacturing overhead
B) $\$ 800$ of direct labor and $\$ 0$ of manufacturing overhead
C) $\$ 840$ of direct labor and $\$ 20$ of manufacturing overhead
D) $\$ 860$ of direct labor and $\$ 0$ of manufacturing overhead

Answer: C
Explanation: C) Direct labor (42 hours $\times \$ 20)+$ Overtime premium $(2 \mathrm{hrs} \times \$ 10)=\$ 860$
Diff: 2
Terms: overtime premium, direct manufacturing labor costs
Objective: 6
AACSB: Analytical skills
13) Dave Rigby is paid $\$ 20$ an hour for straight-time and $\$ 30$ an hour for overtime. One week he worked 45 hours, which included 5 hours of overtime, and 3 hours of idle time caused by material shortages. Compensation would be reported as:
A) $\$ 740$ of direct labor and $\$ 210$ of manufacturing overhead
B) $\$ 840$ of direct labor and $\$ 110$ of manufacturing overhead
C) $\$ 900$ of direct labor and $\$ 50$ of manufacturing overhead
D) $\$ 890$ of direct labor and $\$ 60$ of manufacturing overhead

Answer: B
Explanation: B) Direct labor (42 hours $\times \$ 20$ ) + Idle time ( $3 \mathrm{hrs} \times \$ 20$ ) + Overtime premium ( $5 \mathrm{hrs} \times$ $\$ 10)=\$ 810$
Diff: 3
Terms: overtime premium, direct manufacturing labor costs, idle time
Objective: 6
AACSB: Analytical skills
14) Lou Marinaro worked 44 hours last week for Breakbad Manufacturing. Of the 44 hours 4 hours were considered overtime, and also Marinaro was idle for 5 of the 44 hours due to an equipment malfunction. Marinaro makes $\$ 40$ per hour and is paid $\$ 60$ an hour (time and a half) for overtime. Marinaro's total compensation for that week would be $\qquad$ , and assuming Breakbad charges overtime premium and idle time to indirect labor, the amount of this compensation credited to indirect labor would be
$\qquad$
A) $\$ 1,680 ; \$ 80$
B) $\$ 1,680 ; \$ 280$
C) $\$ 1,840 ; \$ 80$
D) $\$ 1,840 ; \$ 280$

Answer: D
Explanation: D) total compensation $(40 \times \$ 40)+(4 \times \$ 60)=\$ 1,840$;
indirect labor $(5 \times \$ 40)+(4 \times \$ 20)=\$ 280$
Diff: 3
Terms: indirect manufacturing costs, overtime premium, idle time
Objective: 6
AACSB: Analytical skills
15) Overtime premium consists of the wages paid to all workers (for both direct labor and indirect labor) in excess of their straight-time wage rates.
Answer: TRUE
Diff: 1
Terms: overtime premium
Objective: 6
AACSB: Reflective thinking
16) A product cost that is useful for one decision may not be useful information for another decision.

Answer: TRUE
Diff: 2
Terms: product costs
Objective: 6
AACSB: Analytical skills
17) For external reporting purposes, indirect manufacturing costs must be allocated to individual units.

Answer: TRUE
Diff: 2
Terms: indirect manufacturing costs, cost allocation
Objective: 6
AACSB: Reflective thinking
18) Overtime premium is normally considered as a component of direct labor.

Answer: FALSE
Explanation: Overtime premium is normally considered as part of indirect labor since it is usually not associated with a particular job.
Diff: 2
Terms: direct manufacturing labor costs, overtime premium
Objective: 6
AACSB: Reflective thinking
19) If a worker is paid for 40 hours, but is idle for 5 of those 40 hours, the 5 hour of idle time would be considered a component of direct labor.
Answer: FALSE
Explanation: Idle time is normally considered a component of indirect labor since it is usually not associated with a particular job.
Diff: 2
Terms: direct manufacturing labor costs, overtime premium
Objective: 6
AACSB: Analytical skills
20) When should the overtime premium of direct manufacturing labor be considered an indirect manufacturing cost? A direct manufacturing cost?
Answer: The overtime premium of direct manufacturing labor should be considered an indirect manufacturing cost when it is attributable to the overall volume of work, and a direct manufacturing cost when a "rush job" is the sole source of the overtime.
Diff: 2
Terms: overtime premium
Objective: 6
21) In determining product cost, what concerns does a manufacturing firm have when contracting with a government agency?
Answer: Government contracts often reimburse on the basis of "cost of a product" plus a prespecified profit margin. Government agencies provide detailed guidelines on the cost items they allow and disallow when calculating the cost of a product. For example, expenses such as marketing, distribution, and customer service costs may be prohibited.
Diff: 2
Terms: product costs
Objective: 6
AACSB: Reflective thinking
Objective 2.7

1) When making decisions:
A) it is best to use average costs
B) it is best to use unit costs
C) it is best to use total costs rather than unit costs
D) All of these types of costs can be used for decision making; it varies depending on the decision required.
Answer: D
Diff: 2
Terms: average cost, total cost, unit cost
Objective: 7
AACSB: Ethical reasoning
2) Budgeting often plays a major role in affecting behavior and decisions.

Answer: TRUE
Diff: 1
Terms: cost
Objective: 7
AACSB: Ethical reasoning
3) Cost accounting and cost management include calculating various costs, obtaining financial and nonfinancial information, and analyzing relevant information for decision making.
Answer: TRUE
Diff: 1
Terms: cost, variable cost
Objective: 7
AACSB: Reflective thinking
4) A costing system traces direct costs and allocates indirect costs to products.

Answer: TRUE
Diff: 2
Terms: cost tracing, cost allocation
Objective: 7
AACSB: Reflective thinking
5) Management accountants help managers identify which information is relevant to a particular decision.
Answer: TRUE
Diff: 1
Terms: cost
Objective: 7
AACSB: Ethical reasoning
6) When making strategic decisions about which products to produce, managers do NOT need to know how revenues and costs vary with changes in output level.
Answer: FALSE
Explanation: Managers need to know how revenues and costs vary with changes in output level.
Diff: 1
Terms: relevant revenues, relevant costs
Objective: 7
AACSB: Ethical reasoning
7) The following information pertains to Ball Company:

| Manufacturing costs | $\$ 2,400,000$ |
| :--- | ---: |
| Units manufactured | 40,000 |
| Beginning inventory | 0 units |

39,800 units are sold during the year for $\$ 100$ per unit.

## Required:

a. What is the average manufacturing cost per unit?
b. What is the amount of ending finished goods inventory?
c. What is the amount of gross margin?

Answer:
a. $\$ 2,400,000 / 40,000=\$ 60.00$
b. $(40,000-39,800) \times \$ 60=\$ 12,000$
c. $39,800 \times(\$ 100-\$ 60)=\$ 1,592,000$

Diff: 2
Terms: unit cost, finished goods
Objective: 3, 4, 7
AACSB: Analytical skills

