CHAPTER 2: ACCOUNTING FOR MATERIALS

1. An effective cost control system should include:
   a. An established plan of objectives and goals to be achieved.
   b. Regular reports showing the difference between goals and actual performance.
   c. Specific assignment of duties and responsibilities.
   d. All of these are correct.

ANSWER: d
RATIONALE: An effective cost control system should include an established plan of goals and objectives, reports comparing budgeted goals to actual performance, and assignment of specific duties and responsibilities to operating personnel.
POINTS: 1
DIFFICULTY: Easy
LEARNING OBJECTIVES: PRIN.EDWA.16.1 - Introduction
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Internal Controls
OTHER: Bloom's: Remembering

2. To effectively control materials, a business must maintain:
   a. Limited access.
   b. Combination of duties.
   c. Safety stock.
   d. None of these are correct.

ANSWER: a
RATIONALE: To control materials a business must maintain limited access, segregation of duties, and accuracy in recording.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Internal Controls
TOPICS: Materials Control
OTHER: Bloom's: Remembering

3. Janet is the purchasing agent at Frameco Manufacturing. Her duties include vendor selection and ordering materials. Due to a recent economic downturn and resulting cut backs, Janet has been assigned the additional duty of preparing receiving reports after comparing the goods received to the purchase order. This is an example of:
   a. unlimited access to materials.
   b. independence of assigned functions.
   c. misappropriation of assets.
   d. a lack of segregation of duties.

ANSWER: d
RATIONALE: Because Janet's job as a purchasing agent involves preparing the purchase orders and she is also

comparing items received to the purchase orders, there is a lack of segregation of duties. This increases the potential for the misappropriation of assets, but there is not enough information given to determine that a misappropriation has indeed occurred.

POINTS: 1

DIFFICULTY: Challenging

LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Internal Controls

TOPICS: Materials Control

OTHER: Bloom's: Analyzing

4. Marley Company hired a consultant to help improve its operations. The consultant's report stated that Marley's inventory levels are excessive and cited several negative consequences to Marley as a result. Which of the following consequences was **not** cited in the report?

a. Possible other uses for working capital now tied up in inventory
b. Production stoppages due to parts not being available
c. Higher property taxes and insurance costs
d. Large quantities of obsolete materials

ANSWER: b

RATIONALE: It is important to maintain inventories of sufficient size and variety to meet production needs. However, if Marley's inventories are excessive, it is likely that parts are available for production, but the excess inventory is resulting in higher costs related to holding those items such as property taxes and insurance and potential losses from obsolescence or deterioration. Funds invested in inventories could be used for other purposes.

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.BB.07 - Critical Thinking
BUSPROG.06 - Reflective Thinking
IMA-Strategic Planning

TOPICS: Materials Control

OTHER: Bloom's: Analyzing

5. The data used to calculate the order point include all of the following **except**:

a. the costs of placing an order.
b. the rate at which the material will be used.
c. the estimated time interval between the placement and receipt of an order.
d. the estimated minimum level of inventory needed to protect against stockouts.

ANSWER: a

RATIONALE: Calculating an order point is based on usage, lead time and safety stock. The cost of placing an order is used in determining the economic order quantity.

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Strategic Planning

TOPICS: Materials Control

OTHER: Bloom's: Remembering

6. Murphy Company uses 3,000 yards of material each day to make hats. It usually takes five days from the time Murphy orders the material to when it is received. If Murphy's desired safety stock is 6,000 yards, what is Murphy's order point?

a. 6,000 yards
b. 12,000 yards
c. 15,000 yards
d. 21,000 yards

ANSWER: d

RATIONALE:

3,000 (daily usage) x 5 (lead time)	15,000
Safety stock	6,000
Order point	21,000

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning

TOPICS: Materials Control

OTHER: Bloom's: Applying

7. What is the objective of the economic order quantity (EOQ) model for inventory?

a. To minimize order costs or carrying costs, whichever are higher
b. To minimize order costs or carrying costs and maximize the rate of inventory turnover
c. To minimize the total order costs and carrying costs over a period of time
d. To order sufficient quantity to economically meet the next period's demand

ANSWER: c

RATIONALE: If the demand for the product can be determined because it is predictable, the essence of any EOQ model for inventory is to minimize the total order costs and also minimize the total carrying costs.

POINTS: 1

DIFFICULTY: Easy

LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning

TOPICS: Materials Control

OTHER: Bloom's: Remembering

8. Order costs would include all of the following **except**:

a. Receiving clerk's wages.
b. Storeroom keeper's wages.
c. Purchasing department's telephone bill.
d. Transportation in.

ANSWER: b

RATIONALE: Costs related to the purchase and receipt of materials are considered order costs while costs related to the storage and maintenance of materials are considered storage costs. The storeroom keeper's wages would be a storage cost.

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning

TOPICS: Materials Control

OTHER: Bloom's: Understanding

9. Expected annual usage of a particular raw material is 1,200,000 units, and standard order size is 10,000 units. The invoice cost of each unit is $145, and the cost to place one purchase order is $105. The estimated annual order cost is:

a. $12,000.
b. $17,400.
c. $12,600.
d. $800,000.

ANSWER: c

RATIONALE:

$$\text{Annual order cost} = \text{Number of orders} \times \text{Per order cost}$$

$$= \frac{1{,}200{,}000 \text{ units}}{10{,}000 \text{ units}} \times \$105$$

$$= 120 \text{ orders} \times \$105$$

$$= \$12{,}600$$

POINTS: 1

DIFFICULTY: Challenging

LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement

BUSPROG.03 - Analytic
IMA-Strategic Planning

TOPICS: Materials Control

OTHER: Bloom's: Applying

10. Carrying costs would include all of the following **except**:

a. Warehouse rent.
b. Inspection employees' wages.
c. Losses due to obsolescence.
d. Property taxes.

ANSWER: b

RATIONALE: Costs related to the purchase and receipt of materials are considered order costs while costs related to the storage and maintenance of inventory are considered storage costs. Inspection would typically happen upon receipt of goods making this an order cost.

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning

TOPICS: Materials Control

OTHER: Bloom's: Understanding

11. The following data refer to various annual costs relating to the inventory of a single-product company that requires 10,000 units per year:

	Cost per unit
Order cost	$.05
Transportation-in on purchases	.18
Storage	.16
Insurance	.10
	Total per year
Interest that could have been earned on alternate investment of funds	$800

What is the annual carrying cost per unit?

a. $ .21
b. $ .29
c. $ .34
d. $ .44

ANSWER: c

RATIONALE: The carrying costs will consist of the per unit costs for storage, insurance, and interest on the inventory investment.

Carrying costs:			
Storage			$.16
Insurance			.10
Interest / Units required	=	$800 / 10,000	.08

Carrying costs $.34

POINTS: 1

DIFFICULTY: Challenging

LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning

TOPICS: Materials Control

OTHER: Bloom's: Applying

12. The following data pertains to Western Company's materials inventory:

Number of pounds required annually	16,000
Cost of placing an order	$20
Annual carrying cost per pound of material	$4

What is Western Company's EOQ?

a. 4,000 pounds
b. 800 pounds
c. 400 pounds
d. 200 pounds

ANSWER: c

RATIONALE:   = 400

POINTS: 1

DIFFICULTY: Challenging

LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning

TOPICS: Materials Control

OTHER: Bloom's: Applying

13. Expected annual usage of a particular raw material is 180,000 units, and standard order size is 12,000 units. The invoice cost of each unit is $300, and the cost to place one purchase order is $80. Assuming the company does **not** maintain safety stock, the average inventory is:

a. 10,000 units.
b. 7,500 units.
c. 15,000 units.
d. 6,000 units.

ANSWER: d

RATIONALE: Average inventory = $\frac{12,000}{2}$ (standard-size order)

= 6,000 units

POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning
TOPICS: Materials Control
OTHER: Bloom's: Applying

14. Arwen Company has correctly computed its economic order quantity at 500 units; however, management feels it would rather order in quantities of 600 units. How should Arwen's total annual order cost and total annual carrying cost for an order quantity of 600 units compare to the respective amounts for an order quantity of 500 units?

a. Higher total order cost and lower total carrying cost
b. Lower total order cost and higher total carrying cost
c. Higher total order cost and higher total carrying cost
d. Lower total order cost and lower total carrying cost

ANSWER: b
RATIONALE: If orders were placed for 600 units instead of EOQ of 500 units, fewer purchase orders would have to be placed to acquire the total units required for production, thereby reducing the total order cost. However, due to the larger number of units ordered each time, the number of units stored would be greater and a higher total carrying cost would result.
POINTS: 1
DIFFICULTY: Challenging
LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Strategic Planning
TOPICS: Materials Control
OTHER: Bloom's: Analyzing

15. The personnel involved in the physical control of materials includes all of the following **except** the:

a. Purchasing agent.
b. Receiving clerk.
c. Cost accountant.
d. Production department supervisor.

ANSWER: c
RATIONALE: The cost accountant has the responsibility for the accounting records pertaining to inventory valuation but not for the physical materials.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.10 - LO2: Specify internal control procedures for materials
ACCREDITING STAN AACSB Reflective Thinking

DARDS: ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Internal Controls
TOPICS: Materials Control Procedures
OTHER: Bloom's: Understanding

16. The employee who is responsible for preparing purchase requisitions is most likely the:

a. Storeroom keeper.
b. Purchasing agent.
c. Production supervisor.
d. Receiving clerk.

ANSWER: a
RATIONALE: The storeroom keeper is usually the employer responsible for preparing purchase requisitions when the stock is running low to notify the purchasing agent that the inventory needs to be replenished.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.10 - LO2: Specify internal control procedures for materials
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Internal Controls
TOPICS: Materials Control Procedures
OTHER: Bloom's: Remembering

17. Sam Jones works at Seeker, Inc. Sam's duties include identifying where materials can be obtained most economically, placing orders and verifying invoices and approving them for payment. Sam is a(n):

a. receiving clerk.
b. accounts payable clerk.
c. purchasing agent.
d. production supervisor.

ANSWER: c
RATIONALE: The duties described are those of a purchasing agent. The receiving clerk counts and identifies materials received and prepares a receiving report. The accounts payable clerk is responsible for issuing payment to vendors. The production supervisor is responsible for preparing materials requisitions for materials needed for production.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.10 - LO2: Specify internal control procedures for materials
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Cost Management
TOPICS: Materials Control Procedures
OTHER: Bloom's: Remembering

18. The form used to notify the purchasing agent that additional materials are needed is known as a:

a. Purchase order.
b. Vendor's invoice.
c. Receiving report.
d. Purchase requisition.

ANSWER: d
RATIONALE: The storeroom keeper prepares a purchase requisition to notify the purchasing agent that additional materials are needed.
POINTS: 1
DIFFICULTY: Easy
LEARNING OBJECTIVES: PRIN.EDWA.16.10 - LO2: Specify internal control procedures for materials
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Materials Control Procedures
OTHER: Bloom's: Remembering

19. The form prepared by the purchasing agent and sent to the vendor to obtain materials is known as a:

a. Materials requisition.
b. Purchase requisition.
c. Purchase order.
d. Vendor's invoice.

ANSWER: c
RATIONALE: The purchase order is prepared by the purchasing agent and sent to the vendor to order materials.
POINTS: 1
DIFFICULTY: Easy
LEARNING OBJECTIVES: PRIN.EDWA.16.10 - LO2: Specify internal control procedures for materials
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Materials Control Procedures
OTHER: Bloom's: Remembering

20. A receiving report would include all of the following information **except**:

a. What the shipment contained.
b. The purchase order number.
c. The customer.
d. The date the materials were received.

ANSWER: c
RATIONALE: It is unlikely the receiving report would contain the customer name; however, a listing of what the shipment contained, the purchase order number and the date of the receipt would be necessary information used in matching the receiving report to the vendor's invoice and the purchase order.

POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.10 - LO2: Specify internal control procedures for materials
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Cost Management
TOPICS: Materials Control Procedures
OTHER: Bloom's: Remembering

21. Listed below are steps of purchasing and receiving materials:

1. The receiving clerk prepares a receiving report.
2. Purchase requisitions are prepared to notify the purchasing agent that additional materials are needed.
3. The purchase of merchandise is recorded by the accounting department.
4. The purchasing agent completes a purchase order.

In which order would these events typically happen?

a. 4, 2, 3, 1
b. 2, 4, 3, 1
c. 2, 4, 1, 3
d. 4, 2, 1, 3

ANSWER: c
RATIONALE: The storeroom keeper will prepare a purchase requisition to notify the purchasing agent that additional materials are needed. The purchasing agent will then complete a purchase order and send it to the vendor. When the goods are received, the receiving clerk will prepare a receiving report which is compared to the vendor's invoice and the purchase order. At that time, the accounting department will record the purchase of the inventory items in the general ledger.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.10 - LO2: Specify internal control procedures for materials
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Materials Control Procedures
OTHER: Bloom's: Understanding

22. Listed below are steps of procuring materials for production:

1. The receiving clerk checks the quantity and quality of incoming materials.
2. The purchasing agent issue the purchase order to the vendor.
3. The production floor supervisor issues a materials requisition.
4. The storeroom clerk issues a purchase requisition.

In which order would these events typically happen?

a. 3, 2, 4, 1

b. 3, 4, 2, 1
c. 2, 1, 3, 4
d. 4, 2, 1, 3

ANSWER: d

RATIONALE: The storeroom keeper will prepare a purchase requisition to notify the purchasing agent that additional materials are needed. The purchasing agent will then complete a purchase order and send it to the vendor. When the goods are received, the receiving clerk will prepare a receiving report which is compared to the vendor's invoice and the purchase order. The production floor supervisor will issue a materials requisition to obtain inventory from the storeroom.

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.10 - LO2: Specify internal control procedures for materials

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Materials Control Procedures

OTHER: Bloom's: Understanding

23. The duties of the purchasing agent would include all of the following **except**:
a. Placing purchase orders.
b. Counting and identifying materials received.
c. Compiling information that identifies vendors and prices.
d. Verifying invoices and approving them for payment.

ANSWER: b

RATIONALE: The receiving clerk is responsible for counting and identifying the materials received.

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.10 - LO2: Specify internal control procedures for materials

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Materials Control Procedures

OTHER: Bloom's: Understanding

24. The form that serves as authorization to withdraw materials from the storeroom is known as the:
a. Materials requisition.
b. Purchase order.
c. Purchase requisition.
d. Returned materials report.

ANSWER: a

RATIONALE: The materials requisition is prepared by the production department supervisor or an assistant and is presented to the storeroom keeper as authorization for the withdrawal of materials.

POINTS: 1

DIFFICULTY: Easy

LEARNING OBJECTIVES: PRIN.EDWA.16.10 - LO2: Specify internal control procedures for materials

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Internal Controls

TOPICS: Materials Control Procedures

OTHER: Bloom's: Remembering

25. If a company receives a larger quantity of goods than had been ordered and keeps the excess for future use, a(n)_____ is prepared to notify the vendor of the amount of increase to accounts payable in the invoice.

a. credit memorandum
b. return shipping order
c. debit memorandum
d. additional purchase order

ANSWER: a

RATIONALE: A Debit or credit memorandum may be issued when the shipment of materials does not match the purchase order and the invoice. In this case, since more materials than ordered and billed were received, the company would issue a credit memorandum to increase accounts payable.

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.10 - LO2: Specify internal control procedures for materials

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Materials Control Procedures

OTHER: Bloom's: Understanding

26. The Egbert Company uses an industrial chemical, XRG, in a manufacturing process. Information as to balances on hand, purchases, and requisitions of XRG is given in the following table.

Date	Transaction	Number of Kilograms	Price per Kilogram	Balance of Kilograms
Jan. 1	Beginning balance	1,000	$2.10	1,000
Jan. 24	Purchased	2,500	$2.25	3,500
Feb. 8	Issued	700		2,800
Mar. 16	Issued	1,200		1,600
Jun. 11	Purchased	1,500	$2.75	3,100
Aug. 18	Issued	800		2,300
Sep. 6	Issued	1,600		700
Oct. 15	Purchased	2,000	$2.80	2,700
Dec. 29	Issued	600		2,100

If a perpetual inventory record of XRG is maintained on a FIFO basis, the March 16 issue will consist of:

a. 300 kilograms @ $2.10 and 900 kilograms @ $2.25.
b. 1,000 kilograms @ $2.10 and 200 kilograms @ $2.25.

c. 1,200 kilograms @ $2.25.

d. 700 kilograms @ $2.10 and 500 kilograms @ $2.25.

ANSWER: a

RATIONALE: On a FIFO basis, 300 of the kilograms issued on March 16 would have been assigned a cost of $2.00, and the remaining 900 kilograms issued on that date would have been assigned a cost of $2.25, as follows:

	Number of Kilograms	Price per Kilogram	Kilograms issued on February 8	Kilograms issued on March 16
Beginning Balance	1,000	$2.00	700	300
Jan. 24 Purchase	2,500	$2.25		900

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Accounting for Materials

OTHER: Bloom's: Applying

27. The Beaches Company uses metal grates when assembling appliances. Information as to balances on hand, purchases, and requisitions of the grates is given in the following table.

Date	Transaction	Number of Units	Unit Price	Balance of Units
Jan. 1	Beginning balance	150	$2.80	150
Jan. 24	Purchased	450	$3.10	600
Feb. 8	Issued	120		480
Mar. 16	Issued	210		270
Jun. 11	Purchased	225	$3.34	495
Aug. 18	Issued	195		300
Sep. 6	Issued	165		135
Oct. 15	Purchased	225	$3.40	360
Dec. 29	Issued	210		150

If a perpetual inventory record of the metal grates is maintained on a FIFO basis, the September 6 issue will consist of:

a. 15 units @ $2.80, 120 units @ $3.10 and 30 units @ $3.34.

b. 75 units @ $2.80 and 90 units @ $3.10.

c. 165 units @ $3.10.

d. 75 units @ $3.10 and 90 units @ $3.34.

ANSWER: d

RATIONALE: On a FIFO basis, 75 of the grates issued on September 6 would have been assigned a cost of $3.10 per unit and the remaining 90 grates issued on that date would have been assigned a cost of $3.24 per unit as follows:

	Number of Units	Unit Price	Units issued on Feb. 8	Units issued on Mar. 16	Units issued on Aug. 18	Units issued on Sep.6
Beginning Balance	150	$2.80	120	30		

	Jan. 24 Purchase	450	$3.10	180	195	75
	Jun. 11 Purchase	225	$3.24			90

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Accounting for Materials

OTHER: Bloom's: Applying

28. The Bisset Corporation uses Raw Material A in a manufacturing process. Information as to balances on hand, purchases, and requisitions of Raw Material A is given in the following table.

Raw Material A

Date	Transaction	Number of Units	Unit Price	Balance of Units
Jan. 1	Beginning balance	100	$1.40	100
Jan. 24	Purchased	300	$1.55	400
Feb. 8	Issued	80		320
Mar. 16	Issued	140		180
Jun. 11	Purchased	150	$1.62	330
Aug. 18	Issued	130		200
Sep. 6	Issued	110		90
Oct. 15	Purchased	150	$1.70	240
Dec. 29	Issued	140		100

If a perpetual inventory record of Raw Material A is maintained on a FIFO basis, 200 units on hand on August 18 will consist of:

a. 100 units @ $1.40, 80 units @ $1.55 and 20 units @ $1.62.
b. 100 units @ $1.55 and 100 units @ $1.62.
c. 150 units @ $1.62 and 50 units @ $1.55.
d. 200 units @ $1.55.

ANSWER: c

RATIONALE: On a FIFO basis, 50 of the units on hand at August 18 would have been assigned a cost of $1.55 per unit and the remaining 150 units on hand at that date would have been assigned a cost of $1.62 per unit as follows:

	Number of Units	Unit Price	Units issued on Feb. 8	Units issued on Mar. 16	Units issued on Aug. 18	Units in Inventory on Aug.18
Beginning Balance	100	$1.40	80	20		--
Jan. 24 Purchase	300	$1.55		120	130	50
Jun. 11 Purchase	150	$1.62				150

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Accounting for Materials
OTHER: Bloom's: Applying

29. The Benchley Company uses metal grates when assembling appliances. Information as to balances on hand, purchases, and requisitions of the grates is given in the following table.

Date	Transaction	Number of Units	Unit Price	Balance of Units
Jan. 1	Beginning balance	150	$2.80	150
Jan. 24	Purchased	450	$3.10	600
Feb. 8	Issued	120		480
Mar. 16	Issued	210		270
Jun. 11	Purchased	225	$3.24	495
Aug. 18	Issued	195		300
Sep. 6	Issued	165		135
Oct. 15	Purchased	225	$3.50	360
Dec. 29	Issued	210		150

If a perpetual inventory record of the metal grates is maintained on a FIFO basis, what costs are assigned to the 150 units in ending inventory?

a. 150 units @ $3.50
b. 15 units @ $3.50 and 135 units @ $3.24.
c. 150 units @ $2.80.
d. 15 units @ $3.50 and 135 units @ $2.80.

ANSWER: a
RATIONALE: On a FIFO basis, the ending inventory consists of the most recently purchased items.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Cost Management
TOPICS: Accounting for Materials
OTHER: Bloom's: Applying

30. The inventory method which results in the prices paid for earliest purchases assigned to cost of goods sold is:

a. First-in, first-out.
b. Last-in, first-out.
c. Last-in, last-out.
d. Moving average.

ANSWER: a

RATIONALE: First-in, first-out (FIFO) results in the oldest costs being assigned to cost of goods sold.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Cost Management
TOPICS: Accounting for Materials
OTHER: Bloom's: Remembering

31. The inventory method which results in the most recent costs being assigned to inventory on hand at the end of the period is:

a. First-in, first-out.
b. Last-in, first-out.
c. Last-in, last-out.
d. Moving average.

ANSWER: a
RATIONALE: First-in, first-out (FIFO) results in the most recent costs being assigned to ending inventory because the oldest costs are assigned to issues first.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Cost Management
TOPICS: Accounting for Materials
OTHER: Bloom's: Understanding

32. Filmac, Inc. uses speakers when assembling computers. Information as to balances on hand, purchases, and requisitions of speakers is given in the following table.

Date	Transaction	Number of Units	Unit Price	Balance of Units
Jan. 1	Beginning balance	200	$15.00	200
Jan. 15	Purchased	100	$16.00	300
Feb. 24	Issued	50		250
Mar. 8	Issued	70		180
Jun. 23	Purchased	100	$17.00	280
Aug. 8	Issued	80		200
Sep. 29	Issued	30		170
Oct. 7	Purchased	100	$19.00	270
Dec. 16	Issued	50		220

If a perpetual inventory record of speakers is maintained on a LIFO basis, the March 8 issue will consist of:

a. 20 units @ $15.00 and 50 units @ $16.00.

b. 70 units @ $15.00.
c. 50 units @ $16.00 and 20 units @ $15.00.
d. 70 units @ $16.00.

ANSWER: c

RATIONALE: On a LIFO basis, 50 units issued on March 8 would have been assigned a cost of $16.00, and 20 units would have been assigned a cost of $14.00 as follows:

	Number of Units	Unit Price	Units issued on February 24	Units issued on March 8
Beginning Balance	200	$14.00		20
Jan. 15 Purchase	100	$16.00	50	50

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.04 - Reporting
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Accounting for Materials

OTHER: Bloom's: Applying

33. The Bisset Corporation uses Raw Material A in a manufacturing process. Information as to balances on hand, purchases, and requisitions of Raw Material A is given in the following table.

Raw Material A

Date	Transaction	Number of Units	Unit Price	Balance of Units
Jan. 1	Beginning balance	100	$1.40	100
Jan. 24	Purchased	300	$1.55	400
Feb. 8	Issued	80		320
Mar. 16	Issued	140		180
Jun. 11	Purchased	150	$1.62	330
Aug. 18	Issued	130		200
Sep. 6	Issued	110		90
Oct. 15	Purchased	150	$1.70	240
Dec. 29	Issued	140		100

If a perpetual inventory record of Raw Material A is maintained on a LIFO basis, the September 6 issue will consist of:

a. 80 units @ $1.55, 20 units @ $1.62 and 10 units @ $1.40.
b. 110 units @ $1.55.
c. 50 units @1.55 and 60 units @ 1.62.
d. 20 units @ $1.62 and 90 units @ $1.55.

ANSWER: a

RATIONALE: On a LIFO basis, 20 of the units issued on September 6 would have been assigned a cost of $1.62 per unit, 80 of the units issued would have been assigned a cost of $1.55 per unit and the remaining 10 units issued on that date would have been assigned a cost of $1.40 per unit.

	Number of Units	Unit Price	Units issued on	Units issued on	Units issued on	Units issued on

			Feb. 8	Mar. 16	Aug. 18	Sep.6
Beginning Balance	100	$1.40				10
Jan. 24 Purchase	300	$1.55	80	140		80
Jun. 11 Purchase	150	$1.62			130	20

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.04 - Reporting
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Accounting for Materials

OTHER: Bloom's: Applying

34. Wiggins, Inc. uses sulfuric acid in a manufacturing process. Information as to balances on hand, purchases, and requisitions of acid is given in the following table.

Date	Transaction	Number of Gallons	Price per Gallon	Balance of Gallons
Jan. 1	Beginning balance	10,000	$.60	10,000
Feb. 24	Purchased	30,000	$.65	40,000
Mar. 8	Issued	8,000		32,000
Apr. 16	Issued	14,000		18,000
May. 11	Purchased	15,000	$.72	33,000
Jul. 18	Issued	13,000		20,000
Oct. 6	Issued	11,000		9,000
Nov. 15	Purchased	15,000	$.78	24,000
Nov. 29	Issued	14,000		10,000

If a perpetual inventory record of Raw Material A is maintained on a LIFO basis, the 20,000 units in inventory at July 18 will consist of:

a. 5,000 units @ $.72 and 15,000 units @ $.65.
b. 10,000 units @ $.60 and 10,000 units @ $.65.
c. 2,000 units @ $.72, 8,000 units @ $.65 and 10,000 units @ $.60.
d. 10,000 units @ $.50, 6,000 units @ $.65 and 4,000 units @ $.72.

ANSWER: c

RATIONALE: On a LIFO basis, 2,000 of the gallons in inventory at July 18 would have been assigned cost per unit of $.72, 8,000 of the units on hand would have been assigned a cost per unit of $.65 and the remaining 10,000 units in inventory on that date would have been assigned a unit cost of $.50 as follows:

	Number of Gallons	Price per Gallon	Units issued on Mar. 8	Units issued on Apr. 16	Units issued on Jul. 18	Units in Inventory Jul. 18
Beginning Balance	10,000	$.50				10,000
Feb. 24 Purchase	30,000	$.65	8,000	14,000		8,000
May 11 Purchase	15,000	$.72			13,000	2,000

POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.04 - Reporting
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Accounting for Materials
OTHER: Bloom's: Applying

35. The inventory method which results in the most recent cost being assigned to cost of goods sold is:

a. First-in, first-out.
b. Last-in, first-out.
c. Last-in, last-out.
d. Moving average.

ANSWER: b
RATIONALE: Last-in, first-out (LIFO) results in the most recent costs being assigned to cost of goods sold.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.04 - Reporting
BUSPROG.06 - Reflective Thinking
IMA-Cost Management
TOPICS: Accounting for Materials
OTHER: Bloom's: Remembering

36. The inventory method which results in the prices paid for the earliest purchases being assigned to inventory on hand at the end of the period is:

a. First-in, first-out.
b. Last-in, first-out.
c. Last-in, last-out.
d. Moving average.

ANSWER: b
RATIONALE: Last-in, first-out (LIFO) results in the oldest costs being assigned to ending inventory because the most recent costs are assigned to issues first.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.04 - Reporting
BUSPROG.06 - Reflective Thinking
IMA-Cost Management

TOPICS: Accounting for Materials
OTHER: Bloom's: Understanding

37. The Jordan Corporation uses Raw Material A in a manufacturing process. Information as to balances on hand, purchases, and requisitions of Raw Material A is given in the following table.

Raw Material A

Date	Transaction	Number of Units	Unit Price	Balance of Units
Jan. 1	Beginning balance	100	$1.45	100
Jan. 24	Purchased	300	$1.55	400
Feb. 8	Issued	80		320
Mar. 16	Issued	140		180
Jun. 11	Purchased	150	$1.62	330
Aug. 18	Issued	130		200
Sep. 6	Issued	110		90
Oct. 15	Purchased	150	$1.70	240
Dec. 29	Issued	140		100

If a perpetual inventory record of Raw Material A is maintained on a moving average basis, the 140 units issued on March 16 will have a unit cost of (round to 3 decimal places):

a. $1.525.
b. $1.475.
c. $1.50.
d. $1.438.

ANSWER: a

RATIONALE: On a moving average basis, the 140 units issued on March 16 would have a unit cost of $1.5125 as follows:

	Number of Units	Unit Price	Total Cost
Beginning Balance	100	$1.45	$145.00
Jan. 24 Purchase	300	$1.55	465.00
	400		$610.00

Average cost for both the February 8 and March 16 issue would be $1.525 ($610 / 400 units).

POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Accounting for Materials
OTHER: Bloom's: Applying

38. The Kennedy Company uses throttles in its assembly of lawn mowers. Information as to balances on hand, purchases, and requisitions of throttles is given in the following table.

Date	Transaction	Number of Units	Unit Price	Balance of Units

Jan. 1	Beginning balance	50	$2.50	50
Jan. 20	Purchased	150	$3.00	200
Feb. 3	Issued	40		160
Mar. 25	Issued	70		90
Jun. 14	Purchased	75	$4.00	165
Aug. 27	Issued	65		100
Sep. 16	Issued	55		45
Oct. 7	Purchased	75	$4.50	120
Dec. 13	Issued	70		50

If a perpetual inventory record of throttles is maintained on a moving average basis, the 165 items in inventory on June 14 will have a unit cost of (rounded to three decimal places):

a. $3.438.
b. $3.167.
c. $3.386.
d. $2.875.

ANSWER: c

RATIONALE: On a moving average basis, the 165 units in inventory on June 14 would be assigned a cost per unit of $3.386 as follows:

	Number of Units	Unit Price	Total Cost	
Beginning Balance	50	$2.50	$125.00	
Jan. 20 Purchase	150	$3.00	450.00	
	200		$575.00	(575.00/200 = 2.875)
Feb. 3 Issue	40	$2.875	115.00	
Mar. 25 Issue	70	$2.875	201.25	
	90		258.75	
Jun. 14 Purchase	75	$4.00	300.00	
	165		$558.75	

Average cost per unit for the June 14 inventory would be $3.386 ($558.75 / 165 units).

POINTS: 1

DIFFICULTY: Challenging

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Accounting for Materials

OTHER: Bloom's: Applying

39. In a period of rising prices, the use of which of the following cost flow methods would result in the highest tax liability?

a. LIFO
b. FIFO
c. Weighted average cost
d. Moving average cost

ANSWER: b

RATIONALE: Under the FIFO method, the least recent purchases, which were the least expensive, would be

considered to be the goods sold. This would result in lower cost of goods sold, thus higher gross margins which in turn would result in higher income taxes.

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Cost Management

TOPICS: Accounting for Materials

OTHER: Bloom's: Understanding

40. In a period of rising prices, the use of which of the following cost flow methods would result in the highest cost of goods sold?

a. LIFO
b. FIFO
c. Weighted average cost
d. Moving average cost

ANSWER: a

RATIONALE: Under the LIFO method, the most recent purchases, which were the most expensive, would be considered to be the goods sold. Thus, cost of goods sold would be higher.

POINTS: 1

DIFFICULTY: Challenging

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Cost Management

TOPICS: Accounting for Materials

OTHER: Bloom's: Understanding

41. When selecting a method of inventory costing, a company must consider all of the following **except**:

a. federal and state income tax regulations.
b. current economic conditions.
c. the flow of materials.
d. its rate of inventory turnover.

ANSWER: c

RATIONALE: The flow of materials does not dictate the flow of costs. Companies must consider tax regulations and current economic conditions, including the rate of inflation, particularly as they relate to LIFO. In addition, companies that turn over inventory rapidly may not be as concerned as companies that hold inventory for longer periods of time as the impact of rising prices will not be as dramatic.

POINTS: 1

DIFFICULTY: Challenging

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Cost Management
TOPICS: Accounting for Materials
OTHER: Bloom's: Analyzing

42. At the end of the period, the balance in the Materials account should represent
    a. the cost of materials purchased.
    b. the cost of materials on hand, not yet put into production.
    c. the cost of materials issued into production.
    d. the cost of materials included in Work in Process and Finished Goods.

ANSWER: b
RATIONALE: At the end of the period, the balance in the Materials account should represent the cost of materials on hand. Materials purchased increase the Materials account while materials that have been issued into production, which would be included in Work in Process, Finished Goods and Cost of Goods Sold, would have decreased the Materials account.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Cost Management
TOPICS: Accounting for Materials
OTHER: Bloom's: Understanding

43. The general ledger entry to record the purchase of materials is:
    a. Debit-Purchases Received
       Credit-Purchase Orders Outstanding
    b. Debit-Materials
       Credit-Purchase Orders Outstanding
    c. Debit-Purchases Received
       Credit-Accounts Payable
    d. Debit-Materials
       Credit-Accounts Payable

ANSWER: d
RATIONALE: The Materials account is debited and Accounts Payable is credited when materials are purchased. Purchase orders are not recorded in the general ledger.
POINTS: 1
DIFFICULTY: Easy
LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.04 - Reporting
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Accounting for Materials
OTHER: Bloom's: Applying

44. The journal entry to record undamaged direct materials returned to the storeroom would be:

a. Debit - Materials
   Credit - Finished Goods
b. Debit - Factory Overhead
   Credit - Work in Process
c. Debit - Materials
   Credit - Factory Overhead
d. Debit - Materials
   Credit - Work in Process

ANSWER: d
RATIONALE: The entry to record the return of direct materials to the storeroom is the reverse of the entry that is made when the materials are issued to production.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.04 - Reporting
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Accounting for Materials
OTHER: Bloom's: Applying

45. If the amount of materials on hand at the end of the period is less than the control account balance, the control account balance should be decreased by the following entry:

a. Debit - Work in Process
   Credit - Materials
b. Debit - Materials
   Credit - Factory Overhead
c. Debit - Materials
   Credit - Work in Process
d. Debit - Factory Overhead
   Credit - Materials

ANSWER: d
RATIONALE: If the amount of materials on hand per the physical count is less than the control account balance, the balance should be decreased by a debit to a factory overhead account (usually called Inventory Short and Over), because differences may be due to damage, theft or errors and usually cannot be easily identified with a specific job, and a credit to Materials.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.04 - Reporting
BUSPROG.03 - Analytic

IMA-Cost Management
TOPICS: Accounting for Materials
OTHER: Bloom's: Applying

46. Inventory levels for firms using JIT inventory systems compared to firms not using JIT will be:
    a. Higher for both work in process and finished goods.
    b. Higher for work in process and finished goods but lower for raw materials.
    c. Lower for raw materials, work in process, and finished goods.
    d. Higher for finished goods but lower for raw materials and work in process.

ANSWER: c
RATIONALE: Manufacturers using just-in-time inventory systems will maintain lower inventory levels for all three types of inventories. Materials are delivered in time to be placed in production. Work in Process inventories are minimized by eliminating inventory buffers between work cells and Finished Goods inventories are eliminated because items are produced as customers order them.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Strategic Planning
TOPICS: Just-in-Time Materials Control
OTHER: Bloom's: Understanding

47. Just-in-time production techniques:
    a. Require inventory buffers between work centers.
    b. Were first utilized by U.S. manufacturers and later exported to Japan.
    c. Produce goods for inventory with the hope that demand for these goods will then be created.
    d. Require a high degree of cooperation and coordination between supplier and manufacturer.

ANSWER: d
RATIONALE: A just-in-time inventory system is a “pull” inventory system ultimately driven by customer demand so goods are not produced in the hope of selling them. In addition, inventory buffers are minimized as production on units in one manufacturing cell is started only when the subsequent operation requests them. For a just-in-time inventory system to be effective, suppliers must be in close proximity to customers to enable the delivery of raw materials to coincide with production's need for them.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Strategic Planning
TOPICS: Just-in-Time Materials Control
OTHER: Bloom's: Remembering

48. In a JIT system, reducing throughput time is possible because:

a. there are fewer materials used in the process.
b. there are more workers involved in the process.
c. there are more supervisors, so a better job is done of directing plant activities.
d. there are fewer operations such as moving and storing inventories that do not add value to the product.

ANSWER: d
RATIONALE: In a JIT system, there are fewer operations such as moving and storing inventories that do not add value to the product.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Strategic Planning
TOPICS: Just-in-Time Materials Control
OTHER: Bloom's: Understanding

49. Polk, Inc. produces 3,000 hammers each day. The average number of units in work in process is 4,500, having an average cost of $10,000. The annual carrying costs relating to inventory are 15%.

Consultants have determined that the work in process could be reduced by as much as a third by rearranging the factory floor. What is the current throughput time?

a. Eight hours
b. Sixteen hours
c. One day
d. One and one half days

ANSWER: d
RATIONALE: Throughput is the amount of time it takes a unit to get through the system. The average number of units in work in process is 4.500. Dividing this number by 3,000 (daily production) yields a cirrent throughput time of 1.5 days.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning
TOPICS: Just-in-Time Materials Control
OTHER: Bloom's: Understanding

50. Harrison Industries produces 4,000 lunch boxes each day. The average number of units in work in process is 12,000, having an average cost of $60,000. The annual carrying costs related to inventory are 10%.

Consultants have determined that the work in process could be reduced by as much as a third by rearranging the factory

floor. What would the throughput time be if Harrison implements the recommended changes?

a. Twelve hours
b. One day
c. Two days
d. Three days

ANSWER: c

RATIONALE: Throughput is the amount of time it takes a unit to get through the system. The current throughput time is 3 days; this is computed by dividing average work in process by daily production (12,000 / 4,000). If current throughput time is reduced by 1/3, the new throughput time is two days.

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning

TOPICS: Just-in-Time Materials Control

OTHER: Bloom's: Applying

51. Taft Company produces 5,000 pallets each day. The average number of units in work in process is 10,000, having an average cost of $35,000. The annual carrying costs related to inventory are 20%.

Consultants have determined that the work in process could be reduced by as much as 25% by rearranging the factory floor. What would the throughput time be if Harrison implements the recommended changes?

a. Twelve hours
b. One day
c. One and one-half days
d. Two days

ANSWER: c

RATIONALE: Throughput is the amount of time it takes a unit to get through the system. Units in work in process = 10,000 = 2 days x .25 = 1/2 day reduction Daily production 5,000 Two days less one-half day = one and one-half days

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning

TOPICS: Just-in-Time Materials Control

OTHER: Bloom's: Applying

52. Harrison Industries produces 4,000 lunch boxes each day. The average number of units in work in process is 12,000, having an average cost of $60,000. The annual carrying costs related to inventory are 10%.

Consultants have determined that the work in process could be reduced by as much as a third by rearranging the factory

floor. What would the reduction in annual carrying costs be if Harrison is able to implement the recommended changes?

a. $2,000
b. $1,500
c. $6,000
d. $4,000

ANSWER: a

RATIONALE: Carrying cost = Average work in process inventory x carrying cost percentage Existing situation - $60,000 x 10% = $6,000 Inventory reduction $60,000 x 1/3 = $20,000 reduction New average inventory = $60,000 - $20,000 = $40,000 x 10% = $4,000 $6,000 - $4,000 = $2,000 reduction

POINTS: 1

DIFFICULTY: Challenging

LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning

TOPICS: Just-in-Time Materials Control

OTHER: Bloom's: Applying

53. The accounting system used with JIT manufacturing is called:

a. Backflush costing.
b. The push system.
c. Perpetual inventory costing.
d. First-in, first-out.

ANSWER: a

RATIONALE: The accounting system used with JIT is called backflush costing.

POINTS: 1

DIFFICULTY: Easy

LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Just-in-Time Materials Control

OTHER: Bloom's: Remembering

54. In a backflush accounting system, a single account is used for the following:

a. Work in process and finished goods inventories.
b. Finished goods inventories and cost of goods sold.
c. Factory overhead and raw materials.
d. Raw materials and work in process inventories.

ANSWER: d

RATIONALE: In a backflush accounting system, a single account, Raw and In Process is used because in just-in-time or JIT manufacturing, materials are delivered directly into production.

POINTS: 1
DIFFICULTY: Easy
LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Just-in-Time Materials Control
OTHER: Bloom's: Remembering

55. In a backflush accounting system, a single account is used for the following:
    a. Work in process and finished goods inventories.
    b. Finished goods inventories and cost of goods sold.
    c. Factory overhead and raw materials.
    d. Labor and overhead.

ANSWER: d
RATIONALE: In a backflush accounting system, a single account, Conversion Costs, is used because labor is usually insignificant in a highly automated JIT setting.
POINTS: 1
DIFFICULTY: Easy
LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Just-in-Time Materials Control
OTHER: Bloom's: Remembering

56. Which of the following is **not** true about backflush costing?
    a. Different companies may choose different trigger points.
    b. Production costs are attached to products as they move through work in process.
    c. A single account is used for raw and in-process materials because materials are issued to production when received from the supplier.
    d. Direct labor is usually insignificant in a highly automated system, so is not cost effective to account for it separately.

ANSWER: b
RATIONALE: In backflush costing, costs are not attached to products until the products are completed and sold.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Cost Management

TOPICS: Just-in-Time Materials Control
OTHER: Bloom's: Remembering

57. Under a backflush accounting system, the following entry is made when products are completed:
    a. Debit-Finished Goods
       Credit-Work In Process
    b. Debit-Cost of Goods Sold
       Credit-Raw and In Process
       Credit-Conversion Costs
    c. Debit-Finished Goods
       Credit-Raw and In Process
       Credit-Conversion Costs
    d. Debit-Cost of Goods Sold
       Credit-Finished Goods

ANSWER: c
RATIONALE: Finished goods are debited when goods are completed under backflush accounting, similar to other accounting systems. However, work in process is not credited, as that account does not exist under backflush accounting.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.04 - Reporting
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Just-in-Time Materials Control
OTHER: Bloom's: Applying

58. All of the following methods may be used to account for the revenue from scrap sales **except**:
    a. Credit Factory Overhead, if the scrap cannot be identified with a specific job.
    b. Credit Materials, if the scrap would have been able to be recycled.
    c. Credit Work in Process, if the scrap is identified with a specific job.
    d. Credit Scrap Revenue, which is included in the “Other Income” section of the income statement.

ANSWER: b
RATIONALE: Scrap is a by-product of production. It would not be appropriate to credit materials because materials would have been credited when the materials were put into production. Depending on the circumstances, it would be appropriate to credit Factory Overhead, Work in Process or Scrap Revenue.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.13 - LO5: Account for scrap materials, spoiled goods, and defective work
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Scrap, Spoiled Goods and Defective Work

OTHER: Bloom's: Understanding

59. Rowe Co.'s Job 401 for the manufacture of 2,200 wagons was completed during August at the unit costs presented below.

Direct materials	$24
Direct labor	18
Factory overhead	14
	$56

Final inspection of Job 401 disclosed 200 wagons that were sold to a jobber for $6,000.
Assume that the spoilage loss is charged to all production during August. What would be the journal entry to record the spoilage?

a.
Factory Overhead	11,200	
Work in Process		11,200

b.
Spoiled Goods Inventory	6,000	
Work in Process		6,000

c.
Spoiled Goods Inventory	6,000	
Factory Overhead	5,200	
Work in Process		11,200

d.
Spoiled Goods Inventory	11,200	
Factory Overhead		11,200

ANSWER: c

RATIONALE: When the spoilage loss is charged to all of production, the market value of the spoiled goods is charged to Spoiled Goods Inventory, but the cost of the job in work in process is reduced by the entire cost of the spoiled items. The difference is a loss, which is charged to Factory Overhead.

Cost of spoiled items (200 x $56)	$11,200
Market value of spoiled units	6,000
Amount charged to Factory Overhead	$ 5,200

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.13 - LO5: Account for scrap materials, spoiled goods, and defective work

ACCREDITING STANDARDS AACSB Analytic
ACCT.AICPA.FN.03 - Measurement

: BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Scrap, Spoiled Goods and Defective Work
OTHER: Bloom's: Applying

60. Rowe Co.'s Job 401 for the manufacture of 2,200 wagons was completed during August at the unit costs presented below.

Direct materials	$24
Direct labor	18
Factory overhead	14
	$56

Final inspection of Job 401 disclosed 200 spoiled wagons that were sold to a jobber for $6,000.
Assume that the spoilage loss is attributable to the exacting specifications of Job 401 and is charged to this specific job. What would be the journal entry to record the spoilage?

a.
Factory Overhead	6,000	
Work in Process		6,000

b.
Spoiled Goods Inventory	6,000	
Work in Process		6,000

c.
Spoiled Goods Inventory	6,000	
Factory Overhead	5,200	
Work in Process		11,200

d.
Spoiled Goods Inventory	6,000	
Factory Overhead		6,000

ANSWER: b
RATIONALE: When the spoilage loss is charged to the specific job on which the spoilage occurred, the market value of the spoilage is charged to Spoiled Goods Inventory and the cost of the job in work in process is reduced by the same amount.
POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.13 - LO5: Account for scrap materials, spoiled goods, and defective work
ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Scrap, Spoiled Goods and Defective Work
OTHER: Bloom's: Applying

61. Rowe Co.'s Job 401 for the manufacture of 2,200 wagons was completed during August at the unit costs presented below.

Direct materials	$24
Direct labor	18
Factory overhead	14
	$56

Final inspection of Job 401 disclosed 200 spoiled wagons that were sold to a jobber for $6,000.

Assume that spoilage loss is attributable to the exacting specifications of Job 401 and is charged to this specific job. What would be the unit cost of the good wagons produced on Job 401?

a. $56.00
b. $58.60
c. $53.00
d. $48.18

ANSWER: b

RATIONALE: When the spoilage loss is charged to the specific job on which the spoilage occurred, the cost of producing the good units includes the cost of producing all units less the amount received for the spoilage:

$$\frac{(2{,}200 \times \$56) - \$6{,}000}{2{,}000} = \$58.60$$

POINTS: 1

DIFFICULTY: Challenging

LEARNING OBJECTIVES: PRIN.EDWA.16.13 - LO5: Account for scrap materials, spoiled goods, and defective work

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Scrap, Spoiled Goods and Defective Work

OTHER: Bloom's: Applying

62. During March, Hart Company incurred the following costs on Job 122 for the manufacture of 200 motors:

Original cost accumulation:

Direct materials	$2,600
Direct labor	900
Factory overhead	1,350
	$4,850

Direct costs of reworking 10 units:

Direct materials	$ 100
Direct labor	180
Factory overhead	270
	$ 550

Assume the rework costs are to be spread over all jobs that go through the production cycle. What is the journal entry needed to record the rework costs?

a.

Work in Process	550	
Materials		100
Payroll		180
Factory Overhead		270

b.

Materials	100	
Payroll	180	
Factory Overhead	270	
Work in Process		550

c.

Factory Overhead	550	

	Materials		100
	Payroll		180
	Factory Overhead		270

d.

Spoiled Goods Inventory	550	
Work in Process		550

ANSWER: c

RATIONALE: When the costs of correcting defective work is to be spread over all jobs, the material, labor and factory overhead costs are charged to Factory Overhead.

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.13 - LO5: Account for scrap materials, spoiled goods, and defective work

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Scrap, Spoiled Goods and Defective Work

OTHER: Bloom's: Applying

63. During April, Hisch Company incurred the following costs on Job A42 for the manufacture of 400 bookcases:

Original cost accumulation:	
Direct materials	$ 4,200
Direct labor	2,500
Factory overhead	4,500
	$11,500

Direct costs of reworking 15 units:	
Direct materials	$ 150
Direct labor	90
Factory overhead	180
	$ 420

If the defects resulted from the exacting specifications of the order, what is the journal entry needed to record the rework costs?

a.

Work in Process	420	
Materials		150
Payroll		90
Factory Overhead		180

b.

Materials	150	
Payroll	90	
Factory Overhead	180	
Work in Process		420

c.

Factory Overhead	420	
Materials		150
Payroll		90
Factory Overhead		180

d.

Spoiled Goods Inventory	420	
Work in Process		420

ANSWER: a

RATIONALE: When the costs of correcting defective work is to due to the exacting specifications of the order, the material, labor and factory overhead costs are charged to that specific job in Work in Process.

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.13 - LO5: Account for scrap materials, spoiled goods, and defective work

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Scrap, Spoiled Goods and Defective Work

OTHER: Bloom's: Applying

64. During March, Hart Company incurred the following costs on Job 122 for the manufacture of 200 motors:

Original cost accumulation:	
Direct materials	$2,600
Direct labor	900
Factory overhead	1,350
	$4,850
Direct costs of reworking 10 units:	
Direct materials	$ 100
Direct labor	180
Factory overhead	270
	$ 550

The rework costs were attributable to the exacting specifications of Job 122, and the full rework costs were charged to this specific job. What is the cost per finished unit of Job 122?

a. $25.00
b. $23.50
c. $27.00
d. $24.00

ANSWER: c

RATIONALE:

Original cost	$4,850
Rework materials	100
Rework labor	180
Rework overhead	270
Total cost	$5,400
Unit cost ($5,400/200)	$27

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.13 - LO5: Account for scrap materials, spoiled goods, and defective work

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Scrap, Spoiled Goods and Defective Work

OTHER: Bloom's: Applying

65. Xander Company anticipates that usage of Component T will be 100 units daily, which equates to around 25,000 for the year. The material is expected to cost $5 per unit. Once an order is placed with its vendor, it takes five days to receive the goods, and the cost of placing each order is $50. As a result, Xander keeps 1,000 units on hand to avoid stockouts. The carrying cost associated with each unit is $10.

a. Compute the order point.
b. Determine the most economical order quantity.

ANSWER:

(a) Order point = Expected usage during lead time + Safety stock
= (100 units × 5 days) + 1,000
= 1,500 units

(b)

$$EOQ = \sqrt{\frac{2 \times \text{Order costs} \times \text{Annual demand}}{\text{Annual carrying cost per unit}}}$$

$$EOQ = \sqrt{\frac{2 \times \$50 \times 25{,}000}{\$10.00}} = 500 \text{ units}$$

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning

TOPICS: Materials Control

OTHER: Bloom's: Applying

66. The Reddog Company predicts that 3,200 units of material will be used during the year. The expected daily usage is 15 units, there is an expected lead time of 10 days, and there is a safety stock of 200 units. The material is expected to cost $4 per unit. It is estimated that it will cost $25 to place each order. The annual carrying cost is $1 per unit.

a. Compute the order point.
b. Determine the most economical order quantity by use of the formula.
c. Compute the total cost of ordering and carrying at the EOQ point.

ANSWER:

(a) Order point = Expected usage during lead time + Safety stock
= (15 units × 10 days) + 200
= 350 units

(b)

$$EOQ = \sqrt{\frac{2 \times \text{Order costs} \times \text{Annual demand}}{\text{Annual carrying cost per unit}}}$$

$$EOQ = \sqrt{\frac{2 \times \$25 \times 3{,}200}{\$1.00}} = 400 \text{ units}$$

(c) Annual ordering cost = Number of orders × Cost per order

$$= \frac{3{,}200 \text{ Annual usage}}{400 \text{ EOQ}} \times \$25$$

$$= 8 \times \$25 = \$200$$

Annual carrying cost = Average inventory × Carrying cost per unit

Average inventory = (1/2 × EOQ) + Safety Stock
= (1/2 × 400) + 200 = 400

Annual carrying cost = 400 × $1.00 = $400

POINTS: 1

DIFFICULTY: Challenging

LEARNING OBJECTIVES: PRIN.EDWA.16.9 - LO1: Recognize the two basic aspects of materials control

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning

TOPICS: Materials Control

OTHER: Bloom's: Analyzing

67. For the following materials control forms, please indicate the following:

a. who prepares the form;
b. who receives the form; and
c. the form's intended purpose.

1. Purchase Requisition
2. Materials Requisition
3. Receiving Report
4. Purchase Order
5. Debit/Credit Memo

ANSWER:

Materials Control Form	Preparer	Receiver	Purpose
			Notify purchasing agent

	Purchase requisition	Storeroom keeper	Purchasing agent	that additional materials are needed.
	Materials requisition	Production department supervisor	Storeroom keeper	To issue materials to the factory department for production
	Receiving report	Receiving clerk	Purchasing agent	To compare the vendor invoice and purchase order to make sure materials ordered were received
			Storeroom clerk	To ensure all materials are received in the storeroom
	Purchase order	Purchasing agent	Vendor (supplier)	Describes materials wanted, stating price and fixing delivery details
	Debit/Credit memo	Purchasing agent	Vendor (supplier)	To notify vendor of discrepancies in shipments

POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.10 - LO2: Specify internal control procedures for materials
ACCREDITING STANDARDS: AACSB Reflective Thinking
ACCT.AICPA.FN.03 - Measurement
BUSPROG.06 - Reflective Thinking
IMA-Cost Management
TOPICS: Materials Control Procedures
OTHER: Bloom's: Understanding

68. The materials account of the Lankford Company reflected the following changes during January:

Balance, January 1	190 units @ $30
Received, January 5	130 units @ $32
Issued, January 18	240 units
Received, January 20	210 units @ $35
Issued, January 30	70 units

Assuming that Lankford Company maintains perpetual inventory records, calculate the cost of the ending inventory at January 31 and the cost of the units issued in January using the FIFO method.
ANSWER:

	Received			Issued			Balance		
Date	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount
1/1							190	30	5,700
1/5	130	32	4,160				190	30	

										130	32	9,860
	1/18						190	30	5,700			
							50	32	1,600	80	32	2,560
	1/20	210	35	7,350						80	32	
										210	35	7,350
	1/30						70	32	2,240	10	32	
										210	35	7,670

Ending Inventory:
220 units having a total cost of 7,670 (10 units x $32) + (210 units x $210)

Cost of Units Issued:
310 units having a total cost of $9,540 (5,700 + 1,600 + 2,240)

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.04 - Reporting
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Accounting for Materials

OTHER: Bloom's: Applying

69. The materials account of Hetzer Industries reflected the following changes during May :

Balance, May 1	180 units @ $30
Received, May 2	60 units @ $32
Issued, May 4	80 units
Received, May 27	100 units @ $34
Issued, May 31	150 units

Assuming that Hetzer maintains perpetual inventory records, calculate the cost of the ending inventory at May 31 and the cost of the units issued in May using the LIFO method.

ANSWER:

	Received			Issued			Balance		
Date	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount
5/1							180	30	5,400
5/2	60	32	1,920				180	30	
							60	32	7,320
5/4				20	30	600			
				60	32	1,920	160	30	4,800
5/27	100	34	3,400				160	30	
							100	34	8,200
5/31				50	30	1,500			
				100	34	3,400	110	30	3,300

Ending Inventory:
110 units having a total cost of $3,300 (110 x $30)

Cost of Units Issued:
230 units having a total cost of $7,420 (600 + 1,920 + 1,500 + 3,400)

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.04 - Reporting
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Accounting for Materials

OTHER: Bloom's: Applying

70. The materials account of the Herbert Company reflected the following changes during August:

Balance, August 1	18 units @ $200
Received, August 2	6 units @ $210
Issued, August 8	8 units
Received, August 15	10 units @ $222
Issued, August 27	15 units

Assuming that Herbert Company maintains perpetual inventory records, calculate the cost of the ending inventory at August 31 and the cost of the units issued in August using the moving average method.

ANSWER:

	Received			Issued			Balance		
Date	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount
8/1							18	$200.00	$3,600
8/2	6	$210.00	$1,260				24	202.50	4,860
8/8				8	$202.50	1,620	16	202.50	3,240
8/15	10	$222.00	$2,220				26	210.00	5,460
8/27				15	$210.00	3,150	11	210.00	2,310

Ending Inventory:
11 units having a total cost of $2,310

Cost of Units Issued:
23 units having a total cost of $4,770 (1,620 + 3,150)

Unit cost calculations:
$4,860 / 24 = $202.50

$5,460 / 26 = $210.00

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.04 - Reporting
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Accounting for Materials

OTHER: Bloom's: Applying

71. The materials account of the Flynn Company reflected the following changes during May:

Balance, May 1	500 units @ $10
Received, May 5	300 units @ $12
Issued, May 10	400 units
Received, May 15	200 units @ $15
Issued, May 25	300 units

Assuming that Flynn Company maintains perpetual inventory records, calculate the ending inventory at May 31 and the cost of the units issued in May using each of the following methods:
(a) First in, first out (FIFO)
(b) Last in, first out (LIFO)
(c) Moving average

ANSWER: (a) FIFO:

	Received			Issued			Balance		
Date	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount
5/1							500	$10	$5,000
5/5	300	$12	$3,600				500	10	
							300	12	8,600
5/10				400	$10	$4,000	100	10	
							300	12	4,600
5/15	200	15	3,000				100	10	
							300	12	
							200	15	7,600
5/25				100	10	1,000			
				200	12	2,400	100	12	
							200	15	4,200

Ending Inventory:
300 units having a total cost of $4,200 (100 units x $12) + (15 units x $15)

Cost of Units Issued:
700 units having a total cost of $7,400 (4,000 + 1,000 + 2,400)

(b) LIFO:

	Received			Issued			Balance		
Date	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount
5/1							500	10	5,000
5/5	300	12	3,600				500	10	
							300	12	8,600
5/10				100	10	1,000			
				300	12	3,600	400	10	4,000
5/15	200	15	3,000				400	10	
							200	15	7,000
5/25				100	10	1,000			
				200	15	3,000	300	10	3,000

Ending Inventory:
300 units having a total cost of $3,000 (300 x $10)

Cost of Units Issued:

700 units having a total cost of $8,600 (1,000 + 3,600 + 1,000 + 3,000)

(b) Moving Average:

Received				Issued			Balance		
Date	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount
5/1							500	10	5,000
5/5	300	12	3,600				800	10.75	8,600
5/10				400	10.75	4,300	400	10.75	4,300
5/15	200	15	3,000				600	12.17	7,300
5/25				300	12.17	3,650	300	12.17	3,650

Ending Inventory:
300 units having a total cost of $3,650

Cost of Units Issued:
700 units having a total cost of $7,950 (4,300 + 3,650)

Unit cost calculations:
$8,600 / 800 = $10.75

$7,300 / 600 = $12.16667

POINTS: 1

DIFFICULTY: Challenging

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.04 - Reporting
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Accounting for Materials

OTHER: Bloom's: Applying

72. The following accounts are maintained by the Sprague Manufacturing Company in its general ledger: Materials, Work in Process, Factory Overhead, and Accounts Payable. The materials account had a debit balance of $40,000 on November 1. A summary of material transactions for November shows:

(1) Materials purchased on account, $62,000
(2) Direct materials issued, $58,500
(3) Direct materials returned to storeroom, $1,200
(4) Indirect materials issued, $3,600
(5) Indirect materials returned to storeroom, $550
(6) Materials on hand were $200 less than the stores ledger balance

a. Prepare journal entries to record the materials transactions.
b. Post the journal entries to T-accounts.
c. What is the balance of the materials account on November 30?

ANSWER:

(a)	(1)	Materials	62,000	
		Accounts Payable		62,000
	(2)	Work in Process	58,500	
		Materials		58,500

(3)	Materials	1,200	
	Work in Process		1,200
(4)	Factory Overhead	3,600	
	Materials		3,600
(5)	Materials	550	
	Factory Overhead		550
(6)	Factory Overhead	200	
	Materials		200

(b)

Materials				Accounts Payable			
Bal.	40,000	(2)	58,500			(1)	62,000
(1)	62,000	(4)	3,600				
(3)	1,200	(6)	200				
(5)	550						
	103,750		62,300				

Work in Process				Factory Overhead			
(2)	58,500	(3)	1,200	(4)	3,600	(5)	550
				(6)	200		

(c) The balance of the materials account = $103,750 - $62,300
= $ 41,450

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management

TOPICS: Accounting for Materials

OTHER: Bloom's: Applying

73. The following decisions and transactions were made for the Sanders Company in May:

May 1 The production manager informed the storeroom keeper that the forecasted usage of Component X is 3,000 units. There are 1,500 units on hand, each having a unit cost of $20. The company maintains a minimum stock of 1,000 units. The storeroom keeper notifies the purchasing agent that the company will need 2,500 units of X to meet May's production needs and maintain a minimum inventory of 1,200 units.

May 3 The purchasing agent checks with a number of vendors and orders 2,500 units of Component X. Unfortunately, the price has gone up to $25.

May 7 The shipment of Component X is received and inspected. The units are in good condition and the company received the number of units it ordered.

May 9 The invoice covering Component X is received from the vendor and approved for payment.

May 21 The May 9 invoice is paid in full.

May 31 During the month, 2,950 units of Component X are issued to production. The company uses FIFO costing and a job order cost system.

May 31 An inventory of the storeroom is taken at the end of the day and there are 1,040 units of Component X on hand.

(a) Prepare a table to answer the following questions:
(1) What forms, if any, were used?
(2) What entry, if any, was recorded?

(b) Calculate the balance in the Materials account at May 31.

ANSWER:

Date	Form	Account	Debit	Credit
May 1	Purchase requisition	No entry		
May 3	Purchase order	No entry		
May 7	Receiving report	No entry		
May 9	None	Materials	62,500	
		Accounts Payable		62,500
May 21	Approved voucher	Accounts Payable *	62,500	
		Cash		62,500
May 31	Materials requisition	Work in Process **	66,250	
		Materials		66,250
May 31	Inventory report	Factory Overhead ***	250	
		Materials		250

* 2,500 units x $25 = $62,500

** FIFO Basis:

Beginning Inventory	1,500 units @ $20	$30,000
Received	2,500 units @ $25	62,500
Total available	4,000 units	92,500
Issued (2,950 units)	(1,500) units @ $20	(30,000)
	(1,450) units @ $25	(36,250)
Per perpetual records @ 5/31	1,050 units @ $25	26,250
Per physical inventory @ 5/31	1,040 units	
Inventory adjustment needed	10 units @ $25	

** (1,500 x $20) + (1,450 x $25) = $66,250

*** 10 x $25 = $250

(b) Units in inventory at May 31 = 1,040 units @ $25 = $26,000 per above

POINTS: 1

DIFFICULTY: Challenging

LEARNING OBJECTIVES: PRIN.EDWA.16.10 - LO2: Specify internal control procedures for materials
PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic

	IMA-Cost Management
TOPICS:	Materials Control Procedures Accounting for Materials
OTHER:	Bloom's: Analyzing

74. The Outdoor Manufacturing Company produces sporting equipment. The company maintains a single raw materials inventory account for both direct and indirect materials. The following information came from the factory ledger accounts for December:

Raw Materials, December 1	$ 45,500
Work in Process, December 1	125,000
Finished Goods, December 1	175,000
Raw materials purchases (during December)	623,000
Direct labor	435,000
Repairs and maintenance	37,200
Indirect materials	16,700
Utilities	63,200
Indirect labor	38,200
Supervisors' salaries	18,300
Raw Materials, December 31	43,600
Work in Process, December 31	135,000
Finished Goods, December 31	150,000

Compute the cost of direct materials used during the month of December.

ANSWER:

Raw materials inventory, December 1	$ 45,500
Raw materials purchases	623,000
Total materials available	$668,500
Less: Raw materials inventory, December 31	43,600
Raw materials used	$624,900
Less: Indirect materials used	16,700
Direct materials used	$608,200

Instructor Note: This question relates concepts from chapter 2 to those learned in chapter 1.

POINTS:	1
DIFFICULTY:	Challenging
LEARNING OBJECTIVES:	PRIN.EDWA.16.11 - LO3: Account for materials and relate materials accounting to the general ledger
ACCREDITING STANDARDS:	AACSB Analytic ACCT.AICPA.FN.03 - Measurement BUSPROG.03 - Analytic IMA-Cost Management
TOPICS:	Accounting for Materials
OTHER:	Bloom's: Creating

75. Skeeter Company produces 100,000 insect repellent devices each day, and the average number of units in work in process is 150,000, with an average value of $300,000. The average annual carrying cost percentage is 30%.

a. Determine the throughput time.
b. Compute the annual carrying cost.

c. If the same daily output can be achieved while reducing the work in process by 40%, determine the new throughput time.
d. Compute the annual carrying cost given the information in requirement c.

ANSWER:
a. 150,000 / 100,000 = 1.5 days
b. $300,000 x 30% = $90,000
c. 150,000 x 40% = 60,000 unit reduction
(150,000 - 60,000) / 100,000 = .9 days
d. 30% carrying cost x ((1-.4) x $90,000) = $16,200

POINTS: 1

DIFFICULTY: Challenging

LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Strategic Planning

TOPICS: Just-in-Time Materials Control

OTHER: Bloom's: Analyzing

76. Omari Assembly, Inc., which uses backflush costing, had the following transactions during the month of October :

(a) Purchased raw materials on account, $700,000.
(b) Requisitioned raw materials to production, $700,000.
(c) Distributed direct labor costs, $105,000.
(d) Manufacturing overhead incurred, $215,000. (Use Various Credits for the account in the credit part of the entry.)
(e) Completed all goods.
(f) Sold goods for $1,500,000 on account.

Prepare journal entries to record the above transactions.

ANSWER:

(a)	Raw and In-Process	700,000	
	Accounts Payable		700,000
(b)	No entry		
(c)	Conversion Costs	105,000	
	Payroll		105,000
(d)	Conversion Costs	215,000	
	Various Credits		215,000
(e)	Finished Goods	1,020,000	
	Raw and In-Process		1,020,000
(f)	Accounts Receivable	1,500,000	
	Sales		1,500,000
	Cost of Goods Sold	1,020,000	
	Finished Goods		1,020,000

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.12 - LO4: Account for inventories in a just-in-time (lean production) system

ACCREDITING STANDAR AACSB Analytic
DS: ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Just-in-Time Materials Control
OTHER: Bloom's: Applying

77. Gilday Furniture Inc. produces custom furniture. Wood chips are an inevitable by-product of the cutting process, and are considered scrap. Gilday is unable to use this scrap; however, the company has an agreement to sell the scrap at market prices to a local company that processes the wood chips to make industrial fillers.

Record the entries required for scrap under each of the following conditions:

(a) The revenue received for scrap is to be treated as other income. The market value of wood chips is stable and is currently $200 per ton. The company has seven tons on hand.

(b) The revenue received for scrap is to be treated as a reduction in manufacturing cost, but cannot be identified with a specific job. A firm price is not determinable for the scrap until it is sold. It is eventually sold for cash of $800.

(c) The revenue received for scrap is to be treated as a reduction in manufacturing cost, and five tons of scrap are related to a special job where the company made numerous round tables. The market value of wood chips is stable and is currently $200 per ton.

ANSWER:

(a)	Scrap Materials	1,400	
	Scrap Revenue		1,400
	Cash (or Accounts Receivable)	1,400	
	Scrap Materials		1,400
(b)	Cash (or Accounts Receivable)	800	
	Factory Overhead		800
(c)	Scrap Materials	1,000	
	Work in Process		1,000
	Cash (or Accounts Receivable)	1,000	
	Scrap Materials		1,000

POINTS: 1
DIFFICULTY: Moderate
LEARNING OBJECTIVES: PRIN.EDWA.16.13 - LO5: Account for scrap materials, spoiled goods, and defective work

ACCREDITING STANDAR AACSB Analytic
DS: ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic
IMA-Cost Management
TOPICS: Scrap, Spoiled Goods and Defective Work
OTHER: Bloom's: Applying

78. Moreland Corporation manufactures bells and whistles. In June, 6,000 bells were completed on Job Order No.

BX46. On final inspection, 400 bells were rejected and transferred to the spoiled goods inventory to be sold at $.50 each.

Costs recorded on Job Order No. BX46 follow:

Direct materials	$2,400
Direct labor	2,100
Factory overhead	1,200

Prepare the journal entries to record the following:

a. Charges for materials, labor, and factory overhead for Job Order No. BX46
b. Cost of the spoiled work, the transfer of the cost of the good toys to Finished Goods, and the sale of the imperfect toys, if the loss on spoilage is charged to all jobs worked on during the period
c. Cost of the spoiled work, the transfer of the cost of the good bells to Finished Goods, and the sale of the imperfect ones, if the loss on spoilage is to be charged to Job Order No. BX46 only. (Round the new unit cost to the nearest whole cent, and assume part b, above, has not occurred.)

ANSWER:

(a)	Work in Process		5,700	
	Materials			2,400
	Payroll (direct labor)			2,100
	Factory Overhead			1,200
(b)	Spoiled Goods (400 × $.50)		200	
	Factory Overhead		180	
	Work in Process (400 × $.95*)			380
	Finished Goods ((6,000 - 400) × $.95)		5,320	
	Work in Process			5,320
	Cash		200	
	Spoiled Goods			200
(c)	Spoiled Goods		200	
	Work in Process			200
	Finished Goods (5,600 × $.98*)		5,488	
	Work in Process			5,488
	Cash		200	
	Spoiled Goods			200

* Cost per unit $5,700 / 6,000 = $.95

**

$$\frac{\$5,700 - \$200}{5,600} = \$.9821 \text{ rounded}$$

POINTS: 1

DIFFICULTY: Moderate

LEARNING OBJECTIVES: PRIN.EDWA.16.13 - LO5: Account for scrap materials, spoiled goods, and defective work

ACCREDITING STANDARDS: AACSB Analytic
ACCT.AICPA.FN.03 - Measurement
BUSPROG.03 - Analytic

IMA-Cost Management
TOPICS: Scrap, Spoiled Goods and Defective Work
OTHER: Bloom's: Applying

79. Kami company manufactures engine components. During the previous month, the Company manufactured 12,000 units of Component XRB for Job 3524 and incurred the following unit costs:

Direct materials	$32.00
Direct labor	9.00
Factory overhead	6.00

When the units were tested after production, 300 units did not meet specifications and needed further polishing work. The unit cost of correcting the defects was:

Direct labor	3.00
Factory overhead	2.00

a. Prepare the journal entries to record the cost to correct the defective work under each of the following scenarios:

1. If the cost of correcting the defective work is spread over all jobs that go through the production cycle

2. If the defects resulted from the exacting specifications of Job 3524

b. Under Scenario 2 above, calculate the cost per unit of Job 3524.

ANSWER: (a.)

(1.)Factory Overhead (($3.00 + 2.00) x 300)	1,500	
Payroll (direct labor) ($3.00 x 300)		900
Factory Overhead ($2.00 x 300)		600
(2.)Work in Process (Job 3524)	1,500	
Payroll		900
Factory Overhead		600

(b.)

Number of units produced	12,000
Original cost per unit ($32.00 + 9.00 + 6.00)	$ 47.00
Total original cost	$564,000
Plus cost of correcting defective work	1,500
Total cost of Job 3524	$565,500

	Cost per unit of Job 3524 ($565,500 / 12,000)	$ 47.125
POINTS:	1	
DIFFICULTY:	Moderate	
LEARNING OBJECTIVES:	PRIN.EDWA.16.13 - LO5: Account for scrap materials, spoiled goods, and defective work	
ACCREDITING STANDARDS:	AACSB Analytic ACCT.AICPA.FN.03 - Measurement BUSPROG.03 - Analytic IMA-Cost Management	
TOPICS:	Scrap, Spoiled Goods and Defective Work	
OTHER:	Bloom's: Applying	