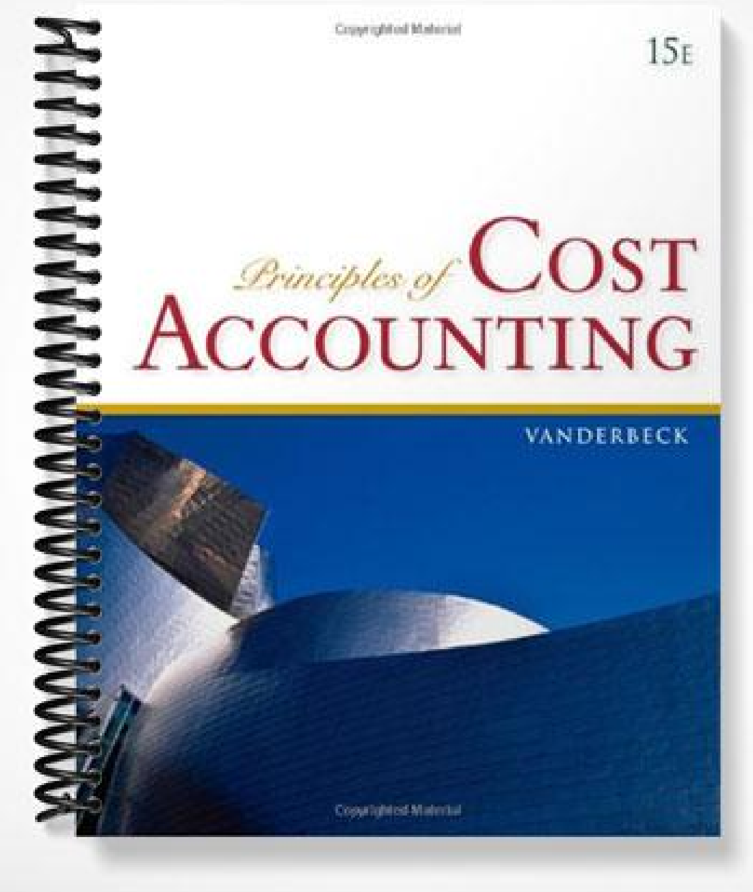
TEST BANK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Principles of COST ACCOUNTING
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CHAPTER 2—ACCOUNTING FOR MATERIALS

MULTIPLE CHOICE

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.

   ANS: D
   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.

   PTS: 1 DIF: Easy REF: P. OBJ: Introduction
   NAT: IMA 1C - Internal Controls TOP: AACSB - Analytic

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.

   ANS: A
   To control materials a business must maintain limited access, segregation of duties, and accuracy in recording.

   PTS: 1 DIF: Moderate REF: P. OBJ: 1
   NAT: IMA 1C - Internal Controls TOP: AACSB - Analytic

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 or 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.

   ANS: D
   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.

   PTS: 1 DIF: Hard REF: P. OBJ: 1
   NAT: IMA 1C - Internal Controls TOP: AACSB - Reflective

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 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

ANS: B
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 1
NAT: IMA 3A - Strategic Management TOP: AACSB - Reflective

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.

ANS: A
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 1
NAT: IMA 3A - Strategic Management TOP: AACSB - Reflective

6. Sully Company uses 3,000 yards of canvas each day to make tents. It usually takes ten days from the time Sully orders the material to when it is received. If Sully's desired safety stock is 12,000 yards, what is Sully's order point?
   a. 12,000 yards
   b. 21,000 yards
   c. 30,000 yards
   d. 42,000 yards

ANS: D

3,000 (daily usage) x 10 (lead time)	30,000
Safety stock	12,000
Order point	42,000

PTS: 1 DIF: Moderate REF: P. OBJ: 1
NAT: IMA 3A - Strategic Management TOP: AACSB - Analytic

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

ANS: C
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.

PTS: 1 DIF: Easy REF: P. OBJ: 1
NAT: IMA 3A - Strategic Planning TOP: AACSB - Analytic

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.

   ANS: B
   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.

   PTS: 1 DIF: Moderate REF: P. OBJ: 1
   NAT: IMA 3A - Strategic Management TOP: AACSB - Analytic

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.

   ANS: C
   Annual order cost = Number of orders × Per order cost

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

   = 120 orders × $105
   = $12,600

   PTS: 1 DIF: Moderate REF: P. OBJ: 1
   NAT: IMA 3A - Strategic Planning TOP: AACSB - Analytic

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.

   ANS: B
   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.

   PTS: 1 DIF: Moderate REF: P. OBJ: 1
   NAT: IMA 3A - Strategic Planning TOP: AACSB - Analytic

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

ANS: C
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
$\frac{\text{Interest}}{\text{Units required}}$	$= \frac{\$800}{10{,}000}$	.08
Carrying costs		$.34

PTS: 1 DIF: Hard REF: P. OBJ: 1
NAT: IMA 3A - Strategic Planning TOP: AACSB - Analytic

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

ANS: C

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

$$\text{EOQ} = \sqrt{\frac{2 \text{ x } 20 \text{ x } 16{,}000}{4}} = 400$$

PTS: 1 DIF: Hard REF: P. OBJ: 1
NAT: IMA 3A - Strategic Management TOP: AACSB - Analytic

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.

    ANS: D

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

    $= 6,000$ units

    PTS: 1 DIF: Moderate REF: P. OBJ: 1
    NAT: IMA 3A - Strategic Planning TOP: AACSB - Analytic

14. Gedye 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 Gedye'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

    ANS: B

    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.

    PTS: 1 DIF: Hard REF: P. OBJ: 1
    NAT: IMA 3A - Strategic Planning TOP: AACSB - Reflective

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.

    ANS: C

    The cost accountant has the responsibility for the accounting records pertaining to inventory valuation but not for the physical materials.

    PTS: 1 DIF: Moderate REF: P. OBJ: 2
    NAT: IMA 1C - Internal Controls TOP: AACSB - Reflective

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.

    ANS: A

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.

PTS: 1 DIF: Moderate REF: P. OBJ: 2
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

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.

ANS: C
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 2
NAT: IMA 2B - Cost Management TOP: AACSB Reflective

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.

ANS: D
The storeroom keeper prepares a purchase requisition to notify the purchasing agent that additional materials are needed.

PTS: 1 DIF: Easy REF: P. OBJ: 2
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

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.

ANS: C
The purchase order is prepared by the purchasing agent and sent to the vendor to order materials.

PTS: 1 DIF: Easy REF: P. OBJ: 2
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

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.

ANS: C

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.

PTS: 1 DIF: Moderate REF: P. OBJ: 2
NAT: IMA 2B - Cost Management TOP: AACSB - Reflective

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

ANS: C
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 2
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

22. 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.

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

PTS: 1 DIF: Moderate REF: P. OBJ: 2
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

23. 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.

ANS: A
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.

PTS: 1 DIF: Easy REF: P. OBJ: 2
NAT: IMA 1C - Internal Controls TOP: AACSB - Analytic

24. 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

ANS: A
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.

PTS: 1	DIF: Moderate	REF: P.	OBJ: 2
NAT: IMA 2B - Cost Management		TOP: AACSB - Analytic	

25. 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, the March 16 issue will consist of:
a. 20 units @ $1.40 and 120 units @ $1.55.
b. 100 units @ $1.40 and 40 units @ $1.55.
c. 140 units @ $1.55.
d. 100 units @ $1.55 and 40 units @ $1.40.

ANS: A
On a FIFO basis, 20 of the units issued on March 16 would have been assigned a cost of $1.40 per unit and the remaining 120 units issued on that date would have been assigned a cost of $1.55 per unit as follows:

	Number of Units	Unit Price	Units issued on February 8	Units issued on March 16
Beginning Balance	100	$1.40	80	20
Jan. 24 Purchase	300	$1.55		120

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

26. 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, the September 6 issue will consist of:
a. 10 units @ $1.40, 80 units @ $1.55 and 20 units @ $1.62.
b. 50 units @ $1.40 and 60 units @ $1.55.
c. 110 units @ $1.55.
d. 50 units @ $1.55 and 60 units @ $1.62.

ANS: D
On a FIFO basis, 50 of the units issued on September 6 would have been assigned a cost of $1.55 per unit and the remaining 60 units issued on 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 issued on Sep.6
Beginning Balance	100	$1.40	80	20		
Jan. 24 Purchase	300	$1.55		120	130	50
Jun. 11 Purchase	150	$1.62				60

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

27. 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.

ANS: C
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

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

28. 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.

ANS: A
First-in, first-out (FIFO) results in the oldest costs being assigned to cost of goods sold.

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Reflective

29. 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.

ANS: A
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Reflective

30. 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 March 16 issue will consist of:
a. 20 units @ $1.40 and 120 units @ $1.55.
b. 100 units @ $1.40 and 40 units @ $1.55.
c. 140 units @ $1.55.
d. 100 units @ $1.55 and 40 units @ $1.40.

ANS: C
On a LIFO basis, the 140 units issued on March 16 would have been assigned a cost of $1.55 per unit as follows:

	Number of Units	Unit Price	Units issued on February 8	Units issued on March 16
Beginning Balance	100	$1.40		
Jan. 24 Purchase	300	$1.55	80	140

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

31. 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.

ANS: A

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 Feb. 8	Units issued on Mar. 16	Units issued on Aug. 18	Units issued on 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

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

32. 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 200 units in inventory at August 18 will consist of:

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

d. 100 units @ $1.40, 60 units @ $1.55 and 40 units @ $1.62.

ANS: C
On a LIFO basis, 20 of the units in inventory at August 18 would have been assigned cost per unit of $1.62, 80 of the units on hand would have been assigned a cost per unit of $1.55 and the remaining 100 units in inventory on that date would have been assigned a unit cost of $1.40 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 Aug. 18
Beginning Balance	100	$1.40				100
Jan. 24 Purchase	300	$1.55	80	140		80
Jun. 11 Purchase	150	$1.62			130	20

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

33. 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.

ANS: B
Last-in, first-out (LIFO) results in the most recent costs being assigned to cost of goods sold.

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Reflective

34. 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.

ANS: B
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Reflective

35. 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 moving average basis, the 140 units issued on March 16 will have a unit cost of:

a. $1.5125.
b. $1.475.
c. $1.55.
d. $1.4375.

ANS: A
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	$1.40	$140.00
Jan. 24 Purchase	300	$1.55	465.00
	400		$605.00

Average cost for both the February 8 and March 16 issue would be $1.5125 ($605 / 400 units).

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

36. 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 moving average basis, the 330 items in inventory on June 11 will have a unit cost of:

a. $1.51.
b. $1.5233.

c. $1.5614.
d. $1.5125.

ANS: C
On a moving average basis, the 330 units in inventory on June 11 would be assigned a cost per unit of $1.5614 as follows:

	Number of Units	Unit Price	Total Cost	
Beginning Balance	100	$1.40	$140.00	
Jan. 24 Purchase	300	$1.55	465.00	
	400		$605.00	605.00/400 = 1.5125
Feb. 8 Issue	80	$1.5125	121.00	
Mar. 16 Issue	140	$1.5125	211.75	
	180		272.25	
Jun. 11 Purchase	150	$1.62	243.00	
	330		$515.25	

Average cost per unit for the June 11 inventory would be $1.5614 ($515.25 / 330 units).

PTS: 1 DIF: Hard REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

37. In a period of rising prices, the use of which of the following cost flow methods would result in the lowest tax liability?
a. FIFO
b. LIFO
c. Weighted average cost
d. Moving average cost

ANS: B
Under the LIFO method, the most recent purchases, which were the most expensive, would be considered to be the goods sold. This would result in higher cost of goods sold, thus lower gross margins which in turn would result in lower income taxes.

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Reflective

38. In a period of rising prices, the use of which of the following cost flow methods would result in the lowest cost of goods sold?
a. FIFO
b. LIFO
c. Weighted average cost
d. Moving average cost

ANS: A
Under the FIFO method, the earliest purchases, which were least the expensive, would be considered to be the goods sold. Thus, cost of goods sold would be lower.

PTS: 1 DIF: Hard REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Reflective

39. 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.

ANS: C
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.

PTS: 1 DIF: Hard REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Reflective

40. 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.
c. the cost of materials issued into production.
d. the cost of materials included in Work in Process and Finished Goods.

ANS: B
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Reflective

41. 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

ANS: D
The Materials account is debited and Accounts Payable is credited when materials are purchased. Purchase orders are not recorded in the general ledger.

PTS: 1 DIF: Easy REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

42. 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

ANS: D
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

43. 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

ANS: D
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

44. 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.

ANS: C
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 4
NAT: IMA 3A - Strategic Planning TOP: AACSB - Reflective

45. 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.

ANS: D
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 4
NAT: IMA 3A - Strategic Planning TOP: AACSB - Reflective

46. 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 relating 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 is the current throughput time?
   a. Eight hours
   b. One day
   c. Two days
   d. Three days

ANS: D
Throughput is the amount of time it takes a unit to get through the system.

$$\frac{\text{Units in work in process}}{\text{Daily production}} = \frac{12{,}000}{4{,}000} = 3 \text{ days.}$$

PTS: 1 DIF: Moderate REF: P. OBJ: 4
NAT: IMA 3A - Strategic Management TOP: AACSB - Analytic

47. 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

ANS: C
Throughput is the amount of time it takes a unit to get through the system.

$$\underline{\text{Units in work in process}} = \underline{12{,}000} = 3 \text{ days} \times 1/3 = 1 \text{ day reduction}$$

Daily production 4,000

Three days less one day = two days

PTS: 1 DIF: Moderate REF: P. OBJ: 4
NAT: IMA 3A - Strategic Management TOP: AACSB - Analytic

48. 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

ANS: A
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

PTS: 1 DIF: Hard REF: P. OBJ: 4
NAT: IMA 3A - Strategic Management TOP: AACSB - Analytic

49. 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.

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

PTS: 1 DIF: Easy REF: P. OBJ: 4
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

50. 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.

ANS: D
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.

PTS: 1 DIF: Easy REF: P. OBJ: 4

NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

51. 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

ANS: C
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 4
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

52. 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.

ANS: B
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 5
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

53. Rowe Co.'s Job 401 for the manufacture of 2,200 wagons was completed during August at the unit costs presented below. Final inspection of Job 401 disclosed 200 wagons coats that were sold to a jobber for $6,000.

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

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

ANS: C
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

PTS: 1 DIF: Moderate REF: P. OBJ: 5
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

54. Rowe Co.'s Job 401 for the manufacture of 2,200 wagons was completed during August at the unit costs presented below. Final inspection of Job 401 disclosed 200 spoiled wagons that were sold to a jobber for $6,000.

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

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

ANS: B
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.

PTS: 1	DIF: Moderate	REF: P.	OBJ: 5
NAT: IMA 2B - Cost Management		TOP: AACSB - Analytic	

55. Rowe Co.'s Job 401 for the manufacture of 2,200 wagons was completed during August at the unit costs presented below. Final inspection of Job 401 disclosed 200 spoiled wagons that were sold to a jobber for $6,000.

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

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

ANS: B

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:

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

PTS: 1	DIF: Hard	REF: P.	OBJ: 5
NAT: IMA 2B - Cost Management		TOP: AACSB - Analytic	

56. 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

ANS: C
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.

PTS: 1 DIF: Moderate REF: P. OBJ: 5
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

57. 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

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 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

ANS: A
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.

PTS:	1	DIF:	Moderate	REF:	P.	OBJ:	5
NAT:	IMA 2B - Cost Management			TOP:	AACSB - Analytic		

58. 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

ANS: C

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

PTS:	1	DIF:	Moderate	REF:	P.	OBJ:	5
NAT:	IMA 2B - Cost Management			TOP:	AACSB - Analytic		

PROBLEM

1. 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.

ANS:

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

(b)

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

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

PTS: 1 DIF: Moderate REF: P. OBJ: 1
NAT: IMA 3A - Strategic Planning TOP: AACSB - Analytic

2. 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.

   ANS:

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

(b)

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

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

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

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

= 8 × $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

PTS: 1 DIF: Hard REF: P. OBJ: 1
NAT: IMA 3A - Strategic Planning TOP: AACSB - Analytic

3. 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 FIFO method.

ANS:

	Received			Issued			Balance		
Date	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount
8/1							18	200	3,600
8/2	6	210	1,260				18	200	
							6	210	4,860
8/8				8	200	1,600	10	200	
							6	210	3,260
8/15	10	222	2,220				10	200	
							6	210	
							10	222	5,480
8/27				10	200	2,000			
				5	210	1,050	1	210	210
							10	222	2,220

Ending Inventory:
11 units having a total cost of $2,430 (1 unit x $210) + (10 units x $222)

Cost of Units Issued:
23 units having a total cost of $4,650 (1,600 + 2,000 + 1,050)

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

4. 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 LIFO method.

ANS:

	Received			Issued			Balance		
Date	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount	Quantity	Unit Price	Amount
8/1							18	200	3,600
8/2	6	210	1,260				18	200	
							6	210	4,860
8/8				2	200	400			

				6	210	1,260	16	200	3,200
8/15	10	222	2,220				16	200	
							10	222	5,420
8/27				5	200	1,000			
				10	222	2,220	11	200	2,200

Ending Inventory:
11 units having a total cost of $2,200 (11 x $200)

Cost of Units Issued:
23 units having a total cost of $4,880 (400 + 1,260 + 1,000 + 2,220)

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

5. 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.

ANS:

	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

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

6. 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

ANS:
(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	
	Unit		Unit		Unit

Date	Quantity	Price	Amount	Quantity	Price	Amount	Quantity	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

PTS: 1 DIF: Hard REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

7. 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?

ANS:

			Debit	Credit
(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

PTS: 1 DIF: Moderate REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

8. 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.

ANS:

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 @ May 31	1,050 units @ $25	26,250
Per physical inventory @ May 31	1,040	
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

PTS: 1 DIF: Hard REF: P. OBJ: 2, 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

9. 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.

ANS:

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.

PTS: 1 DIF: Hard REF: P. OBJ: 3
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

10. Hawkins Company, which uses backflush costing, had the following transactions during the month of June:

(a) Purchased raw materials on account, $350,000.
(b) Requisitioned raw materials to production, $330,000.
(c) Distributed direct labor costs, $52,300.
(d) Manufacturing overhead incurred, $107,000. (Use Various Credits for the account in the credit part of the entry.)

Prepare journal entries to record the above transactions.

ANS:

(a)	Raw and In-Process	350,000	
	Accounts Payable		350,000
(b)	No entry		
(c)	Conversion Costs	52,300	
	Payroll		52,300
(d)	Conversion Costs	107,000	
	Various Credits		107,000

PTS: 1 DIF: Moderate REF: P. OBJ: 4
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

11. 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.

ANS:

(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

PTS: 1 DIF: Moderate REF: P. OBJ: 5
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

12. The Reardon Company manufactures novelty toys. In June, 400 of these toys were completed on Job Order No. 2525. On final inspection, 20 toys were rejected and transferred to the spoiled goods inventory to be sold at $2 each.

Costs recorded on Job Order No. 2525 follow:

Direct materials	$1,600
Direct labor	1,400
Factory overhead	800

Prepare the journal entries to record the following:

a. Charges for materials, labor, and factory overhead for Job Order No. 2525
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 toys to Finished Goods, and the sale of the imperfect toys, if the loss on spoilage is to be charged to Job Order No. 2525 only. (Round the new unit cost to the nearest whole cent, and assume part b, above, has not occurred.)

ANS:

(a)	Work in Process ($3,800/400 = $9.50)	3,800	
	Materials		1,600
	Payroll (direct labor)		1,400

	Factory Overhead		800
(b)	Spoiled Goods (20 × $2)	40	
	Factory Overhead	150	
	Work in Process (20 × $9.50)		190
	Finished Goods (380 × $9.50)	3,610	
	Work in Process		3,610
	Cash	40	
	Spoiled Goods		40
(c)	Spoiled Goods	40	
	Work in Process		40
	Finished Goods (380 × $9.90*)	3,762	
	Work in Process		3,762
	Cash	40	
	Spoiled Goods		40

$$* \frac{\$3{,}800 - \$40}{380} = \underline{\underline{\$9.895}} \text{ rounded}$$

PTS: 1 DIF: Moderate REF: P. OBJ: 5
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic

13. 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.

ANS:
(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

PTS: 1 DIF: Moderate REF: P. OBJ: 5
NAT: IMA 2B - Cost Management TOP: AACSB - Analytic