
2.1-1 Accounting firms, building contractors, and healthcare providers are companies that use job order costing.

Answer: True
Difficulty: 1
LO: 2-1
EOC Ref: S2-1
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.1-2 Process costing is used by companies that produce large numbers of identical units in a continuous fashion.

Answer: True
Difficulty: 1
LO: 2-1
EOC Ref: S2-1
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.1-3 General Motors and Chevron are examples of companies that use process costing.

Answer: True
Difficulty: 1
LO: 2-1
EOC Ref: S2-1
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.1-4 Which of the following companies would NOT use job order costing?
A) A lawn maintenance company
B) A legal firm
C) An auto repair shop
D) A beverage manufacturer

Answer: D
Difficulty: 2
LO: 2-1
EOC Ref: E2-14
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting

Which of the following is an example of an industry that would use a process costing system rather than a job order costing system?
A) Custom furniture manufacturer
B) Unique furniture accessories manufacturer
C) Paint manufacturer
D) Aircraft manufacturer

Answer: C
Difficulty: 2
LO: 2-1
EOC Ref: E2-14
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.1-6 Job order costing is most likely used in which of the following industries?
A) Pharmaceutical manufacturing
B) Textbook publishing
C) Chemical manufacturing
D) Food and beverage manufacturing

Answer: B
Difficulty: 2
LO: 2-1
EOC Ref: S2-1
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.1-7 Which of the following companies is most likely to use job order costing?
A) Swenson Mobil Oil Refinery
B) Hunter's Custom Furniture Company
C) Oliver Chemical Company
D) Somody Cereal Company

Answer: B
Difficulty: 1
LO: 2-1
EOC Ref: S2-1
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting

Which of the following statements is INCORRECT?
A) A job order costing system is used by manufacturers of heterogeneous products.
B) A process costing system is used by manufacturers of homogeneous products.
C) A service firm would likely use a job order costing system.
D) A custom home manufacturer would likely use a process costing system.

Answer: D
Difficulty: 2
LO: 2-1
EOC Ref: E2-14
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.1-9 Which costing system would better account for a unique individual product?
A) Job order costing system
B) Product costing system
C) Process costing system
D) Variable costing system

Answer: A
Difficulty: 2
LO: 2-1
EOC Ref: E2-14
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.1-10 State whether each company below would be more likely to use a job costing system or a process costing system:

| a) | $=$ | custom furniture manufacturer <br> paint manufacturer <br> carpet manufacturer |
| :--- | :--- | :--- |
| b) | $=$ | concrete manufacturer <br> c) <br> home builder |

Answer:
a) job costing
b) process costing
c) process costing
d) process costing
e) job costing

Difficulty: 1
LO: 2-1
EOC Ref: S2-1
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.1-11 State whether each company below would be more likely to use a job costing system or a process costing system:
$\left.\begin{array}{lll}\text { A) } & \square & \begin{array}{l}\text { soft drink bottler } \\ \text { custom jewelry manufacturer } \\ \text { B) } \\ \text { C) } \\ \text { D) } \\ \text { E) }\end{array} \quad \square\end{array} \begin{array}{l}\text { legal firm } \\ \text { printer }\end{array}\right]$ cardboard box maker

Answer:
A) process costing
B) job costing
C) job costing
D) job costing
E) process costing

Difficulty: 1
LO: 2-1
EOC Ref: S2-1
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

On the line in front of each statement, enter the letter corresponding to the term that best fits that statement. You may use a letter more than once, and some letters may not be used at all.

| A) | cost allocation | F) | time record |
| :--- | :--- | :--- | :--- |
| B) | job cost record | G) | predetermined manufacturing overhead rate |
| C) | cost driver | H) | overallocated manufacturing overhead |
| D) | process costing | I) | allocation base |
| E) | materials requisition | J) | job costing |

$\qquad$ Estimated manufacturing overhead rate computed at the beginning of the year, calculated as the estimated manufacturing overhead costs divided by the estimated quantity of the manufacturing overhead allocation base
__ Method of assigning manufacturing overhead and other indirect costs to cost objects
__ System for recording costs to a specific unit or to a small batch of products or services A common denominator for systematically linking indirect costs to products
_—_ System for assigning costs to large numbers of identical units that usually proceed in a continuous fashion through a series of uniform production steps or processes

Answer:
_ G__ Estimated manufacturing overhead rate computed at the beginning of the Year, calculated as the estimated manufacturing overhead costs divided by the estimated quantity of the manufacturing overhead allocation base
_ A__ Method of assigning manufacturing overhead and other indirect costs to cost objects
_ B _ System for assigning costs to a specific unit or to a small batch of products or services
_ I _ A common denominator for systematically linking indirect costs to products
__D__ System for assigning costs to large numbers of identical units that usually proceed in a continuous fashion through a series of uniform production steps or processes

Difficulty: 2
LO: 2-1
EOC Ref: S2-1
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.1-13 On the line in front of each statement, enter the letter corresponding to the term that best fits that statement. You may use a letter more than once, and some letters may not be used at all.
A. cost allocation F. time record
B. job cost record G. predetermined manufacturing overhead rate
C. cost driver H. overallocated manufacturing overhead
D. process costing I. allocation base
E. materials requisition J. job costing
$\qquad$ Source document used primarily by employees engaging in service activities, to trace direct labor to specific jobs
___ Any factor that affects costs
__ Document used to accumulate the costs of a job
__ When the amount of manufacturing overhead allocated to work in process inventory exceeds the amount of manufacturing overhead costs that were actually incurred
___ Request for materials inventory, prepared by manufacturing personnel

## Answer:

_ F_ Source document used primarily by employees engaging in service activities to trace direct labor to specific jobs
__ C_ Any factor that affects costs
_ B _ Document used to accumulate the costs of a job
_ H__ When the amount of manufacturing overhead allocated to work in process inventory exceeds the amount of manufacturing overhead costs that were actually incurred
__E_ Request for materials inventory prepared by manufacturing personnel
Difficulty: 2
LO: 2-1
EOC Ref: S2-2
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.1-14 Briefly explain the difference between job order and process costing and give examples of each.

Answer:
A job order costing system will accumulate costs for each batch or job. It is appropriate for companies that manufacture unique products or produce specialized services. Examples of companies that might use job order costing include building contractors, custom furniture makers, and law firms. Other companies produce a uniform number of identical units through a series of uniform production steps or processes. These companies would use process costing. Examples would include banks, food and beverage manufacturers, and pharmaceutical companies.

Difficulty: 1
LO: 2-1
EOC Ref: E2-14
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.2-1 When materials are requisitioned for a job, the materials inventory account is debited.

Answer: False
Difficulty: 2
LO: 2-2
EOC Ref: S2-3
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.2-2 When indirect materials are requisitioned for a job, the work in process account is credited.

Answer: False
Difficulty: 2
LO: 2-2
EOC Ref: S2-3
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.2-3 Work in process inventory is debited for the incurrence of both direct and indirect labor in a job costing system.

Answer: False
Difficulty: 2
LO: 2-2
EOC Ref: S2-5
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.2-4 The entry to record the purchase of materials on account using a job order costing system would include a:
A) debit to materials inventory.
B) debit to accounts payable.
C) debit to work in process inventory.
D) credit to materials inventory.

Answer: A
Difficulty: 2
LO: 2-2
EOC Ref: S2-3
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.2-6 Which of the following would be debited to record direct labor costs actually incurred?
A) Work in process
B) Manufacturing wages
C) Manufacturing overhead
D) Finished goods inventory

Answer: A
Difficulty: 2
LO: 2-2
EOC Ref: S2-2
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.2-7 Which of the following would be debited to assign the costs of indirect labor?
A) Manufacturing overhead
B) Indirect labor wages expense
C) Finished goods inventory
D) Work in process inventory

Answer: A
Difficulty: 2
LO: 2-2
EOC Ref: S2-2
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.2-8 Which of the following would be debited to record the requisition of indirect materials?
A) Manufacturing overhead
B) Work in process inventory
C) Materials inventory
D) Indirect materials expense

Answer: A
Difficulty: 2
LO: 2-2
EOC Ref: S2-2
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking AICPA Functional Competencies: Reporting
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2.2-10 The entry to transfer direct labor and indirect labor costs from manufacturing wages into production includes a debit to which of the following?
A) Manufacturing overhead and work in process inventory
B) Finished goods inventory and cost of goods sold.
C) Manufacturing overhead and cost of goods sold.
D) Finished goods inventory and work in process inventory.

Answer: A
Difficulty: 2
LO: 2-2
EOC Ref: S2-6
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.2-11 In job order costing, indirect materials used in production are credited to which of the following?
A) Finished goods inventory
B) Materials inventory
C) Manufacturing overhead
D) Work in process inventory

Answer: B
Difficulty: 2
LO: 2-2
EOC Ref: S2-6
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.2-12
2.2-13 In job order costing, all indirect manufacturing labor incurred is initially debited to what account?
A) Manufacturing overhead
B) Work in process inventory
C) Manufacturing wages
D) Indirect labor expense

Answer: C
Difficulty: 2
LO: 2-2
EOC Ref: S2-5
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking AICPA Functional Competencies: Reporting
2.2-14 Allocation of direct and indirect materials requires a credit to what account?
A) Materials inventory
B) Manufacturing overhead
C) Work in process inventory
D) Finished goods inventory

Answer: A
Difficulty: 2
LO: 2-2
EOC Ref: S2-3
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting

The journal entry to issue $\$ 500$ of direct materials and $\$ 30$ of indirect materials to production involves a debit to what account(s)?
A) Work in process inventory for $\$ 500$ and manufacturing overhead for $\$ 30$
B) Work in process inventory for $\$ 500$ and indirect materials expense for $\$ 30$
C) Manufacturing overhead for $\$ 530$
D) Work in process inventory for $\$ 530$

Answer: A
Difficulty: 2
LO: 2-2
EOC Ref: S2-3
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.2-16 The journal entry to assign $\$ 1,500$ of direct labor and $\$ 200$ of indirect labor for the current period involves a debit to what account(s)?
A) Manufacturing overhead for $\$ 1,700$
B) Work in process inventory for $\$ 1,500$ and indirect labor expense for $\$ 200$
C) Work in process inventory for $\$ 1,500$ and manufacturing overhead for $\$ 200$
D) Work in process inventory for $\$ 1,700$

Answer: C<br>Difficulty: 2<br>LO: 2-2<br>EOC Ref: S2-3<br>AACSB: Reflective Thinking<br>AICPA Business Perspective Competencies: Critical Thinking<br>AICPA Functional Competencies: Reporting

| Woodworkers' wages | $\$ 100,000$ |
| :--- | ---: |
| Indirect laborers' wages | $\$ 20,000$ |
| Maintenance personnel wages | $\$ 10,000$ |

What is the journal entry to record the incurrence of these wages?
A)

| Work in process inventory |  | 130,000 |  |
| :--- | :--- | :--- | :--- |
|  | Wages payable (cash) |  | 130,000 |

B)

| Work in process inventory |  | 130,000 |  |
| :--- | :--- | :--- | :--- |
|  | Manufacturing wages |  | 130,000 |

C)

| Manufacturing wages |  | 130,000 |  |
| :--- | :--- | :--- | :--- |
|  | Wages payable (cash) |  | 130,000 |

D)

| Wages expense |  | 130,000 |  |
| :--- | :--- | :--- | :--- |
|  | Wages payable (cash) |  | 130,000 |

Answer: C
Difficulty: 2
LO: 2-2
EOC Ref: S2-5
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.2-18 Specialty Wood Products company had the following manufacturing labor related transactions last month:

| Woodworkers' wages | $\$ 100,000$ |
| :--- | ---: |
| Indirect laborers' wages | $\$ 20,000$ |
| Maintenance personnel wages | $\$ 10,000$ |

What is the journal entry to record the assignment of these wages?
A)

| Work in process inventory |  | 120,000 |  |
| :--- | :--- | :--- | :--- |
| Wage expense |  | 10,000 |  |
|  | Manufacturing wages |  | 130,000 |

B)

| Work in process inventory |  | 110,000 |  |
| :--- | :--- | :--- | :--- |
| Wage expense |  | 20,000 |  |
|  | Manufacturing wages |  | 130,000 |

C)

| Manufacturing wages |  | 130,000 |  |
| :--- | :--- | :--- | :--- |
|  | Wages payable (cash) |  | 130,000 |

D)

| Work in process inventory |  | 100,000 |  |
| :--- | :--- | :--- | :--- |
| Manufacturing overhead |  | 30,000 |  |
|  | Manufacturing wages |  | 130,000 |

Answer: D
Difficulty: 2
LO: 2-2
EOC Ref: S2-5
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking AICPA Functional Competencies: Reporting
2.2-19 Which of the following entries would be made to record the use of $\$ 10,000$ of direct materials and $\$ 5,000$ of indirect materials by Jake's Custom Furniture?
A)

| Manufacturing overhead |  | 15,000 |  |
| :--- | :--- | :--- | :--- |
|  | Materials inventory |  | 15,000 |

B)

| Work in process inventory |  | 10,000 |  |
| :--- | :--- | :--- | :--- |
| Manufacturing overhead |  | 5,000 |  |
|  | Materials inventory |  | 15,000 |

C)

| Materials inventory |  | 15,000 |  |
| :--- | :--- | :--- | :--- |
|  | Work in process inventory |  | 15,000 |

D)

| Work in process inventory |  | 15,000 |  |
| :--- | :--- | :--- | :--- |
|  | Materials inventory |  | 15,000 |

Answer: B
Difficulty: 2
LO: 2-2
EOC Ref: S2-4
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting

Which of the following entries would be made to assign $\$ 10,000$ of manufacturing labor to jobs, $70 \%$ of which was direct labor and $30 \%$ of which was indirect labor?
A)

| Manufacturing overhead |  | 10,000 |  |
| :--- | :--- | :--- | :--- |
|  | Manufacturing wages |  | 10,000 |

B)

| Work in process inventory |  | 7,000 |  |
| :--- | :--- | :--- | :--- |
| Manufacturing overhead |  | 3,000 |  |
|  | Manufacturing wages |  | 10,000 |

C)

| Manufacturing wages |  | 10,000 |  |
| :--- | :--- | :--- | :--- |
|  | Work in process inventory |  | 7,000 |
|  | Manufacturing overhead |  | 3,000 |

D)

| Work in process inventory |  | 10,000 |  |
| :--- | :--- | :--- | :--- |
|  | Manufacturing wages |  | 10,000 |

Answer: B
Difficulty: 2
LO: 2-2
EOC Ref: S2-4
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.2-21 The journal entry to record $\$ 200$ of depreciation on factory equipment used in production for the current period involves which of the following?
A) A debit to accumulated depreciation-factory equipment for $\$ 200$
B) A credit to manufacturing overhead for $\$ 200$
C) A debit to depreciation expense-factory equipment for $\$ 200$
D) A debit to manufacturing overhead for $\$ 200$

Answer: D
Difficulty: 2
LO: 2-2
EOC Ref: S2-2
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting

The Hemingway Company uses a job order costing system. In April, material requisitions of $\$ 44,000$ were issued (direct materials, $\$ 40,000$ ) and materials purchases of both direct and indirect materials totaled $\$ 56,600$. The ending balance in materials inventory was $\$ 18,400$. What was the beginning raw materials balance?
A) $\$ 5,800$
B) $\$ 31,000$
C) $\$ 25,600$
D) $\$ 22,400$

Answer: A
Calculations:
Beg Materials + Purchases - Requisitions=End Materials
BM $+56,600-44,000=18,400$
BM $+12,600=18,400$
BM $=5,800$
Difficulty: 2
LO: 2-2
EOC Ref: S2-3
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.2-24 Which of the following entries would be made to record the purchase of $\$ 20,000$ of raw materials on account for Jake's Custom Furniture?
A)

| Accounts payable |  | 20,000 |  |
| :--- | :--- | :--- | :--- |
|  | Work in process inventory |  | 20,000 |

B)

| Work in process inventory |  | 20,000 |  |
| :--- | :--- | :--- | :--- |
|  | Accounts payable |  | 20,000 |

C)

| Raw materials inventory |  | 20,000 |  |
| :--- | :--- | :--- | :--- |
|  | Accounts payable |  | 20,000 |

D)

| Accounts payable |  | 20,000 |  |
| :--- | :--- | :--- | :--- |
|  | Materials inventory |  | 20,000 |

Answer: C
Difficulty: 2
LO: 2-2
EOC Ref: S2-2
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking AICPA Functional Competencies: Reporting
2.2-25 For a manufacturer that used job order costing, show the order of the cost flow through the following accounts by numbering them from 1 to 4 .
___ Finished goods inventory
__ Materials inventory
___ Cost of goods sold
__ Work in process inventory
Answer:
__3_ Finished goods inventory
__1_ Materials inventory
__ _ Cost of goods sold
__2_ Work in process inventory
Difficulty: 1
LO: 2-2
EOC Ref: S2-2
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.2-27 On the line in front of each statement, enter either a $d r$ for debit or a $c r$ for credit to indicate the normal entry that would be needed for each account.
___ Added wages incurred to manufacturing wages account
___ Assigned wages from manufacturing wages account __ Added indirect labor to manufacturing overhead account __ Added direct labor to work in process inventory account

## Answer:

__dr__ Added wages incurred to manufacturing wages account
__cr__ Assigned wages from manufacturing wages account
__dr__ Added indirect labor to manufacturing overhead account
__dr_ Added direct labor to work in process inventory account
Difficulty: 2
LO: 2-2
EOC Ref: E2-15
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

| A) | valuing inventory | D) | process costing |
| :--- | :--- | :--- | :--- |
| B) | product emphasis | E) | pricing |
| C) | cost control | F) | time record |

$\qquad$ Set to cover design, marketing, distribution, and customer costs, as well as profits
___ Focus on the most profitable products
___ Compare the actual cost with the budgeted cost
__ The manufacturing cost is used for this purpose
Answer:
_ E _ Set to cover design, marketing, distribution, and customer costs, as well as profits
_ B __ Focus on the most profitable products
_ C__ Compare the actual cost with the budgeted cost
__A__ The manufacturing cost is used for this purpose
Difficulty: 2
LO: 2-2
EOC Ref: S2-2
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.2-29 Briefly explain the cost flow of materials through a job order costing system from the purchase to the sale. Identify the specific accounts that are used.

## Answer:

When materials are purchased, they are recorded in the materials inventory account. As these materials are requisitioned, they are moved out of the materials inventory account. Direct materials are moved to work in process inventory, and indirect materials go to manufacturing overhead. A predetermined overhead rate is used to allocate manufacturing overhead to work in process. When a job is completed, the costs are moved from work in process to finished goods inventory where they remain until the product is sold. At that point, the costs are transferred from finished goods inventory to cost of goods sold.

## Difficulty: 2

LO: 2-2
EOC Ref: E2-15
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-1 All manufacturing overhead costs incurred are accumulated as debits to a general ledger account titled Manufacturing overhead.

Answer: True
Difficulty: 2
LO: 2-3
EOC Ref: S2-7
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.3-2
2.3-3 The entry to allocate manufacturing overhead costs to work in process requires a debit to manufacturing overhead.

Answer: False Difficulty: 2
LO: 2-3
EOC Ref: E2-19
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting

The key to accurately assigning indirect manufacturing costs to jobs is to identify a manufacturing overhead allocation base.

Answer: True
Difficulty: 2
LO: 2-3
EOC Ref: E2-19
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting

Which of the following statements regarding overhead allocation is CORRECT?
A) Overhead should be allocated to the manufacturing process when the manufacturing process is complete.
B) Ending work-in process is reduced if overhead is underallocated.
C) Actual overhead is assigned to the manufacturing process as overhead is incurred.
D) Estimated overhead is assigned to the manufacturing process as production takes place.

Answer: D
Difficulty: 2
LO: 2-3
EOC Ref: S2-8
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.3-7 Wall Corporation's selected cost data for July is shown below:

| Cost of goods manufactured | $\$ 420,000$ |
| :--- | ---: |
| Work in process inventory, July 1 | $\$ 100,000$ |
| Work in process inventory, July 31 | $\$ 120,000$ |
| Direct materials used | $\$ 50,000$ |

Manufacturing overhead is allocated at $50 \%$ of direct labor cost.
What are the total manufacturing costs for July?
A) $\$ 520,000$
B) $\$ 400,000$
C) $\$ 550,000$
D) $\$ 440,000$

Answer: D
Calculations:

$$
\begin{aligned}
\text { July TMC } & =\text { WIP end }+ \text { CGM }- \text { WIP beg } \\
& =120,000+420,000-100,000 \\
& =440,000
\end{aligned}
$$

Difficulty: 3
LO: 2-3
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Wall Corporation's selected cost data for July is shown below:

| Cost of goods manufactured | $\$ 420,000$ |
| :--- | ---: |
| Work in process inventory, July 1 | $\$ 100,000$ |
| Work in process inventory, July 31 | $\$ 120,000$ |
| Direct materials used | $\$ 50,000$ |

Manufacturing overhead is allocated at $50 \%$ of direct labor cost.
What was the amount of direct labor incurred in July?
A) $\$ 330,126$
B) $\$ 260,000$
C) $\$ 243,750$
D) $\$ 224,500$

Answer: B
Calculations:
TMC $=\mathrm{DM}+\mathrm{DL}+$ Allocated MOH
$\$ 440,000=\$ 50,000+$ DL +0.5 DL
$1.5 \mathrm{DL}=\$ 390,000$
DL $=\$ 260,000$
Difficulty: 2
LO: 2-3
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

| Materials purchased on account | $\$ 75,000$ |
| :--- | ---: |
| Materials requisitioned (includes $\$ 2,000$ of indirect materials) | $\$ 43,000$ |
| Direct labor incurred | $\$ 75,000$ |
| Manufacturing overhead incurred | $\$ 95,000$ |
| Cost of goods completed | $\$ 226,750$ |
| Cost of goods sold | $\$ 138,000$ |
| Beginning materials inventory | $\$ 15,000$ |
| Beginning work in process inventory | $\$ 32,000$ |
| Beginning finished goods inventory | $\$ 31,000$ |
| Predetermined manufacturing overhead rate <br> (as a percent of direct labor cost) | $125 \%$ |

The journal entry to record the total materials placed into production would include which of the following?
A) Debit to work in process for $\$ 41,000$
B) Debit to work in process for $\$ 43,000$
C) Credit to manufacturing overhead for $\$ 2,000$
D) Debit to manufacturing overhead for $\$ 41,000$

Answer: A
Calculations:
DM used $=$ Total materials requisitioned - IDM

$$
\begin{aligned}
& =\$ 43,000-\$ 2,000 \\
& =\$ 41,000
\end{aligned}
$$

Difficulty: 2
LO: 2-3
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

| Materials purchased on account | $\$ 75,000$ |
| :--- | ---: |
| Materials requisitioned (includes $\$ 2,000$ of indirect materials) | $\$ 43,000$ |
| Direct labor incurred | $\$ 75,000$ |
| Manufacturing overhead incurred | $\$ 95,000$ |
| Cost of goods completed | $\$ 226,750$ |
| Cost of goods sold | $\$ 138,000$ |
| Beginning materials inventory | $\$ 15,000$ |
| Beginning work in process inventory | $\$ 32,000$ |
| Beginning finished goods inventory | $\$ 31,000$ |
| Predetermined manufacturing overhead rate <br> (as a percent of direct labor cost) | $125 \%$ |

The journal entry to record the actual manufacturing overhead costs incurred would include which of the following?
A) Credit to work in process $\$ 95,000$
B) Credit to manufacturing overhead $\$ 93,750$
C) Debit to manufacturing overhead $\$ 95,000$
D) Debit to work in process for $\$ 93,750$

Answer: C
Difficulty: 2
LO: 2-3
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

| Materials purchased on account | $\$ 75,000$ |
| :--- | ---: |
| Materials requisitioned (includes $\$ 2,000$ of indirect materials) | $\$ 43,000$ |
| Direct labor incurred | $\$ 75,000$ |
| Manufacturing overhead incurred | $\$ 95,000$ |
| Cost of goods completed | $\$ 226,750$ |
| Cost of goods sold | $\$ 138,000$ |
| Beginning materials inventory | $\$ 15,000$ |
| Beginning work in process inventory | $\$ 32,000$ |
| Beginning finished goods inventory | $\$ 31,000$ |
| Predetermined manufacturing overhead rate <br> (as a percent of direct labor cost) | $125 \%$ |

The journal entry to record the allocation of manufacturing overhead costs incurred would include which of the following?
A) Debit to work in process inventory for $\$ 95,000$
B) Debit to work in process inventory for $\$ 93,750$
C) Credit to manufacturing overhead for $\$ 95,000$
D) Debit to manufacturing overhead for $\$ 93,750$

Answer: B
Calculations:
MOH allocated= DL\$ x POHR

$$
=\$ 75,000 \times 1.25
$$

Difficulty: 2
LO: 2-3
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

| Materials purchased on account | $\$ 75,000$ |
| :--- | ---: |
| Materials requisitioned (includes $\$ 2,000$ of indirect materials) | $\$ 43,000$ |
| Direct labor incurred | $\$ 75,000$ |
| Manufacturing overhead incurred | $\$ 95,000$ |
| Cost of goods completed | $\$ 226,750$ |
| Cost of goods sold | $\$ 138,000$ |
| Beginning materials inventory | $\$ 15,000$ |
| Beginning work in process inventory | $\$ 32,000$ |
| Beginning finished goods inventory | $\$ 31,000$ |
| Predetermined manufacturing overhead rate <br> (as a percent of direct labor cost) | $125 \%$ |

What is the balance in work in process inventory at December 31, 2009?
A) $\$ 15,000$
B) $\$ 17,000$
C) $\$ 16,500$
D) $\$ 15,500$

Answer: A
Calculations:
WIP end $=$ WIP beg + TMC - CG completed

$$
\begin{aligned}
& =\$ 32,000+(\$ 41,000+\$ 75,000+\$ 93,750)-\$ 226,750 \\
& =\$ 15,000
\end{aligned}
$$

Difficulty: 3
LO: 2-3
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-13 Lakeside Company's schedule of cost of goods manufactured showed the following amounts for April:

| Cost of goods manufactured | $\$ 69,300$ |
| :--- | ---: |
| Direct materials used | $\$ 27,000$ |
| Direct labor (\$15 per hour) | $\$ 30,000$ |
| Work in process inventory, April | $\$ 9,000$ |

Manufacturing overhead is allocated at the rate of $\$ 4.00$ per direct labor hour. What is the work in process inventory on April 30th?
A) $\$ 11,700$
B) $\$ 3,300$
C) $\$ 4,700$
D) $\$ 2,700$

Answer: C
Calculations:
DLH $=\$ 30,000 / 15=2000$
MOH allocated $=2000 \mathrm{DLH} \times \$ 4 / \mathrm{DLH}=\$ 8000$
WIP end $=$ WIP beg $+($ DM + DL + MOH allocated $)-$ CGM
$=\$ 9,000+(\$ 27,000+\$ 30,000+\$ 8,000)-\$ 69,300$
$=\$ 4,700$
Difficulty: 3
LO: 2-3
EOC Ref: S2-8
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-14 On January 1, 2009, Matthew Company's work in process inventory account had a balance of \$30,000. During 2009, $\$ 58,000$ of direct materials was placed into production. Manufacturing wages incurred amounted to $\$ 84,000$, of which $\$ 66,000$ were for direct labor. Manufacturing overhead is allocated on the basis of $120 \%$ of direct labor cost. Actual manufacturing overhead was $\$ 90,000$. Jobs costing $\$ 220,400$ were completed during 2009. What is the December 31, 2009, balance in work in process inventory?
A) $\$ 16,800$
B) $\$ 34,800$
C) $\$ 6,000$
D) $\$ 12,800$

Answer: D
Calculations:
MOH allocated $=66,000 \times 1.2=79,200$
WIP end $=$ WIP beg $+(\mathrm{DM}+\mathrm{DL}+\mathrm{MOH})-$ Cost of jobs completed

$$
=\$ 30,000+(\$ 58,000+\$ 66,000+\$ 79,200)-\$ 220,400
$$

$$
=\$ 12,800
$$

Difficulty: 3
LO: 2-3
EOC Ref: P2-25A
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-15 Davie Company used estimated direct labor hours of 180,000 and estimated manufacturing overhead costs of $\$ 990,000$ in establishing its 2009 predetermined manufacturing overhead rate. Actual results showed:

| Actual manufacturing overhead | $\$ 950,000$ |
| :--- | :--- |
| Allocated manufacturing overhead | $\$ 962,500$ |

What was the number of direct labor hours worked during 2009?
A) 180,000
B) 186,000
C) 192,000
D) 175,000

Answer: D

## Calculations:

POHR $=$ Estm MOH/ estm DLH $=\$ 990,000 / 180,000$ DLH $=\$ 5.5 /$ DLH
Allocated $\mathrm{MOH}=\mathrm{POHR} \times \mathrm{DLH}$

$$
962,500=\$ 5.5 \times \text { DLH }
$$

$$
\text { DLH }=175,000
$$

Difficulty: 3
LO: 2-3
EOC Ref: S2-8
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-16 Opague Corporation uses a job order costing system. The work in process inventory balance on December 31, 2009, consists of Job \# 120, which has a balance of \$19,000. Job \# 120 has been charged with manufacturing overhead of $\$ 5,100$. Opaque allocates manufacturing overhead at a predetermined rate of $85 \%$ of direct labor cost. What was the amount of direct materials charged to Job \# 120?
A) $\$ 7,900$
B) $\$ 7,000$
C) $\$ 7,565$
D) $\$ 5,900$

Answer: A
Calculations:
Cost of Job \# $120=$ DM + DL + Allocated MOH

$$
\begin{aligned}
19,000 & =\mathrm{DM}+(\$ 5100 / 0.85)+\$ 5100 \\
\mathrm{DM} & =\$ 19,000-\$ 6,000-\$ 5,100 \\
& =\$ 7,900
\end{aligned}
$$

Difficulty: 3
LO: 2-3
EOC Ref: S2-8
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-17 Buncombe Company presents the following cost data for 2009:

| Estimated manufacturing overhead costs | $\$ 240,000$ |
| :--- | :--- |
| Estimated direct labor cost | $\$ 300,000$ |
| Estimated direct labor hours | 30,000 |
| Actual direct labor cost | $\$ 315,000$ |
| Actual direct labor hours | 33,000 |
| Allocation base: Direct labor cost |  |
| Other expenses: | $\$ 65,300$ |
| Factory depreciation on equipment | $\$ 51,000$ |
| Factory rent | $\$ 28,900$ |
| Factory utilities | $\$ 26,000$ |
| Factory property taxes | $\$ 23,800$ |
| Indirect labor | $\$ 32,000$ |
| Indirect materials | $\$ 52,500$ |
| Sales commissions |  |

What were the total actual manufacturing overhead costs for Buncombe Company in 2009?
A) $\$ 227,000$
B) $\$ 275,500$
C) $\$ 223,000$
D) $\$ 197,000$

Answer: A
Calculations:
Total actual MOH $=\$ 65,300+\$ 51,000+\$ 28,900+\$ 26,000+\$ 23,800+\$ 32,000$

$$
=\$ 227,000
$$

Difficulty: 2
LO: 2-3
EOC Ref: S2-9
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Buncombe Company presents the following cost data for 2009:

| Estimated manufacturing overhead costs | $\$ 240,000$ |
| :--- | :--- |
| Estimated direct labor cost | $\$ 300,000$ |
| Estimated direct labor hours | 30,000 |
| Actual direct labor cost | $\$ 315,000$ |
| Actual direct labor hours | 33,000 |
| Allocation base: Direct labor cost |  |
| Other expenses: | $\$ 65,300$ |
| Factory depreciation on equipment | $\$ 51,000$ |
| Factory rent | $\$ 28,900$ |
| Factory utilities | $\$ 26,000$ |
| Factory property taxes | $\$ 23,800$ |
| Indirect labor | $\$ 32,000$ |
| Indirect materials | $\$ 52,500$ |
| Sales commissions |  |

What is the predetermined manufacturing overhead rate for 2009?
A) $84 \%$ of direct labor cost
B) $\$ 1.25$ per direct labor hour
C) $70 \%$ of direct labor cost
D) $80 \%$ of direct labor cost

Answer: D
Calculations:
POHR $=$ Estm MOH $/$ Estm DL\$ $=\$ 240,000 / \$ 300,000=0.80$
Difficulty: 2
LO: 2-3
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-19 Buncombe Company presents the following cost data for 2009:

| Estimated manufacturing overhead costs | $\$ 240,000$ |
| :--- | :--- |
| Estimated direct labor cost | $\$ 300,000$ |
| Estimated direct labor hours | 30,000 |
| Actual direct labor cost | $\$ 315,000$ |
| Actual direct labor hours | 33,000 |
| Allocation base: Direct labor cost |  |
| Other expenses: | $\$ 65,300$ |
| Factory depreciation on equipment | $\$ 51,000$ |
| Factory rent | $\$ 28,900$ |
| Factory utilities | $\$ 26,000$ |
| Factory property taxes | $\$ 23,800$ |
| Indirect labor | $\$ 32,000$ |
| Indirect materials | $\$ 52,500$ |
| Sales commissions |  |

Manufacturing overhead allocated for 2009 is:
A) $\$ 450,450$.
B) $\$ 210,000$.
C) $\$ 220,500$.
D) $\$ 252,000$.

Answer: D
Calculations:

```
MOH allocated = POHR x Actual DL$
    = 0.80 x $ 315,000
    = $ 252,000
```

Difficulty: 2
LO: 2-3
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Charleston Corporation's schedule of cost of goods manufactured showed the following amounts for August, 2009.

| Cost of goods manufactured | $\$ 98,000$ |
| :--- | :--- |
| Direct materials used | $\$ 36,000$ |
| Direct labor (\$20 per hour) | $\$ 70,000$ |
| Work in process, August 1, 2009 | $\$ 10,000$ |

Manufacturing overhead is allocated at the rate of $\$ 8$ per direct labor hour. What is the amount of allocated manufacturing overhead for August 2009?
A) $\$ 35,000$
B) $\$ 28,000$
C) $\$ 34,000$
D) $\$ 3,500$

Answer: B
Calculations:

$$
\begin{aligned}
\text { Allocated } \mathrm{MOH} & =\text { POHR } \times \text { Actual DLH } \\
& =\$ 8 / D L H \times(70,000 / 20) \\
& =\$ 28,000
\end{aligned}
$$

Difficulty: 2
LO: 2-3
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-21 Charleston Corporation's schedule of cost of goods manufactured showed the following amounts for August, 2009.

| Cost of goods manufactured | $\$ 98,000$ |
| :--- | :--- |
| Direct materials used | $\$ 36,000$ |
| Direct labor (\$20 per hour) | $\$ 70,000$ |
| Work in process, August 1, 2009 | $\$ 10,000$ |

Manufacturing overhead is allocated at the rate of $\$ 8$ per direct labor hour.
Actual manufacturing overhead for August, 2009 amounts to $\$ 30,000$. What is the amount of work in process inventory on August 31, 2009?
A) $\$ 46,000$
B) $\$ 6,000$
C) $\$ 16,000$
D) $\$ 48,000$

Answer: A
Calculations:

$$
\begin{aligned}
\text { WIP end } & =\text { WIP beg }+(\mathrm{DM}+\mathrm{DL}+\mathrm{MOH})-\mathrm{CGM} \\
& =\$ 10,000+(\$ 36,000+\$ 70,000+\$ 28,000)-\$ 98,000 \\
& =\$ 46,000
\end{aligned}
$$

Difficulty: 3
LO: 2-3
EOC Ref: E2-18
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

On January 1, 2009, Jackson Company's work in process inventory account had a balance of \$65,000. During 2009, materials requisitioned for use in production amounted to $\$ 70,000$, of which $\$ 66,000$ represented direct materials. Factory wages for the period were $\$ 209,000$, of which $\$ 186,400$ were for direct labor. Manufacturing overhead is allocated on the basis of $60 \%$ of direct labor cost. Actual overhead was $\$ 116,440$. Jobs costing $\$ 353,240$ were completed during 2009. The December 31, 2009, balance in work in process inventory is:
A) $\$ 80,000$.
B) $\$ 72,800$.
C) $\$ 107,200$.
D) $\$ 76,000$.

Answer: D
Calculations:
WIP end $=$ WIP beg $+(\mathrm{DM}+\mathrm{DL}+\mathrm{MOH})-$ Cost of jobs completed
$=\$ 65,000+(\$ 66,000+\$ 186,400+\$ 111,840)-\$ 353,240$
$=\$ 76,000$
Difficulty: 3
LO: 2-3
EOC Ref: E2-18
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
Forsyth Company uses estimated direct labor hours of 150,000 and estimated manufacturing overhead costs of $\$ 337,500$ in establishing its 2010 predetermined manufacturing overhead rate. Actual results showed:

| Actual manufacturing overhead | $\$ 346,500$ |
| :--- | :--- |
| Allocated manufacturing overhead | $\$ 343,800$ |

The number of direct labor hours worked during the period was:
A) 154,000 .
B) 152,800 .
C) 150,000 .
D) 146,000 .

Answer: B
Calculations:
Allocated $\mathrm{MOH}=\mathrm{POHR} \times$ Actual DLH
343,800 $=337,500 / 150,000 \times$ Actual DLH
Actual DLH $=152,800$
Difficulty: 2
LO: 2-3
EOC Ref: S2-7
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-24 How is the predetermined manufacturing overhead rate used to allocate manufacturing overhead calculated?
A) By dividing the total estimated manufacturing overhead costs by the total estimated quantity of allocation base
B) By dividing the total estimated quantity of allocation base by the total estimated manufacturing overhead costs
C) By multiplying the total estimated manufacturing overhead costs by the total estimated quantity of allocation base
D) By dividing the total estimated manufacturing overhead costs by the total actual quantity of the allocation base

Answer: A
Difficulty: 2
LO: 2-3
EOC Ref: S2-10
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-25 Clyde Company gathered the following information for the year ended December 31, 2009:

| Direct labor cost incurred | $\$ 165,000$ |
| :--- | ---: |
| Estimated manufacturing overhead costs | $\$ 231,000$ |
| Estimated direct labor cost | $\$ 3,080,000$ |
| Work in process inventory, Dec, 31, 2009 | $\$ 50,000$ |
| Finished goods inventory, Dec. 31, 2009 | $\$ 65,000$ |
| Cost of goods sold | $\$ 135,000$ |
| Estimated direct labor hours | 308,000 |

Clyde Company uses a job costing system.
What would the predetermined manufacturing overhead rate be using direct labor cost as the allocation base?
A) $71.4 \%$
B) $140 \%$
C) $5.2 \%$
D) $7.5 \%$

Answer: D
Calculations:
POHR $=$ Estm MOH $/$ Estm DL\$
$=\$ 231,000 / 3,080,000$

$$
=7.5 \%
$$

Difficulty: 2
LO: 2-3
EOC Ref: S2-10
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Clyde Company gathered the following information for the year ended December 31, 2009:

| Direct labor cost incurred | $\$ 165,000$ |
| :--- | ---: |
| Estimated manufacturing overhead costs | $\$ 231,000$ |
| Estimated direct labor cost | $\$ 3,080,000$ |
| Work in process inventory, Dec, 31, 2009 | $\$ 50,000$ |
| Finished goods inventory, Dec. 31, 2009 | $\$ 65,000$ |
| Cost of goods sold | $\$ 135,000$ |
| Estimated direct labor hours | 308,000 |

Clyde Company uses a job costing system.
What would the predetermined manufacturing overhead rate be using direct labor hours as the allocation base?
A) $\$ .75$ per hour
B) $\$ 1.87$ per hour
C) $\$ 1.40$ per hour
D) $\$ .54$ per hour

Answer: A
Calculations:
POHR = Estm MOH / Estm DLH
= \$ 231,000 / 308,000 DLH
= \$ $0.75 / \mathrm{DLH}$
Difficulty: 2
LO: 2-3
EOC Ref: S2-10
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-27 The records at Smith and Jones Company show Job. No. 110 charged with $\$ 11,000$ of direct materials and $\$ 12,500$ of direct labor. Smith and Jones Company allocates manufacturing overhead at $85 \%$ of direct labor cost. What is the total cost of Job No. 110?
A) $\$ 20,625$
B) $\$ 34,125$
C) $\$ 22,500$
D) $\$ 21,625$

Answer: B
Calculations:
$\$ 11,000+\$ 12,500+(.85 \times \$ 12,500)$
Difficulty: 2
LO: 2-3
EOC Ref: S2-8
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

For each of the following items, determine whether it would be more appropriate to debit MOH) manufacturing overhead or WIP) work in process inventory. Enter either MOH or WIP on the line in front of each statement.
___ Indirect materials used
__ Direct materials used
__ Indirect labor used
__ Direct labor used
__ Plant utilities
Answer:

| _MOH_ | Indirect materials used <br> _WIP_- |
| :--- | :--- |
| Direct materials used |  |
| _MOH_ | Indirect labor used |
| _WIP | Direct labor used |
| _MOH_ | Plant utilities |

Difficulty: 2
LO: 2-3
EOC Ref: S2-6
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-30 Gadgets Company has two departments, X and Y . Manufacturing overhead is allocated based on direct labor cost in Department X and direct labor hours in Department Y . The following additional information is available:

| Estimated Amounts | Department X | Department Y |
| :--- | :--- | :--- |
| Direct labor cost | $\$ 249,600$ | $\$ 427,500$ |
| Direct labor hours | 24,960 | 45,000 |
| Manufacturing overhead costs | $\$ 312,000$ | $\$ 256,500$ |

Actual data for completed Job No. 140 is as follows:

|  | Department X | Department Y |
| :--- | :--- | :--- |
| Direct materials requisitioned | $\$ 23,700$ | $\$ 48,580$ |
| Direct labor cost | $\$ 34,400$ | $\$ 38,800$ |
| Direct labor hours | 4,300 | 3,800 |

Requirements:
a) Compute the predetermined manufacturing overhead rate for Department X .
b) Compute the predetermined manufacturing overhead rate for Department Y .
c) What is the total manufacturing overhead cost for Job No.140?
d) If Job No. 140 consists of 350 units of product, what is the average unit cost of this job?

Answer:
a) $\quad \$ 312,000 / \$ 249,600=\underline{125 \%}$ of direct labor cost
b) $\quad \$ 256,500 / 45,000$ hours $=\$ 5.70$ per direct labor hour
c) Dept. $\mathrm{X}=(\$ 34,400 \times 125 \%)=\$ 43,000$

Dept. $\mathrm{Y}=(\$ 5.70 \times 3,800)=\frac{21,660}{\$ 64,660}$
d) $\$ 23,700+\$ 34,400+\$ 43,000+\$ 48,580+\$ 38,800+\$ 21,660=\$ 210,140$
$\$ 210,140 / 350$ units $=\$ 600.40$
Difficulty: 3
LO: 2-3
EOC Ref: P2-25A
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-31 Boone Company has the following balances as of December 31, 2009.

| Materials inventory | $\$ 15,000$ |
| :--- | :--- |
| Work in process inventory | $\$ 36,200$ |
| Finished goods inventory | $\$ 50,100$ |
| Manufacturing overhead debit balance (after allocation) | $\$ 3,500$ |
| Cost of goods sold | $\$ 74,500$ |

Additional information is as follows:

| Cost of materials purchased during 2009 | $\$ 41,000$ |
| :--- | ---: |
| Cost of direct materials requisitioned during 2009 | $\$ 47,000$ |
| Cost of indirect materials requisitioned during 2009 | $\$ 8,000$ |
| Cost of goods manufactured during 2009 | $\$ 105,000$ |
| Manufacturing overhead allocated (120\% of direct labor) | $\$ 51,000$ |

Determine each of the following:
a) January 1, 2009, materials inventory
b) January 1, 2009, work in process inventory
c) January 1, 2009, finished goods inventory
d) Actual manufacturing overhead incurred

Answer:
a) $\quad \$ 15,000+\$ 47,000+\$ 8,000-\$ 41,000=\$ 29,000$
b) $\quad \$ 51,000 / 1.2=\$ 42,500$ direct labor
$\$ 36,200+\$ 105,000-\$ 47,000-\$ 51,000-\$ 42,500=\underline{\underline{\$ 700}}$
c) $\quad \$ 50,100+\$ 74,500-\$ 105,000=\underline{\$ 19,600}$
d) $\quad \$ 51,000+\$ 3,500=\underline{\$ 54,500}$

Difficulty: 3
LO: 2-3
EOC Ref: P2-25A
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-32 Gilbert Company's work in process inventory has a June 1, 2009, balance of \$19,500 representing Job No. 95. During June, $\$ 48,000$ of direct materials was requisitioned for Job No. 95 and $\$ 26,000$ of direct labor cost was incurred on Job No. 95. Manufacturing overhead is allocated at $150 \%$ of direct labor cost. Actual manufacturing overhead costs incurred in June amounted to $\$ 40,000$. No new jobs were started during June. Job No. 95 is completed on June 28.

Requirements:
a) Determine the total cost of Job No. 95 .
b) What is the balance in manufacturing overhead on June 30, 2009? Assume the June 1, 2009, balance was overallocated $\$ 300$.

Answer:
a) $\$ 19,500+\$ 48,000+\$ 26,000+(1.50 \times \$ 26,000)=\underline{\$ 132,500}$
b) $\$ 40,000$ actual $-\$ 39000$ allocated $-\$ 300$ overallocated $=\$ 700$ underallocated

Difficulty: 2
LO: 2-3
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.3-33 The following information was gathered for the Kidman Company for the year ended December 31, 2009.

| Estimated direct labor hours | 32,500 |
| :--- | :--- |
| Actual direct labor hours | 35,000 |
| Estimated manufacturing overhead | $\$ 650,000$ |
| Actual manufacturing overhead | $\$ 670,000$ |

Kidman uses direct labor hours to calculate the predetermined overhead rate. Calculate the following:
a) Predetermined manufacturing overhead rate
b) Manufacturing overhead allocated
c) Amount of over/underallocated overhead

Answer:
a) $\$ 650,000 / 32,500=\$ 20$ per direct labor hour
b) $35,000 \times \$ 20=\underline{\$ 700,000}$
c) $\$ 700,000-\$ 670,000=\$ 30,000$ overallocated

Difficulty: 2
LO: 2-3
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Wright Brothers is debating the use of direct labor cost or direct labor hours as the cost allocation base for allocating manufacturing overhead. The following information is available for the year ended December 31, 2009:

| Estimated direct labor cost | $\$ 437,500$ |
| :--- | :--- |
| Actual direct labor cost | $\$ 447,000$ |
| Estimated manufacturing overhead costs | $\$ 350,000$ |
| Actual manufacturing overhead costs | $\$ 338,000$ |
| Estimated direct labor hours | 25,000 |
| Actual direct labor hours | 24,200 |

Determine the following:
a) Predetermined manufacturing overhead rate using direct labor cost as the allocation base
b) Predetermined manufacturing overhead rate using direct labor hours as the allocation base
c) Allocated manufacturing overhead based on direct labor cost
d) Allocated manufacturing overhead based on direct labor hours
e) Was manufacturing overhead under or overapplied
f) Using direct labor hours as the allocation base, prepare the journal entry to close out manufacturing overhead.

Answer:
a) $\$ 350,000 / \$ 437,500=\underline{\underline{80 \%} \text { of direct labor cost }}$
b) $\$ 350,000 / 25,000$ hours $=\$ 14.00$ per direct labor hour
c) $\$ 447,000 \times .80=\underline{\$ 357,600}$
d) $\$ 14.00 \times 24,200=\$ 338,800$
e) overapplied ( $\$ 338,800$ applied but only $\$ 338,000$ actually incurred)
f) General Journal

| Date | Accounts | Debit | Credit |
| :--- | :--- | :--- | :--- |
| Dec. 31 | Manufacturing Overhead <br> Cost of Goods Sold | 800 |  |
|  |  |  | 800 |

Difficulty: 3
LO: 2-3
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Given for Converse Corporation:
Actual manufacturing overhead costs $\quad \$ 25,855$
Overallocated manufacturing overhead \$920
Manufacturing overhead is allocated at a rate of $\$ 1.75$ per direct labor hour. Direct labor cost is $\$ 17.00$ per hour.

Calculate the following:
a) Allocated manufacturing overhead
b) Actual number of direct labor hours worked

Answer:
a) $\$ 25,855+\$ 920=\$ 26,775$
b) $\$ 26,775 / \$ 1.75=15,300$ hours

Difficulty: 2
LO: 2-3
EOC Ref: E2-20
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking AICPA Functional Competencies: Measurement

1) Given for Sabo Corporation:

Actual manufacturing overhead costs $\$ 30,600$
Underallocated manufacturing overhead \$1,550
Allocated manufacturing overhead is based on $50 \%$ of direct labor cost.
a) Calculate the allocated manufacturing overhead cost.
b) Calculate the direct labor cost.
2) Given for Chernoff Corporation:

Actual manufacturing overhead costs $\quad \$ 25,600$
Overallocated manufacturing overhead $\$ 1,400$
Manufacturing overhead is allocated at $\$ 15$ per machine hour.
a) Calculate the allocated manufacturing overhead cost.
b) Calculate the number of machine hours incurred.

Answer:

1) a) $\$ 30,600-\$ 1,550=\$ 29,050$
b) $\quad \$ 29,050 / .50=\$ 58,100$
2) a) $\$ 25,600+\$ 1,400=\$ 27,000$
b) $\quad \$ 27,000 / \$ 15=\underline{1,800 \text { machine hours }}$

Difficulty: 3
LO: 2-3
EOC Ref: E2-20
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Cambridge Corporation has two departments that produce small appliances. Department A allocates manufacturing overhead using machine hours as the allocation base, while Department B allocates manufacturing overhead using direct labor cost as the allocation base. Data for April, 2009, are shown below:

|  | Dept. A | Dept. B |
| :--- | :--- | :--- |
| Estimated manufacturing overhead costs for 2009 | $\$ 90,000$ | $\$ 300,000$ |
| Estimated direct labor cost for 2009 | $\$ 50,000$ | $\$ 625,000$ |
| Estimated machine hours for 2009 | 30,000 | 5,000 |
| Actual manufacturing overhead costs for April | $\$ 7,000$ | $\$ 14,900$ |
| Actual direct labor cost for April | $\$ 3,000$ | $\$ 32,000$ |
| Actual machine hours for April | 2,200 | 490 |

a) Determine the predetermined manufacturing overhead rate for Department A .
b) Determine the predetermined manufacturing overhead rate for Department B.
c) Journalize the entries to allocate manufacturing overhead to each department for April, 2009.
d) Determine the balances of the manufacturing overhead accounts for each department as of April 30, 2009.

Indicate whether the amounts represent overallocated or underallocated manufacturing overhead.

Answer:
a) $\$ 90,000 / 30,000=\$ 3.00$ per machine hour
b) $\$ 300,000 / \$ 625,000=48 \%$ of direct labor cost
c) General Journal

| Date | Accounts | Debit | Credit |
| :--- | :--- | :--- | :--- |
| Dec. 31 | Work in Process Inventory-Dept. A | 6,600 |  |
|  | Manufacturing Overhead-Dept. A |  |  |

(2,200 machine hours x $\$ 3.00$ predetermined manufacturing overhead allocation rate)
Dec. 31
Work in Process Inventory-Dept. B
15,360
Manufacturing Overhead-Dept. B
( $\$ 32,000$ direct labor cost $x 48 \%$ predetermined manufacturing overhead allocation rate)
d) Department A
actual manufacturing overhead $=\$ 7,000$
allocated manufacturing overhead $=\$ 6,600$
$\$ 6,600-\$ 7,000=\$ 400$ underallocated
Department B
actual manufacturing overhead $=\$ 14,900$
allocated manufacturing overhead $=\$ 15,360$
$\$ 15,360-\$ 14,900=\underline{\$ 460 \text { overallocated }}$
Difficulty: 3
LO: 2-3
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.4-2 Cost of goods sold needs to be increased at year-end when the manufacturing overhead is overapplied.
2.4-3 The work in process inventory account summarizes the schedule of cost of goods manufactured.
2.4-1
2.4-4
2.4-5

Overallocated overhead occurs when the manufacturing overhead allocated to work in process inventory is less than the amount actually incurred.

Answer: False
Difficulty: 2
LO: 2-4
EOC Ref: S2-9
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting

Answer: False
Difficulty: 2
LO: 2-4
EOC Ref: S2-9
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting

Answer: True
Difficulty: 2
LO: 2-4
EOC Ref: S2-10
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
Each time jobs are completed, the entire balance in manufacturing overhead is transferred to finished goods inventory.

Answer: False
Difficulty: 2
LO: 2-4
EOC Ref: S2-11
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
The work in process account balance increases when cost of goods manufactured is greater than the manufacturing costs incurred during the period.

Answer: False
Difficulty: 2
LO: 2-4
EOC Ref: S2-10
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.4-7 Underapplied overhead results when:
A) actual overhead costs are greater than applied overhead costs.
B) actual overhead costs are less than estimated overhead costs.
C) actual overhead costs are greater than estimated overhead costs.
D) too much overhead is assigned to cost of goods manufactured.

Answer: A
Difficulty: 2
LO: 2-4
EOC Ref: S2-9
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.4-8 Which of the following statements is INCORRECT?
A) Finished goods inventory increases when cost of goods manufactured exceeds cost of goods sold.
B) Work in process inventory increases when the manufacturing costs allocated to work in process exceeds cost of goods manufactured.
C) Overapplied overhead results in an adjustment that decreases cost of goods sold.
D) Underapplied overhead results when applied manufacturing overhead is less than estimated manufacturing overhead.

Answer: D
Difficulty: 2
LO: 2-4
EOC Ref: E2-19
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.4-9 McDuffy Furniture Company constructs custom furniture. Job cost records during the second and third quarters of 2009 are shown below.

| Job No. | Date Started | Date Finished | Total Cost of Job on <br> July 1 | Manufacturing Costs <br> Added in July |
| :--- | :--- | :--- | :--- | :--- |
| 110 | June 1 | July 15 | $\$ 32,840$ | $\$ 43,600$ |
| 111 | June 3 | August 25 | $\$ 18,100$ | $\$ 177,200$ |
| 112 | July 2 | July 30 | - | $\$ 145,000$ |
| 113 | July 6 | July 31 | - | $\$ 82,800$ |
| 114 | July 15 | August 19 | - | $\$ 126,400$ |

What would the entry be to record the sale of Job 111 on August 25, at a sales price of $\$ 305,420$ ?
A)

| Accounts Receivable |  | 305,420 |  |
| :--- | :--- | :--- | :--- |
| Cost of Goods Sold | Sales Revenue |  | 305,420 |
|  |  | 195,300 |  |

B)

| Accounts Receivable |  | 305,420 |  |
| :--- | :--- | :--- | :--- |
| Cost of Goods Sold | Sales Revenue |  | 305,420 |
|  |  | 177,200 |  |

C)

| Accounts Receivable |  | 305,420 |  |
| :--- | :--- | :--- | :--- |
|  | Sales Revenue |  | 305,420 |
| Cost of Goods Sold |  | 195,300 |  |
|  | Finished Goods Inventory |  | 195,300 |

D)

| Accounts Receivable |  | 305,420 |  |
| :--- | :--- | :--- | :--- |
|  | Sales Revenue |  | 305,420 |
| Finished Goods Inventory |  | 195,300 |  |
|  | Cost of Goods Sold |  | 195,300 |

Answer: C
Difficulty: 2
LO: 2-4
EOC Ref: P2-25A
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

McDuffy Furniture Company constructs custom furniture. Job cost records during the second and third quarters of 2009 are shown below.

| Job No. | Date Started | Date Finished | Total Cost of Job on <br> July 1 | Manufacturing Costs <br> Added in July |
| :--- | :--- | :--- | :--- | :--- |
| 110 | June 1 | July 15 | $\$ 32,840$ | $\$ 43,600$ |
| 111 | June 3 | August 25 | $\$ 18,100$ | $\$ 177,200$ |
| 112 | July 2 | July 30 | - | $\$ 145,000$ |
| 113 | July 6 | July 31 | - | $\$ 82,800$ |
| 114 | July 15 | August 19 | - | $\$ 126,400$ |

What is the work in process on June $30^{\text {th }}$ ?
A) $\$ 50,940$
B) $\$ 492,540$
C) $\$ 625,940$
D) $\$ 0$

Answer: A
Calculations:
WIP at June $30^{\text {th }}=$ Job \# $110+\mathrm{Job} \# 111$

$$
\begin{aligned}
& =\$ 32,840+\$ 18,100 \\
& =\$ 50,940
\end{aligned}
$$

Difficulty: 2
LO: 2-4
EOC Ref: P2-25A
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Buncombe Company presents the following cost data for 2009:

| Estimated manufacturing overhead costs | $\$ 240,000$ |
| :--- | :--- |
| Estimated direct labor cost | $\$ 300,000$ |
| Estimated direct labor hours | 30,000 |
| Actual direct labor cost | $\$ 315,000$ |
| Actual direct labor hours | 33,000 |
| Allocation base: Direct labor cost |  |
| Other expenses: | $\$ 65,300$ |
| Factory depreciation on equipment | $\$ 51,000$ |
| Factory rent | $\$ 28,900$ |
| Factory utilities | $\$ 26,000$ |
| Factory property taxes | $\$ 23,800$ |
| Indirect labor | $\$ 32,000$ |
| Indirect materials | $\$ 52,500$ |
| Sales commissions |  |

What is required to close the manufacturing overhead account on December 31, 2009 ?
A) A credit to manufacturing overhead for $\$ 25,000$
B) A debit to manufacturing overhead for $\$ 25,000$
C) A debit to cost of goods sold for $\$ 25,000$
D) A credit to work in process inventory for $\$ 25,000$

Answer: B
Calculations:
POHR $=$ Estm MOH $/$ Estm DL $\$=\$ 240,000 / 300,000=0.8$
Allocated MOH $=$ POHR x Actual DL\$ $=0.8 \times \$ 315,000=\$ 252,000$
Actual $\mathrm{MOH}=\$ 65,300+51,000+28,900+26,000+23,800+32,000=227,000$
MOH was overallocated by $\$ 252,000-227,000=\$ 25,000$
The credit balance in MOH needs to be debited to close out MOH.
Difficulty: 2
LO: 2-4
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Buncombe Company presents the following cost data for 2009:

| Estimated manufacturing overhead costs | $\$ 240,000$ |
| :--- | :--- |
| Estimated direct labor cost | $\$ 300,000$ |
| Estimated direct labor hours | 30,000 |
| Actual direct labor cost | $\$ 315,000$ |
| Actual direct labor hours | 33,000 |
| Allocation base: Direct labor cost |  |
| Other expenses: | $\$ 65,300$ |
| Factory depreciation on equipment | $\$ 51,000$ |
| Factory rent | $\$ 28,900$ |
| Factory utilities | $\$ 26,000$ |
| Factory property taxes | $\$ 23,800$ |
| Indirect labor | $\$ 32,000$ |
| Indirect materials | $\$ 52,500$ |
| Sales commissions |  |

What is the manufacturing overhead rate?
A) $76 \%$ of direct labor cost
B) $125 \%$ of direct labor cost
C) $80 \%$ of direct labor cost
D) $105 \%$ of direct labor cost

## Answer: C

Calculations:
POHR $=$ Estm MOH $/$ Estm DL $\$=\$ 240,000 / 300,000=0.8$
Difficulty: 2
LO: 2-4
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Daniel Company's manufacturing overhead account showed a $\$ 4,500$ overallocated balance at the end of 2005. Actual overhead incurred was $\$ 95,000$. Other accounts showed the following balances:

| Materials inventory | $\$ 10,000$ |
| :--- | :--- |
| Work in process inventory | $\$ 30,000$ |
| Finished goods inventory | $\$ 45,000$ |
| Cost of goods sold | $\$ 275,000$ |

The entry to close the manufacturing overhead account would include which of the following?
A) Credit to work in process for $\$ 4,500$
B) Debit to work in process for $\$ 4,500$
C) Debit to cost of goods sold for $\$ 4,500$
D) Debit to manufacturing overhead for $\$ 4,500$

Answer: D
Difficulty: 2
LO: 2-4
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.4-14 Daniel Company's manufacturing overhead account showed a $\$ 4,500$ overallocated balance at the end of 2005. Actual overhead incurred was $\$ 95,000$. Other accounts showed the following balances:

| Materials inventory | $\$ 10,000$ |
| :--- | :--- |
| Work in process inventory | $\$ 30,000$ |
| Finished goods inventory | $\$ 45,000$ |
| Cost of goods sold | $\$ 275,000$ |

What will be the ending balance in cost of goods sold after allocating the proper amount of the manufacturing overhead?
A) $\$ 270,500$
B) $\$ 279,500$
C) $\$ 266,000$
D) $\$ 284,000$

Answer: A
Calculations:
After the closing entry, COGS $=\$ 275,000-4,500=\$ 270,500$
Difficulty: 2
LO: 2-4
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Delaware Furniture Company constructs custom furniture. Job cost records during the second and third quarters of 2009 are shown below.

| Job No. | Date Started | Date Finished | Total Cost of Job on <br> July 1 | Manufacturing Costs <br> Added in July |
| :--- | :--- | :--- | :--- | :--- |
| 110 | June 1 | July 15 | $\$ 32,840$ | $\$ 43,600$ |
| 111 | June 3 | August 25 | $\$ 18,100$ | $\$ 177,200$ |
| 112 | July 2 | July 30 |  | $\$ 145,000$ |
| 113 | July 6 | July 31 |  | $\$ 82,800$ |
| 114 | July 15 | August 19 |  | $\$ 126,400$ |

What is the total cost of the July $31^{\text {st }}$ work in process inventory?
A) $\$ 466,700$
B) $\$ 448,600$
C) $\$ 321,700$
D) $\$ 303,600$

Answer: C
Calculations:
July $31^{\text {t }}$ WIP $=$ Job $111+$ Job $114=(18,100+177,200)+126,400=\$ 321,700$
Difficulty: 3
LO: 2-4
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Delaware Furniture Company constructs custom furniture. Job cost records during the second and third quarters of 2009 are shown below.

| Job No. | Date Started | Date Finished | Total Cost of Job on <br> July 1 | Manufacturing Costs <br> Added in July |
| :--- | :--- | :--- | :--- | :--- |
| 110 | June 1 | July 15 | $\$ 32,840$ | $\$ 43,600$ |
| 111 | June 3 | August 25 | $\$ 18,100$ | $\$ 177,200$ |
| 112 | July 2 | July 30 |  | $\$ 145,000$ |
| 113 | July 6 | July 31 |  | $\$ 82,800$ |
| 114 | July 15 | August 19 |  | $\$ 126,400$ |

What is the total cost of the July $31^{\text {st }}$ finished goods inventory?
A) $\$ 82,800$
B) $\$ 304,240$
C) $\$ 209,200$
D) $\$ 227,800$

Answer: B

Calculations:
July 31 FG $=$ Job $110+$ Job $112+$ Job 113

$$
\begin{aligned}
& =(32,840+43,600)+145,000+82,800 \\
& =\$ 304,240
\end{aligned}
$$

Difficulty: 3
LO: 2-4
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Delaware Furniture Company constructs custom furniture. Job cost records during the second and third quarters of 2009 are shown below.

| Job No. | Date Started | Date Finished | Total Cost of Job on <br> July 1 | Manufacturing Costs <br> Added in July |
| :--- | :--- | :--- | :--- | :--- |
| 110 | June 1 | July 15 | $\$ 32,840$ | $\$ 43,600$ |
| 111 | June 3 | August 25 | $\$ 18,100$ | $\$ 177,200$ |
| 112 | July 2 | July 30 |  | $\$ 145,000$ |
| 113 | July 6 | July 31 |  | $\$ 82,800$ |
| 114 | July 15 | August 19 |  | $\$ 126,400$ |

Assuming Jobs No. 110 and 112 are sold to customers in July, what is the total cost of goods sold for July?
A) $\$ 188,600$
B) $\$ 304,240$
C) $\$ 271,400$
D) $\$ 221,440$

Answer: D

Calculations:
CGS for July $=$ Job $110+$ Job 112

$$
\begin{aligned}
& =(\$ 32,840+\$ 43,600)+\$ 145,000 \\
& =\$ 221,440
\end{aligned}
$$

Difficulty: 3
LO: 2-4
EOC Ref: E2-19
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Cruise Company uses a job order costing system and had the following data available for 2009.

| Beginning materials inventory | $\$ 36,000$ |
| :--- | ---: |
| Beginning work in process inventory | $\$ 64,000$ |
| Beginning finished goods inventory | $\$ 54,000$ |
| Materials purchased on account | $\$ 148,000$ |
| Direct materials requisitioned | $\$ 85,000$ |
| Direct labor cost incurred | $\$ 135,000$ |
| Actual manufacturing overhead incurred | $\$ 162,000$ |
| Cost of goods completed | $\$ 295,000$ |
| Cost of goods sold | $\$ 260,000$ |
| Predetermined manufacturing overhead rate <br> (as a percent of direct labor) | $125 \%$ |

The journal entry to record the cost of goods completed would include which of the following?
A) Debit to finished goods for $\$ 295,000$
B) Debit to work in process inventory for $\$ 260,000$
C) Credit to work in process for $\$ 260,000$
D) Credit to finished goods for $\$ 295,000$

Answer: A
Difficulty: 2
LO: 2-4
EOC Ref: E2-20
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

| Beginning materials inventory | $\$ 36,000$ |
| :--- | ---: |
| Beginning work in process inventory | $\$ 64,000$ |
| Beginning finished goods inventory | $\$ 54,000$ |
| Materials purchased on account | $\$ 148,000$ |
| Direct materials requisitioned | $\$ 85,000$ |
| Direct labor cost incurred | $\$ 135,000$ |
| Actual manufacturing overhead incurred | $\$ 162,000$ |
| Cost of goods completed | $\$ 295,000$ |
| Cost of goods sold | $\$ 260,000$ |
| Predetermined manufacturing overhead rate <br> (as a percent of direct labor) | $125 \%$ |

What is the ending work in process inventory balance?
A) $\$ 151,000$
B) $\$ 87,000$
C) $\$ 157,750$
D) $\$ 93,750$

Answer: C
WIP end $=$ WIP beg $+(\mathrm{DM}+\mathrm{DL}+\mathrm{MOH})-\mathrm{CGM}$

$$
\begin{aligned}
& =\$ 64,000+(\$ 85,000+\$ 135,000+\$ 135,000 \times 1.25)-\$ 295,000 \\
& =\$ 157,750
\end{aligned}
$$

Difficulty: 3
LO: 2-4
EOC Ref: P2-25A
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

| Beginning materials inventory | $\$ 36,000$ |
| :--- | ---: |
| Beginning work in process inventory | $\$ 64,000$ |
| Beginning finished goods inventory | $\$ 54,000$ |
| Materials purchased on account | $\$ 148,000$ |
| Direct materials requisitioned | $\$ 85,000$ |
| Direct labor cost incurred | $\$ 135,000$ |
| Actual manufacturing overhead incurred | $\$ 162,000$ |
| Cost of goods completed | $\$ 295,000$ |
| Cost of goods sold $\$ 260,000$ <br> Predetermined manufacturing overhead rate <br> (as a percent of direct labor) $125 \%$ $\mathbf{l}$ |  |

What is the ending finished goods inventory balance?
A) $\$ 35,000$
B) $\$ 54,400$
C) $\$ 19,000$
D) $\$ 89,000$

Answer: D
Calculations:
FG end $=$ FG beg $+\mathrm{CGM}-\mathrm{CGS}$

$$
\begin{aligned}
& =\$ 54,000+\$ 295,000-\$ 260,000 \\
& =\$ 89,000
\end{aligned}
$$

Difficulty: 2
LO: 2-4
EOC Ref: P2-25A
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Cruise Company uses a job order costing system and had the following data available for 2009.

| Beginning materials inventory | $\$ 36,000$ |
| :--- | ---: |
| Beginning work in process inventory | $\$ 64,000$ |
| Beginning finished goods inventory | $\$ 54,000$ |
| Materials purchased on account | $\$ 148,000$ |
| Direct materials requisitioned | $\$ 85,000$ |
| Direct labor cost incurred | $\$ 135,000$ |
| Actual manufacturing overhead incurred | $\$ 162,000$ |
| Cost of goods completed | $\$ 295,000$ |
| Cost of goods sold | $\$ 260,000$ |
| Predetermined manufacturing overhead rate <br> (as a percent of direct labor) | $125 \%$ |

The journal entry to record the sale of all jobs for the entire year would include which of the following?
A) Debit to cost of goods sold for $\$ 295,000$
B) Credit to finished goods inventory for $\$ 295,000$
C) Credit to finished goods inventory for $\$ 260,000$
D) Debit to finished goods inventory for $\$ 295,000$

Answer: C
Difficulty: 2
LO: 2-4
EOC Ref: P2-25A
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

| Sales revenue | $\$ 570,000$ |
| :--- | ---: |
| Actual manufacturing overhead | $\$ 103,600$ |
| Allocated manufactured overhead | $\$ 96,000$ |
| Cost of goods sold | $\$ 368,000$ |

Allison Corporation adjusts cost of goods sold for any balance in the manufacturing overhead account at the end of the year. What is the 2009 gross profit of Allison Corporation?
A) $\$ 184,400$
B) $\$ 194,400$
C) $\$ 192,000$
D) $\$ 199,600$

Answer: B
Calculations:
Underallocated $\mathrm{MOH}=\$ 103,600-\$ 96,000=\$ 7,600$
COGS after closing $=\$ 368,000+\$ 7,600=\$ 375,600$
Gross profit $=$ Sales - COGS $=\$ 570,000-\$ 375,600=\$ 194,400$
Difficulty: 3
LO: 2-4
EOC Ref: P2-25A
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.4-24 Wake Corporation reports the following balances at December 31, 2009:

| Sales revenue | $\$ 360,000$ |
| :--- | :--- |
| Cost of goods sold | $\$ 206,000$ |
| Allocated manufacturing overhead | $\$ 78,800$ |
| Actual manufacturing overhead | $\$ 72,800$ |

Wake adjusts cost of goods sold for any balance in the manufacturing overhead account at the end of the year. What is the gross profit of Wake Corporation for the year ended December 31, 2009?
A) $\$ 160,000$
B) $\$ 172,000$
C) $\$ 154,000$
D) $\$ 148,000$

Answer: A
Calculations:
COGS after closing $==\$ 206,000-\$ 6,000=\$ 200,000$
Gross Profit $=$ Sales Revenue - COGS $=\$ 360,000-200,000=\$ 160,000$
Difficulty: 3
LO: 2-4
EOC Ref: P2-25A
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
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Clyde Company gathered the following information for the year ended December 31, 2009:

| Direct labor cost incurred | $\$ 165,000$ |
| :--- | ---: |
| Estimated manufacturing overhead costs | $\$ 231,000$ |
| Estimated direct labor cost | $\$ 3,080,000$ |
| Work in process inventory, Dec, 31,2009 | $\$ 50,000$ |
| Finished goods inventory, Dec. 31, 2009 | $\$ 65,000$ |
| Cost of goods sold | $\$ 135,000$ |
| Estimated direct labor hours | 308,000 |

Clyde Company uses a job order costing system.
Assume that manufacturing overhead is underallocated on December 31, 2009, by $\$ 17,000$. After closing out manufacturing overhead, what would the balance be in cost of goods sold?
A) $\$ 152,000$
B) $\$ 143,500$
C) $\$ 160,500$
D) $\$ 118,000$

Answer: A
Calculations:
COGS after closing $=$ COGS + Underallocated MOH

$$
=\$ 135,000+\$ 17,000=\$ 152,000
$$

Difficulty: 2
LO: 2-4
EOC Ref: P2-25A
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.4-26 Actual manufacturing overhead for the current period is $\$ 19,600$ while allocated manufacturing overhead for the current period is $\$ 18,700$. What is the proper entry to dispose of the manufacturing overhead balance?
A) Debit cost of goods sold and credit manufacturing overhead for $\$ 900$
B) Debit cost of goods sold and credit finished goods inventory for $\$ 900$
C) Debit manufacturing overhead and credit cost of goods sold for $\$ 900$
D) Debit manufacturing overhead and credit work in process inventory for $\$ 900$

Answer: A
Difficulty: 2
LO: 2-4
EOC Ref: S2-9
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

When a job is completed in a job order costing system, the journal entry involves which accounts?
A) A debit to finished goods inventory and a credit to work in process inventory for the cost of the job B) A debit to finished goods inventory and a credit to work in process inventory for the sales price of the job
C) A debit to cost of goods sold and a credit to finished goods inventory for the cost of the job
D) A debit to work in process inventory and a credit to finished goods inventory for the cost of the job

Answer: A
Difficulty: 2
LO: 2-4
EOC Ref: S2-9
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
Actual manufacturing overhead for 2009 amounts to $\$ 102,500$, allocated manufacturing overhead for 2009 amounts to $\$ 98,700$. By how much is manufacturing overhead over/underallocated?
A) $\$ 3,800$ underallocated
B) $\$ 1,900$ underallocated
C) $\$ 1,900$ overallocated
D) $\$ 3,800$ overallocated

Answer: A
Calculations:
$\$ 102,500-98,700=\$ 3,800$ underallocated
Difficulty: 2
LO: 2-4
EOC Ref: S2-9
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

| Materials purchased on account | $\$ 75,000$ |
| :--- | ---: |
| Materials requisitioned (includes $\$ 2,000$ of indirect <br> materials) | $\$ 43,000$ |
| Direct labor incurred | $\$ 75,000$ |
| Manufacturing overhead incurred | $\$ 95,000$ |
| Cost of goods completed | $\$ 226,750$ |
| Cost of goods sold | $\$ 138,000$ |
| Beginning materials inventory | $\$ 32,000$ |
| Beginning work in process inventory | $\$ 31,000$ |
| Beginning finished goods inventory | $125 \%$ |
| Predetermined manufacturing overhead rate <br> (as a percent of direct labor cost) |  |

The journal entry to transfer completed goods to the finished goods inventory account would include which of the following?
A) Debit to work in process inventory for $\$ 226,750$
B) Debit to finished goods inventory for $\$ 227,875$
C) Debit to finished goods inventory for $\$ 226,750$
D) Credit to work in process inventory for $\$ 227,875$

Answer: C
Difficulty: 2
LO: 2-4
EOC Ref: P2-25A
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

| Materials purchased on account | $\$ 75,000$ |
| :--- | ---: |
| Materials requisitioned (includes $\$ 2,000$ of indirect <br> materials) | $\$ 43,000$ |
| Direct labor incurred | $\$ 75,000$ |
| Manufacturing overhead incurred | $\$ 95,000$ |
| Cost of goods completed | $\$ 226,750$ |
| Cost of goods sold | $\$ 138,000$ |
| Beginning materials inventory | $\$ 15,000$ |
| Beginning work in process inventory | $\$ 32,000$ |
| Beginning finished goods inventory | $\$ 31,000$ |
| Predetermined manufacturing overhead rate <br> (as a percent of direct labor cost) | $125 \%$ |

The journal entry to close manufacturing overhead would include a:
A) debit to manufacturing overhead for $\$ 1,250$.
B) credit to manufacturing overhead for $\$ 1,250$.
C) debit to work in process inventory for $\$ 1,250$.
D) credit to cost of goods sold for $\$ 1,250$.

Answer: B

## Calculations:

Amt of Underallocated $\mathrm{MOH}=$ Actual $\mathrm{MOH}-$ Allocated MOH
$=\$ 95,000-(\$ 75,000 \times 1.25)$
$=\$ 95,000-\$ 93,750$
= \$1,250 underallocated
Difficulty: 2
LO: 2-4
EOC Ref: P2-25A
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

| Materials purchased on account | $\$ 75,000$ |
| :--- | ---: |
| Materials requisitioned (includes $\$ 2,000$ of indirect <br> materials) | $\$ 43,000$ |
| Direct labor incurred | $\$ 75,000$ |
| Manufacturing overhead incurred | $\$ 95,000$ |
| Cost of goods completed | $\$ 226,750$ |
| Cost of goods sold | $\$ 138,000$ |
| Beginning materials inventory | $\$ 15,000$ |
| Beginning work in process inventory | $\$ 32,000$ |
| Beginning finished goods inventory | $\$ 31,000$ |
| Predetermined manufacturing overhead rate <br> (as a percent of direct labor cost) | $125 \%$ |

The journal entry to close manufacturing overhead would include which of the following?
A) Debit to cost of goods sold for $\$ 1,250$
B) Debit to work in process inventory for $\$ 1,250$
C) Debit to manufacturing overhead for $\$ 1,250$
D) Credit to work in process inventory for $\$ 1,250$

Answer: A
Difficulty: 2
LO: 2-4
EOC Ref: P2-25A
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.4-32 Door Company estimated manufacturing overhead costs for 2009 at $\$ 378,000$. The predetermined manufacturing overhead rate was based on 105,000 estimated direct labor hours. Actual direct labor hours for 2009 totaled 110,000 . The manufacturing overhead account showed debit entries totaling $\$ 394,000$. For the year, was overhead overallocated or underallocated and by how much?
A) $\$ 16,000$ underallocated
B) $\$ 2,000$ overallocated
C) $\$ 2,000$ underallocated
D) $\$ 16,000$ overallocated

Answer: B
Calculations:
$\$ 378,000 / 105,000=\$ 3.60$ allocated overhead per direct labor hour
$\$ 3.60 \times 110,000=\$ 396,000$ allocated overhead
$\$ 396,000$ allocated $-\$ 394,000$ actual $=\$ 2,000$ overallocated overhead
Difficulty: 3
LO: 2-4
EOC Ref: S2-10
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Manufacturing overhead is overallocated $\$ 1,000$ at the end of the current period. The journal entry to dispose of the overallocated overhead balance involves a debit to:
A) manufacturing overhead and a credit to cost of goods sold for $\$ 1,000$.
B) cost of goods sold and a credit to manufacturing overhead for $\$ 1,000$.
C) manufacturing overhead and a credit to work in process inventory for $\$ 1,000$.
D) cost of goods sold and a credit to finished goods inventory for $\$ 1,000$.

Answer: A
Difficulty: 2
LO: 2-4
EOC Ref: S2-9
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
Lakeside Company estimated manufacturing overhead costs for 2009 at $\$ 378,000$, based on 180,000 estimated direct labor hours. Actual direct labor hours for 2009 totaled 195,000. The manufacturing overhead account contains debit entries totaling $\$ 391,500$. The manufacturing overhead for 2009 was:
A) $\$ 31,500$ underallocated.
B) $\$ 31,500$ overallocated.
C) $\$ 18,000$ underallocated.
D) $\$ 18,000$ overallocated.

## Answer: D

Calculations:
$\$ 378,000 / 180,000=\$ 2.10$ overhead allocated per direct labor hour
$\$ 2.10 \times 195,000=\$ 409,500$ overhead allocated
$\$ 409,500$ allocated- $\$ 391,500$ actual $=\$ 18,000$ overallocated overhead
Difficulty: 3
LO: 2-4
EOC Ref: S2-10
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
U) underallocated
O) overallocated

Put the correct letter on the line in front of each statement.
$\qquad$ Cost of Goods Sold is increased
__ Manufacturing Overhead has a debit balance Cost of Goods Sold is decreased Manufacturing Overhead is credited and Cost of Goods Sold is debited

Answer:
__U__ Cost of Goods Sold is increased
__U__ Manufacturing Overhead has a debit balance
__O_C Cost of Goods Sold is decreased
__U__ Manufacturing Overhead is credited and Cost of Goods Sold is debited
Difficulty: 2
LO: 2-4
EOC Ref: S2-10
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
15.4-36 Peterson Corporation uses a job order costing system. Record the following transactions in Peterson's general journal for the current month:
a) Purchased materials on account, $\$ 70,000$.
b) Requisitioned $\$ 48,000$ of direct materials and $\$ 6,500$ of indirect materials for use in production.
c) Factory payroll incurred, $\$ 75,000$.
d) Allocated factory payroll, $85 \%$ direct labor, $15 \%$ indirect labor.
e) Recorded depreciation on factory equipment $\$ 13,500$, and other manufacturing overhead of $\$ 45,900$ (credit accounts payable).
f) Allocated manufacturing overhead based on $130 \%$ of direct labor cost.
g) Cost of completed production for the current month, $\$ 165,000$.
h) Cost of finished goods sold, $\$ 130,000$; selling price, $\$ 188,500$ (all sales on account).

Answer:
General Journal

| Date | Accounts | Debit | Credit |
| :--- | :---: | :--- | :---: |
| a) | Materials Inventory | 70,000 |  |
|  | Accounts Payable |  | 70,000 |

b) Work in Process Inventory $\quad 48,000$

Manufacturing Overhead $\quad 6,500$
Materials Inventory 54,500
c) Manufacturing Wages 75,000

Wages Payable
75,000
d) Work in Process Inventory 63,750

Manufacturing Overhead 11,250
Manufacturing Wages 75,000
e) Manufacturing Overhead 59,400

Accum. Depr.-Factory Equip. 13,500
Accounts Payable 45,900
f) Work in Process Inventory 82,875

Manufacturing Overhead 82,875
g) Finished Goods Inventory $\quad 165,000$

Work in Process Inventory 165,000
h) Accounts Receivable 188,500

Sales Revenue 188,500
Cost of Goods Sold 130,000
Finished Goods Inventory 130,000
Calculations:
d) $\$ 75,000 \times .85=\$ 63,750 ; \$ 75,000 \times .15=\$ 11,250$
f) $\$ 63,750 \times 1.30=\$ 82,875$

Difficulty: 2
LO: 2-4
EOC Ref: P2-25A
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking AICPA Functional Competencies: Measurement

| Job No. | Date Started | Date Finished | Date Sold | Total Cost of Job on <br> June 30 |
| :--- | :--- | :--- | :--- | ---: |
| 100 | May 12 | June 12 | June 21 | $\$ 16,800$ |
| 101 | May 15 | June 20 | June 25 | $\$ 6,900$ |
| 102 | June 8 | July 8 | July 15 | $\$ 19,500$ |
| 103 | June 12 | June 28 | July 2 | $\$ 3,500$ |
| 104 | June 20 | July 19 | July 26 | $\$ 9,200$ |

Determine each of the following:
a) Work in process inventory on June 30
b) Finished goods inventory on June 30
c) Cost of goods sold for June

Answer:
a) Job 104 and Job $102 \$ 19,500+\$ 9,200=\$ 28,700$
b) Job $103 \$ 3,500$
c) Job 100 and Job $101 \$ 16,800+\$ 6,900=\$ 23,700$

Difficulty: 2
LO: 2-4
EOC Ref: E2-15
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

The following activities took place in the work in process inventory account during April:
$\begin{array}{ll}\text { Beginning balance } & \$ 15,000 \\ \text { Direct materials used } & \$ 120,000\end{array}$
Total manufacturing labor incurred in April was $\$ 162,500,75 \%$ of this amount represented direct labor. The predetermined manufacturing overhead rate is $120 \%$ of direct labor cost. Actual manufacturing overhead costs for April amounted to $\$ 150,000$.

Two jobs were completed with total costs of $\$ 120,000$ and $\$ 85,000$, respectively. They were sold on account for $\$ 260,000$ and $\$ 150,000$, respectively.
Requirements:
a) Compute the balance in work in process inventory on April 30th.
b) Record the journal entry for direct materials used in April.
c) Record the journal entry for total manufacturing labor incurred in April.
d) Record the journal entry to assign manufacturing labor to the appropriate accounts.
e) Record the journal entry for allocated manufacturing overhead for April.
f) Record the journal entry to move the completed jobs into finished goods inventory.
g) Record the journal entry to sell the two completed jobs on account.

Answer:
a) $\$ 15,000+\$ 120,000+(75 \% \times \$ 162,500)+[120 \% \times(75 \% \times \$ 162,500)]-\$ 120,000-\$ 85,000=$ \$198,125

General Journal

| Date | Accounts | Debit | Credit |
| :---: | :---: | :---: | :---: |
| b) | Work in Process Inventory | 120,000 |  |
|  | Materials Inventory |  | 120,000 |
| c) | Manufacturing Wages | 162,500 |  |
|  | Wages Payable |  | 162,500 |
| d) | Work in Process Inventory | 121,875 |  |
|  | Manufacturing Overhead | 40,625 |  |
|  | Manufacturing Wages |  | 162,500 |
| e) | Work in Process Inventory | 146,250 |  |
|  | Manufacturing Overhead |  | 146,250 |
| f) | Finished Goods Inventory | 205,000 |  |
|  | Work in Process Inventory |  | 205,000 |
| g) | Accounts Receivable | 410,000 |  |
|  | Sales Revenue |  | 410,000 |
|  | Cost of Goods Sold | 205,000 |  |
|  | Finished Goods Inventory |  | 205,000 |

Difficulty: 2
LO: 2-4
EOC Ref: E2-16
AACSB: Analytic Skills, Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
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The following account balances as of January 1, 2009, were selected from the general ledger of Browning Manufacturing Company:

Work in process inventory \$0
Materials inventory \$24,000
Finished goods inventory $\quad \$ 44,000$
Additional data:

1) Actual manufacturing overhead for January amounted to $\$ 59,000$.
2) Total direct labor cost for January was $\$ 56,000$.
3) The predetermined manufacturing overhead rate is based on direct labor cost. The budget for 2009 called for $\$ 300,000$ of direct labor cost and $\$ 360,000$ of manufacturing overhead costs.
4) The only job unfinished on January 31, 2009, was Job No. 410, for which total labor charges were $\$ 5,600$ ( 700 direct labor hours) and total direct material charges were $\$ 10,000$.
5) Cost of direct materials placed in production during January totaled $\$ 100,000$. There were no indirect material requisitions during January, 2009.
6) January 31 balance in materials inventory was $\$ 29,000$.
7) Finished goods inventory balance on January 31 was $\$ 30,000$.

Requirements:
a) Determine the predetermined manufacturing overhead rate.
b) Determine the amount of materials purchased during January.
c) Determine cost of goods manufactured for January.
d) Determine the work in process inventory balance on January 31st.
e) Determine cost of goods sold for January.
f) Determine whether manufacturing overhead is overallocated or underallocated and by what amount.

Answer:
a) $\$ 360,000 / \$ 300,000=\underline{120 \%}$ of direct labor cost
b) Beg Inv $\$ 24,000+$ Purchases-Materials Requisitioned $100,000=$ End Inv $\$ 29,000$. Purchases $=$ \$105,000
c) $\$ 100,000+56,000+(1.20 \times \$ 56,000)-10,000-5,600-(1.20 \times \$ 5,600)=\underline{\$ 200,880}$
d) $\$ 10,000+5,600+(1.20 \times \$ 5,600)=\underline{\$ 22,320}$
e) $\$ 44,000+\$ 200,880-\$ 30,000=\underline{\$ 214,880}$
f) Actual manufacturing overhead $=\$ 59,000$;

Allocated manufacturing overhead $=\$ 67,200-\$ 59,000=\$ 8,200$ overallocated
Difficulty: 3
LO: 2-4
EOC Ref: E2-18
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

Prepare journal entries for the following transactions for Long Company:
a) Materials purchased on account, $\$ 62,500$.
b) Materials requisitioned for use in production: direct materials, $\$ 33,600$; indirect materials, $\$ 5,400$.
c) Manufacturing labor incurred, $\$ 35,000$.
d) Manufacturing labor allocation: $90 \%$ direct labor, $10 \%$ indirect labor.
e) Depreciation on factory equipment, $\$ 5,000$.
f) Prepaid expenses expired relating to the manufacturing operations, $\$ 6,100$.
g) Other miscellaneous factory costs incurred, $\$ 12,000$ (credit accounts payable).
h) Manufacturing overhead is allocated at $120 \%$ of direct labor cost.
i) Cost of goods manufactured, $\$ 88,000$.
j) Jobs sold to customers on account: cost of jobs, $\$ 75,000$; sales price, $\$ 132,000$.

Answer:
General Journal
Date Accounts Debit Credit
a) Materials Inventory

62,500
Accounts Payable
62,500
b) Work in Process Inventory

33,600
Manufacturing Overhead
5,400
Materials Inventory
39,000
c) Manufacturing Wages

35,000
Wages Payable
35,000
d) Work in Process Inventory

31,500
Manufacturing Overhead
Manufacturing Wages
3,500

5,000
Accum. Depr.-Factory Equip.
f) Manufacturing Overhead

Prepaid Expenses
g) Manufacturing Overhead

Accounts Payable
h) Work in Process Inventory

37,800
Manufacturing Overhead
i) Finished Goods Inventory

88,000
Work in Process Inventory
6,100

12,000

132,000

| Accounts Receivable | 132,000 |
| :--- | :--- |
| Sales Revenue | 75,000 |

Finished Goods Inventory
75,000
132,000
j) Accounts Receivable
,
75,000
Calculations:
d) $\$ 35,000 \times .9=\$ 31,500 ; \$ 35,000 \times .1=\$ 3,500$
h) $\$ 31,500 \times 1.20=\$ 37,800$

Difficulty: 2
LO: 2-4
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EOC Ref: E2-16
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.5-1 A service firm would most likely use a process costing system.

Answer: False
Difficulty: 2
LO: 2-5
EOC Ref: S2-12
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.5-2 Both service firms and manufacturing companies allocate indirect costs.

Answer: True
Difficulty: 2
LO: 2-5
EOC Ref: S2-12
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.5-3 Service firms follow the same approach as manufacturing companies to develop a predetermined indirect cost allocation rate.

Answer: True
Difficulty: 2
LO: 2-5
EOC Ref: S2-12
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
2.5-4 The main cost driver for service firms is usually machine hours.

Answer: False
Difficulty: 2
LO: 2-5
EOC Ref: S2-13
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Reporting
AICPA Functional Competencies: Reporting
2.5-5 Which of the following is the most significant cost for a service company which used job order costing?
A) Labor costs
B) Indirect costs
C) Supplies costs
D) Overhead costs

Answer: A
Difficulty: 1
LO: 2-5
EOC Ref: S2-12
AACSB: Reflective Thinking
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
AICPA Functional Competencies: Measurement
2.5-6 The engineering firm of Dobbs and Smith uses a job order costing system to accumulate client-related costs. The overhead rate is $60 \%$ of direct labor cost. Staff engineer time is charged at a rate of $\$ 80$ per hour. A recent job for a client involved 30 staff labor hours.

Compute the cost of the job.
Answer:
$(30 \times \$ 80)+[(30 \times \$ 80) \times .60]=\underline{\$ 3,840}$
Difficulty: 2
LO: 2-5
EOC Ref: E2-23
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement
2.5-7 Abba Accounting expects its accountants to work a total of 24,000 direct labor hours per year. Abba's estimated total indirect costs are $\$ 240,000$.
A) What is the indirect cost allocation rate?
B) What indirect costs will be allocated to client 405, if one accountant works 28 hours to prepare the annual report?

Answer:
A) $\$ 240,000 / 24,000$ hours $=\$ 10$ per hour
B) $\$ 10$ per hour $\times 28$ hours $=\$ 280$

Difficulty: 2
LO: 2-5
EOC Ref: S2-13
AACSB: Analytic Skills
AICPA Business Perspective Competencies: Critical Thinking
AICPA Functional Competencies: Measurement

