

TEST BANK



Accounting and
Prof. Connect Australia

introduction **TO**
MANAGERIAL ACCOUNTING

BREWER
GARRISON
NOREEN



4TH EDITION

Chapter 002, Systems Design: Job-Order Costing

True / False Questions

1. Job-order costing is used in manufacturing companies and process costing is used in service companies.

FALSE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 1
Level: Easy

2. A flour manufacturer is more likely to use process costing than job-order costing whereas a manufacturer of customized leather jackets is more likely to use job-order costing than process costing.

TRUE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 1
Level: Easy

3. Normally a job cost sheet is not prepared for a job until after the job has been completed.

FALSE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Level: Medium

4. Job cost sheets contain entries for actual direct material, actual direct labor, and actual manufacturing overhead cost incurred in completing a job.

FALSE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

5. Multiple departmental overhead rates generally provide more accurate product costs than a single plant-wide overhead rate.

TRUE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Level: Easy

6. If direct labor-hours is used as the allocation base in a job-order costing system, but overhead costs are not caused by direct-labor-hours, then jobs with high direct labor requirements will tend to be overcosted relative to jobs with low direct labor requirements.

TRUE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Level: Easy

7. The journal entry for cost of goods manufactured includes only the costs of units that are finished.

TRUE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

8. The following entry would be used to record depreciation on manufacturing equipment:

Depreciation Expense	XXX	
Work in Process		XXX

FALSE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Medium

9. Including manufacturing overhead costs in product costs ensures that each product will earn a profit.

FALSE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Level: Medium

10. A debit balance in the Manufacturing Overhead account at year end means that overhead was underapplied.

TRUE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Learning Objective: 8
Level: Medium

11. Nonmanufacturing costs are expensed as incurred, rather than going into the Work in Process account.

TRUE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

12. Indirect materials are not charged to a specific job but rather are included in manufacturing overhead.

TRUE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Easy

13. Overhead is underapplied if actual overhead costs for a period are greater than the amount of overhead cost which has been charged to Work in Process.

TRUE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 8
Level: Easy

14. Two of the reasons why overhead may be underapplied are: (1) the estimated overhead cost may be too low, and (2) the estimated base may be too high.

TRUE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 8
Level: Easy

Multiple Choice Questions

15. Which of the following statements is correct concerning job-order costing?

- A.** Job-order costing would be appropriate for a textbook publisher.
- b. All the costs appearing on a job cost sheet are actual costs.
- c. Indirect materials are charged to a specific job.
- d. Job-order costing is mainly used in firms with homogeneous products such as oil refineries.

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 1
Learning Objective: 2
Level: Medium

16. Which of the following types of firms typically would use process costing rather than job-order costing?

- a. A small appliance repair shop.
- b. A manufacturer of commercial passenger aircraft.
- c. A specialty equipment manufacturer.
- D.** A breakfast cereal manufacturer.

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 1
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

17. Which of the following would usually be found on a job cost sheet under a normal cost system?

	Actual direct material cost	Actual manufacturing overhead cost
a.	Yes	Yes
B.	Yes	No
c.	No	Yes
d.	No	No

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Level: Easy

18. In a job-order cost system, which of the following events would trigger recording data on a job cost sheet?

- a. the purchase of direct materials
- b. the payment of fire insurance on the factory building
- c. the payment for product advertising
- D.** none of these

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Level: Medium

19. The job cost sheet:

- A.** summarizes all costs charged to a particular job.
- b. contains only direct costs such as direct materials and direct labor.
- c. is discarded after production is completed on a particular job.
- d. is useful only in process costing.

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

20. What source document is used to determine the actual amount of direct materials to record on a job cost sheet?
- a. bill of materials
 - b. production order
 - c. materials purchase order
 - D.** materials requisition form

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Level: Medium

21. In a predetermined overhead rate in a job-order costing system that is based on machine-hours, which of the following would be used in the numerator and denominator?

- | | Numerator | Denominator |
|------------------|----------------------------------|-------------------------|
| a. | Actual manufacturing overhead | Actual machine-hours |
| b. | Actual manufacturing overhead | Estimated machine-hours |
| c. | Estimated manufacturing overhead | Actual machine-hours |
| <u>D.</u> | Estimated manufacturing overhead | Estimated machine-hours |

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Level: Easy
Source: CPA, adapted

Chapter 002, Systems Design: Job-Order Costing

22. Which of the terms below would make the following sentence correct? Multiple overhead rate costing systems are usually more _____ than plantwide overhead rates.

- | | accurate | complex |
|-----------|----------|---------|
| <u>A.</u> | Yes | Yes |
| b. | Yes | No |
| c. | No | Yes |
| d. | No | No |

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Level: Medium

23. In a job-order costing system, the application of manufacturing overhead would be recorded as a debit to:

- a. Manufacturing Overhead inventory.
- b. Finished Goods inventory.
- C. Work in Process inventory.
- d. Cost of Goods Sold.

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Learning Objective: 5
Level: Medium

24. In a job-order costing system, the incurrence of indirect labor costs would usually be recorded as a debit to:

- A. Manufacturing Overhead.
- b. Finished Goods.
- c. Work in Process.
- d. Cost of Goods Sold.

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

25. What journal entry is made in a job-order costing system when \$8,000 of materials are requisitioned for general factory use instead of for use in a particular job?

- | | | | |
|------------------|------------------------|---------|---------|
| | Work in Process | \$8,000 | |
| a. | Manufacturing Overhead | | \$8,000 |
| | Work in Process | \$8,000 | |
| b. | Raw Materials | | \$8,000 |
| | Manufacturing Overhead | \$8,000 | |
| c. | Work in Process | | \$8,000 |
| | Manufacturing Overhead | \$8,000 | |
| <u>D.</u> | Raw Materials | | \$8,000 |

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Medium

26. A good description of "cost of goods manufactured" is the recorded cost of the:

- A.** units completed during the period.
- b. units started and completed during the period.
- c. work done on all units during the period.
- d. work done this period on units completed this period.

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 6
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

27. In a job-order costing system, the cost of a completed but unsold job is:
- a. closed to Cost of Goods Sold.
 - b. part of the Work in Process inventory balance.
 - c. adjusted to exclude any applied overhead.
 - D.** part of the Finished Goods inventory balance.

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Medium

28. If overhead is underapplied, then:
- a. actual overhead cost is less than estimated overhead cost.
 - B.** the amount of overhead cost applied to Work in Process is less than the actual overhead cost incurred.
 - c. the predetermined overhead rate is too high.
 - d. the Manufacturing Overhead account will have a credit balance at the end of the year.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 8
Level: Medium

29. Overapplied overhead would result if:
- a. the plant was operated at less than normal capacity.
 - b. overhead costs incurred were less than estimated overhead costs.
 - C.** overhead costs incurred were less than overhead costs charged to production.
 - d. overhead costs incurred were greater than overhead charged to production.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

30. Elliott Company uses a predetermined overhead rate based on machine-hours to apply manufacturing overhead to jobs. The company manufactures tools to customer specifications. The following data pertain to Job 1501:

Direct materials used.....	\$4,200
Direct labor-hours worked	300
Direct labor rate per hour	\$8.00
Machine-hours used	200
Predetermined overhead rate per machine-hour	\$15.00

What is the total manufacturing cost recorded on Job 1501?

- a. \$8,800
- b.** \$9,600
- c. \$10,300
- d. \$11,100

Direct materials used.....	\$4,200
Direct labor (300 hours × \$8.00 per hour).....	2,400
Manufacturing overhead applied (200 hours × \$15.00 per hour)....	<u>3,000</u>
Total manufacturing cost for job 1501	<u><u>\$9,600</u></u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Learning Objective: 5
Level: Easy
Source: CPA, adapted

Chapter 002, Systems Design: Job-Order Costing

31. Job 910 was recently completed. The following data have been recorded on its job cost sheet:

Direct materials	\$3,193
Direct labor-hours	21 labor-hours
Direct labor wage rate	\$12 per labor-hour
Machine-hours	166 machine-hours

The company applies manufacturing overhead on the basis of machine-hours. The predetermined overhead rate is \$15 per machine-hour. The total cost that would be recorded on the job cost sheet for Job 910 would be:

- a. \$3,220
- b. \$3,760
- c. \$5,935**
- d. \$3,445

Direct materials	\$3,193
Direct labor (21 hours × \$12 per hour).....	252
Manufacturing overhead (166 hours × \$15 per hour)	<u>2,490</u>
Total manufacturing cost for job 910	<u>\$5,935</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Learning Objective: 5
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

32. The following data have been recorded for recently completed Job 450 on its job cost sheet. Direct materials cost was \$3,044. A total of 46 direct labor-hours and 104 machine-hours were worked on the job. The direct labor wage rate is \$15 per labor-hour. The company applies manufacturing overhead on the basis of machine-hours. The predetermined overhead rate is \$13 per machine-hour. The total cost for the job on its job cost sheet would be:

- a. \$4,332
- b. \$3,734
- c. \$3,072
- D.** \$5,086

Direct materials	\$3,044
Direct labor (46 hours × \$15 per hour).....	690
Manufacturing overhead (104 hours × \$13 per hour)	<u>1,352</u>
Total manufacturing cost for job 450	<u>\$5,086</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Learning Objective: 5
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

33. Avery Co. uses a predetermined overhead rate based on direct labor-hours to apply manufacturing overhead to jobs. For the month of October, Avery's estimated manufacturing overhead cost was \$300,000 based on an estimated activity level of 100,000 direct labor-hours. Actual overhead amounted to \$325,000 with actual direct labor-hours totaling 110,000 for the month. How much was the overapplied or underapplied overhead?
- a. \$25,000 overapplied
 - b. \$25,000 underapplied
 - C. \$5,000 overapplied**
 - d. \$5,000 underapplied

Actual manufacturing overhead	\$325,000
Applied manufacturing overhead (\$3 per DLH* × 110,000 DLHs)	<u>330,000</u>
Manufacturing overhead overapplied.....	<u>\$ 5,000</u>

*Predetermined overhead rate = $\$300,000 \div 100,000$ direct labor-hours
= \$3 per direct labor-hour

Since applied manufacturing overhead exceeds actual manufacturing overhead, manufacturing overhead is overapplied.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Medium
Source: CPA, adapted

Chapter 002, Systems Design: Job-Order Costing

34. Heller Cannery, Inc., uses a predetermined overhead rate based on machine-hours to apply manufacturing overhead to jobs. The company estimated that it would incur \$510,000 in manufacturing overhead during the year and that it would work 100,000 machine-hours. The company actually worked 105,000 machine-hours and incurred \$540,000 in manufacturing overhead costs. By how much was manufacturing overhead underapplied or overapplied for the year?

- a. \$4,500 overapplied
- B.** \$4,500 underapplied
- c. \$30,000 overapplied
- d. \$30,000 underapplied

Actual manufacturing overhead	\$540,000
Applied manufacturing overhead ($\$5.10$ per DLH* \times 105,000 DLHs).....	<u>535,500</u>
Manufacturing overhead underapplied.....	<u>\$ 4,500</u>

*Predetermined overhead rate = $\$510,000 \div 100,000$ machine-hours
= $\$5.10$ per machine-hour

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Medium
Source: CPA, adapted

Chapter 002, Systems Design: Job-Order Costing

35. Woodman Company uses a predetermined overhead rate based on direct labor-hours to apply manufacturing overhead to jobs. Estimated and actual data for direct labor and manufacturing overhead for last year are as follows:

	Estimated	Actual
Direct labor-hours	600,000	550,000
Manufacturing overhead	\$720,000	\$680,000

The manufacturing overhead for Woodman Company for last year was:

- a. overapplied by \$20,000
- b. overapplied by \$40,000
- C.** underapplied by \$20,000
- d. underapplied by \$40,000

Actual manufacturing overhead	\$680,000
Applied manufacturing overhead ($\$1.20^* \times 550,000$) .	<u>660,000</u>
Manufacturing overhead underapplied.....	<u>\$ 20,000</u>

*Predetermined overhead rate = $\$720,000 \div 600,000$ direct labor-hours
= \$1.20 per direct labor-hour

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Medium
Source: CMA, adapted

Chapter 002, Systems Design: Job-Order Costing

36. Darrow Company uses a predetermined overhead rate based on direct labor-hours to apply manufacturing overhead to jobs. Last year, the company worked 10,000 direct labor-hours and incurred \$80,000 of actual manufacturing overhead cost. If overhead was underapplied by \$2,000, the predetermined overhead rate for the company for the year must have been:

- A. \$7.80
- b. \$8.00
- c. \$8.20
- d. \$8.40

$$\begin{aligned} \text{Actual manufacturing overhead} - \text{Applied manufacturing overhead} &= \text{underapplied} \\ \$80,000 - \text{Applied} &= \$2,000 \\ \text{Applied} &= \$78,000 \end{aligned}$$

$$\begin{aligned} \text{Direct labor-hours} \times \text{Predetermined overhead rate} &= \text{Applied manufacturing} \\ &\quad \text{overhead} \\ 10,000 \times \text{Predetermined overhead rate} &= \$78,000 \\ \text{Predetermined overhead rate} &= \$78,000 \div 10,000 \text{ direct} \\ &\quad \text{labor-hours} \\ \text{Predetermined overhead rate} &= \$7.80 \text{ per direct labor-hour} \end{aligned}$$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

37. Collins Company uses a predetermined overhead rate based on direct labor cost to apply manufacturing overhead to jobs. The following information applies to the company for the current year:

Direct labor-hours:	
Estimated for the year	24,000
Actual hours worked	19,500
Direct labor cost:	
Estimated for the year	\$300,000
Actual cost incurred	\$210,000
Manufacturing overhead:	
Estimated for the year	\$240,000
Actual cost incurred	\$185,000

The manufacturing overhead cost for the current year will be:

- a. \$17,000 overapplied
- B.** \$17,000 underapplied
- c. \$55,000 overapplied
- d. \$55,000 underapplied.

$$\begin{aligned} \text{Predetermined overhead rate} &= \$240,000 \div 300,000 \text{ direct labor cost} \\ &= 80\% \text{ of direct labor cost} \end{aligned}$$

Actual manufacturing overhead	\$185,000
Applied manufacturing overhead (80% of \$210,000).....	<u>168,000</u>
Manufacturing overhead underapplied.....	<u>\$ 17,000</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

38. Chipata Corporation applies manufacturing overhead to jobs on the basis of machine-hours. Chipata estimated 25,000 machine-hours and \$10,000 of manufacturing overhead cost for the year. During the year, Chipata incurred 26,200 machine-hours and \$11,300 of manufacturing overhead. What was Chipata's underapplied or overapplied overhead for the year?

- a. \$480 overapplied
- B. \$820 underapplied**
- c. \$1,300 overapplied
- d. \$1,300 underapplied

$$\begin{aligned}\text{Predetermined overhead rate} &= \$10,000 \div 25,000 \text{ machine-hours} \\ &= \$0.40 \text{ per machine-hour}\end{aligned}$$

Actual manufacturing overhead	\$11,300
Applied manufacturing overhead (26,200 × \$0.40)	<u>10,480</u>
Manufacturing overhead underapplied.....	<u>\$ 820</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

39. Linh Corporation applies manufacturing overhead to jobs on the basis of pounds of direct material used. Linh estimated 160,000 pounds of material usage and \$200,000 of manufacturing overhead cost for the year. During the year, Linh actually used 150,000 pounds of material and incurred \$171,000 of manufacturing overhead cost. What was Linh's underapplied or overapplied overhead for the year?

- a. \$12,500 underapplied
- B.** \$16,500 overapplied
- c. \$17,600 underapplied
- d. \$29,000 overapplied

$$\begin{aligned}\text{Predetermined overhead rate} &= \$200,000 \div 160,000 \text{ pounds} \\ &= \$1.25 \text{ per pound}\end{aligned}$$

Actual manufacturing overhead	\$171,000
Applied manufacturing overhead (150,000 × \$1.25)	<u>187,500</u>
Manufacturing overhead overapplied.....	<u>\$ 16,500</u>

Since applied manufacturing overhead exceeds actual manufacturing overhead, manufacturing overhead is overapplied.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

40. Brusveen Corporation applies manufacturing overhead to jobs on the basis of direct labor-hours. The following information relates to Brusveen for last year:

	Estimated	Actual
Direct labor-hours	15,000	14,800
Manufacturing overhead cost.....	\$300,000	\$287,120

What was Brusveen's underapplied or overapplied overhead for last year?

- a. \$4,000 underapplied
- b. \$8,880 underapplied
- C. \$8,880 overapplied**
- d. \$9,000 underapplied

$$\begin{aligned}\text{Predetermined overhead rate} &= \$300,000 \div 15,000 \text{ direct labor-hours} \\ &= \$20 \text{ per direct labor-hour}\end{aligned}$$

Actual manufacturing overhead	\$287,120
Applied manufacturing overhead (14,800 × \$20)	<u>296,000</u>
Manufacturing overhead overapplied.....	<u>\$ 8,880</u>

Since applied manufacturing overhead exceeds actual manufacturing overhead, manufacturing overhead is overapplied.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

41. Forbes Company uses a predetermined overhead rate based on direct labor-hours to apply manufacturing overhead to jobs. At the beginning of the period, the company estimated manufacturing overhead would be \$18,000 and direct labor-hours would be 15,000. The actual figures were \$19,500 for manufacturing overhead and 16,000 direct labor-hours. The cost records for the period will show:

- a. overapplied overhead of \$300
- b. overapplied overhead of \$1,500
- c. underapplied overhead of \$1,500
- D.** underapplied overhead of \$300

$$\begin{aligned}\text{Predetermined overhead rate} &= \$18,000 \div 15,000 \text{ direct labor-hours} \\ &= \$1.20 \text{ per direct labor-hour}\end{aligned}$$

Actual manufacturing overhead	\$19,500
Applied manufacturing overhead (16,000 × \$1.20)	<u>19,200</u>
Manufacturing overhead underapplied.....	<u>\$ 300</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

42. At the beginning of the year, manufacturing overhead for the year was estimated to be \$250,860. At the end of the year, actual direct labor-hours for the year were 20,800 hours, the actual manufacturing overhead for the year was \$245,860, and manufacturing overhead for the year was underapplied by \$10,820. If the predetermined overhead rate is based on direct labor-hours, then the estimated direct labor-hours at the beginning of the year used in the predetermined overhead rate must have been:

- A. 22,200 direct labor-hours
- b. 20,800 direct labor-hours
- c. 21,758 direct labor-hours
- d. 22,715 direct labor-hours

$$\begin{aligned} \text{Actual mfg. overhead} - \text{Applied mfg. overhead} &= \text{Underapplied mfg. overhead} \\ \$245,860 - \text{Applied manufacturing overhead} &= \$10,820 \\ \text{Applied manufacturing overhead} &= \$235,040 \end{aligned}$$

$$\begin{aligned} \text{Applied manufacturing overhead} &= \text{Actual direct labor-hours} \times \left(\frac{\text{Estimated manufacturing overhead}}{\text{Estimated direct labor-hours}} \right) \\ \$235,040 &= 20,800 \times \left(\frac{\$250,860}{\text{Estimated direct labor-hours}} \right) \\ \$11.30 &= \left(\frac{\$250,860}{\text{Estimated direct labor-hours}} \right) \end{aligned}$$

$$\text{Estimated direct labor-hours} = 22,200 \text{ direct labor-hours}$$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

43. Brabec Corporation uses direct labor-hours in its predetermined overhead rate. At the beginning of the year, the estimated direct labor-hours were 19,700 hours. At the end of the year, actual direct labor-hours for the year were 17,700 hours, the actual manufacturing overhead for the year was \$392,940, and manufacturing overhead for the year was underapplied by \$35,400. The estimated manufacturing overhead at the beginning of the year used in the predetermined overhead rate must have been:

- a. \$357,540
- B. \$397,940**
- c. \$431,775
- d. \$387,940

$$\begin{aligned} \text{Actual mfg. overhead} - \text{Applied mfg. overhead} &= \text{Underapplied mfg. overhead} \\ \$392,940 - \text{Applied manufacturing overhead} &= \$35,400 \\ \text{Applied manufacturing overhead} &= \$357,540 \end{aligned}$$

$$\begin{aligned} \text{Applied manufacturing overhead} &= \text{Actual direct labor-hours} \times \left(\frac{\text{Estimated manufacturing overhead}}{\text{Estimated direct labor-hours}} \right) \\ \$357,540 &= 17,700 \times \left(\frac{\text{Estimated manufacturing overhead}}{19,700} \right) \\ \$20.20 &= \left(\frac{\text{Estimated manufacturing overhead}}{19,700} \right) \end{aligned}$$

$$\text{Estimated manufacturing overhead} = \$397,940$$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

44. Crichman Corporation uses direct labor-hours in its predetermined overhead rate. At the beginning of the year, the estimated direct labor-hours were 14,900 hours and the total estimated manufacturing overhead was \$362,070. At the end of the year, actual direct labor-hours for the year were 16,000 hours and the actual manufacturing overhead for the year was \$357,070. Overhead at the end of the year was:

- A. \$31,730 overapplied
- b. \$26,730 overapplied
- c. \$31,730 underapplied
- d. \$26,730 underapplied

$$\begin{aligned}\text{Predetermined overhead rate} &= \$362,070 \div 14,900 \text{ direct labor-hours} \\ &= \$24.30 \text{ per direct labor-hour}\end{aligned}$$

Actual manufacturing overhead	\$357,070
Applied manufacturing overhead (16,000 × \$24.30)	<u>388,800</u>
Manufacturing overhead overapplied.....	<u>\$ 31,730</u>

Since applied manufacturing overhead exceeds actual manufacturing overhead, manufacturing overhead is overapplied.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

45. Daffe Corporation uses direct labor-hours in its predetermined overhead rate. At the beginning of the year, the total estimated manufacturing overhead was \$165,600. At the end of the year, actual direct labor-hours for the year were 11,900 hours, manufacturing overhead for the year was overapplied by \$10,760, and the actual manufacturing overhead was \$160,600. The predetermined overhead rate for the year must have been closest to:

- A. \$14.40
- b. \$13.92
- c. \$13.50
- d. \$14.90

$$\begin{array}{rclcl} \text{Applied manufacturing} & - & \text{Actual manufacturing} & = & \text{Overapplied} \\ \text{overhead} & & \text{overhead} & & \text{manufacturing overhead} \end{array}$$

(Applied manufacturing overhead is greater than actual manufacturing overhead when manufacturing overhead is overapplied.)

$$\begin{array}{rclcl} \text{Applied manufacturing} & - & \$160,600 & = & \$10,760 \\ \text{overhead} & & & & \end{array}$$

$$\text{Applied manufacturing overhead} = \$171,360$$

$$\begin{array}{rclcl} \text{Applied manufacturing} & = & \text{Actual direct} & \times & \text{Predetermined} \\ \text{overhead} & & \text{labor-hours} & & \text{overhead rate} \end{array}$$

$$\begin{array}{rclcl} \$171,360 & = & 11,900 & \times & \text{Predetermined} \\ & & & & \text{overhead rate} \end{array}$$

$$\text{Predetermined overhead rate} = \$14.40$$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

46. Washtenaw Corporation uses a job-order costing system. The following data are for last year:

Estimated direct labor-hours	12,000
Estimated manufacturing overhead costs.....	\$39,000
Actual direct labor-hours	11,000
Actual manufacturing overhead costs.....	\$37,000

Washtenaw applies overhead using a predetermined rate based on direct labor-hours. What amount of overhead was applied to work in process last year?

- a. \$39,050
- b. \$42,600
- C. \$35,750**
- d. \$36,960

$$\begin{aligned}\text{Predetermined overhead rate} &= \$39,000 \div 12,000 \text{ direct labor-hours} \\ &= \$3.25 \text{ per direct labor-hour}\end{aligned}$$

$$\begin{array}{rcccl} \text{Applied manufacturing} & = & \text{Actual direct} & \times & \text{Predetermined} \\ \text{overhead} & & \text{labor-hours} & & \text{overhead rate} \end{array}$$

$$\begin{array}{rcccl} \text{Applied manufacturing} & = & 11,000 & \times & \$3.25 \\ \text{overhead} & & & & \end{array}$$

$$\text{Applied manufacturing overhead} = \$35,750$$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

47. The Silver Company uses a predetermined overhead rate to apply manufacturing overhead to jobs. The predetermined overhead rate is based on labor cost in Dept. A and on machine-hours in Dept. B. At the beginning of the year, the company made the following estimates:

	Dept A	Dept B
Direct labor cost	\$60,000	\$40,000
Manufacturing overhead	\$90,000	\$45,000
Direct labor-hours	6,000	9,000
Machine-hours	2,000	15,000

What predetermined overhead rates would be used in Dept. A and Dept. B, respectively?

- a. 67% and \$3.00
- b. 150% and \$5.00
- c.** 150% and \$3.00
- d. 67% and \$5.00

Department A:

$$\begin{aligned} \text{Predetermined overhead rate} &= \frac{\text{Estimated total manufacturing overhead cost}}{\text{Estimated total amount of the allocation base}} \\ &= \frac{\$90,000}{\$60,000} = 150\% \text{ of direct labor cost} \end{aligned}$$

Department B:

$$\begin{aligned} \text{Predetermined overhead rate} &= \frac{\text{Estimated total manufacturing overhead cost}}{\text{Estimated total amount of the allocation base}} \\ &= \frac{\$45,000}{15,000} = \$3.00 \text{ per machine-hour} \end{aligned}$$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

48. Reamer Company uses a predetermined overhead rate based on machine-hours to apply manufacturing overhead to jobs. The company has provided the following estimated costs for next year:

Direct materials	\$1,000
Direct labor	\$3,000
Sales commissions	\$4,000
Salary of production supervisor	\$2,000
Indirect materials.....	\$400
Advertising expense	\$800
Rent on factory equipment.....	\$1,000

Reamer estimates that 500 direct labor-hours and 1,000 machine-hours will be worked during the year. The predetermined overhead rate per hour will be:

- a. \$6.80
- b. \$6.00
- c. \$3.00
- D.** \$3.40

Manufacturing overhead:

Salary of production supervisor	\$2,000
Indirect materials	400
Rent on factory equipment.....	<u>1,000</u>
Total estimated manufacturing overhead	<u>\$3,400</u>

$$\text{Predetermined overhead rate} = \frac{\text{Total estimated manufacturing overhead}}{\text{Estimated machine-hours}}$$

$$\text{Predetermined overhead rate} = \frac{\$3,400}{1,000} = \$3.40 \text{ per machine-hour}$$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

49. At the beginning of June, Varetoni Manufacturing Company had a \$320 balance in its Work in Process inventory account. At the end of June, Varetoni's Work in Process inventory account had a balance of \$970. During June, Varetoni made the following journal entries:

Finished Goods	\$6,160	
Work in Process		\$6,160
Cost of Goods Sold	\$5,830	
Finished Goods		\$5,830

Based on the information above, what is Varetoni's cost of goods manufactured for June?

- a. \$5,180
- b. \$5,510
- C.** \$6,160
- d. \$6,480

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Learning Objective: 6
Level: Medium

50. Niebla Corporation has provided data concerning the company's Manufacturing Overhead account for the month of July. Prior to the closing of the overapplied or underapplied balance to Cost of Goods Sold, the total of the debits to the Manufacturing Overhead account was \$72,000 and the total of the credits to the account was \$77,000. Which of the following statements is true?

- a. Manufacturing overhead applied to Work in Process for the month was \$72,000.
- B.** Actual manufacturing overhead for the month was \$72,000.
- c. Manufacturing overhead for the month was underapplied by \$5,000.
- d. Manufacturing overhead transferred from Finished Goods to Cost of Goods Sold during the month was \$77,000.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

51. Matthias Corporation has provided data concerning the company's Manufacturing Overhead account for the month of May. Prior to the closing of the overapplied or underapplied balance to Cost of Goods Sold, the total of the debits to the Manufacturing Overhead account was \$53,000 and the total of the credits to the account was \$69,000. Which of the following statements is true?

- A.** Manufacturing overhead applied to Work in Process for the month was \$69,000.
- b. Manufacturing overhead for the month was underapplied by \$16,000.
- c. Manufacturing overhead transferred from Finished Goods to Cost of Goods Sold during the month was \$53,000.
- d. Actual manufacturing overhead incurred during the month was \$69,000.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Learning Objective: 8
Level: Medium

52. Sagon Corporation has provided data concerning the company's Manufacturing Overhead account for the month of September. Prior to the closing of the overapplied or underapplied balance to Cost of Goods Sold, the total of the debits to the Manufacturing Overhead account was \$76,000 and the total of the credits to the account was \$66,000. Which of the following statements is true?

- a. Manufacturing overhead transferred from Finished Goods to Cost of Goods Sold during the month was \$76,000.
- b. Actual manufacturing overhead incurred during the month was \$66,000.
- c. Manufacturing overhead applied to Work in Process for the month was \$76,000.
- D.** Manufacturing overhead for the month was underapplied by \$10,000.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

53. On December 1, Mogro Corporation had \$26,000 of raw materials on hand. During the month, the company purchased an additional \$60,000 of raw materials. During December, \$62,000 of raw materials were requisitioned from the storeroom for use in production. The debits to the Raw Materials account for the month of December total:

- a. \$26,000
- b. \$86,000
- C.** \$60,000
- d. \$62,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

54. At the beginning of December, Altro Corporation had \$26,000 of raw materials on hand. During the month, the company purchased an additional \$76,000 of raw materials. During December, \$72,000 of raw materials were requisitioned from the storeroom for use in production. The credits to the Raw Materials account for the month of December total:

- a. \$26,000
- b. \$102,000
- c. \$76,000
- D.** \$72,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

55. Gallon Corporation had \$24,000 of raw materials on hand on April 1. During the month, the company purchased an additional \$52,000 of raw materials. During April, \$62,000 of raw materials were requisitioned from the storeroom for use in production. These raw materials included both direct and indirect materials. The indirect materials totaled \$2,000. The debits to the Work in Process account as a consequence of the raw materials transactions in April total:

- A.** \$60,000
- b. \$62,000
- c. \$0
- d. \$52,000

Total materials requisitioned	\$62,000
Less: Indirect materials.....	<u>2,000</u>
Total raw materials debited to Work in Process in April	<u>\$60,000</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

56. During September at Renfro Corporation, \$65,000 of raw materials were requisitioned from the storeroom for use in production. These raw materials included both direct and indirect materials. The indirect materials totaled \$4,000. The journal entry to record this requisition would include a debit to Manufacturing Overhead of:

- a. \$65,000
- B.** \$4,000
- c. \$0
- d. \$61,000

Manufacturing Overhead	4,000	
Work in Process	61,000	
Raw Materials		65,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

57. Gullett Corporation had \$26,000 of raw materials on hand on November 1. During the month, the company purchased an additional \$75,000 of raw materials. The journal entry to record the purchase of raw materials would include a:

- a. debit to Raw Materials of \$101,000
- b. credit to Raw Materials of \$75,000
- C.** debit to Raw Materials of \$75,000
- d. credit to Raw Materials of \$101,000

Raw Materials	75,000	
Accounts Payable		75,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

58. During July at Loeb Corporation, \$83,000 of raw materials were requisitioned from the storeroom for use in production. These raw materials included both direct and indirect materials. The indirect materials totaled \$4,000. The journal entry to record the requisition from the storeroom would include a:

- A.** debit to Work in Process of \$79,000
- b. debit to Work in Process of \$83,000
- c. credit to Manufacturing Overhead of \$4,000
- d. debit to Raw Materials of \$83,000

Total raw materials	\$83,000
Less: indirect raw materials	<u>4,000</u>
Total raw materials debited to Work in Process	<u>\$79,000</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

59. In October, Raddatz Inc. incurred \$73,000 of direct labor costs and \$6,000 of indirect labor costs. The journal entry to record the accrual of these wages would include a:

- A. debit to Manufacturing Overhead of \$6,000
- b. debit to Work in Process of \$79,000
- c. credit to Manufacturing Overhead of \$6,000
- d. credit to Work in Process of \$79,000

Work in Process	73,000	
Manufacturing Overhead	6,000	
Wages Payable		79,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

60. Epolito Corporation incurred \$87,000 of actual Manufacturing Overhead costs during September. During the same period, the Manufacturing Overhead applied to Work in Process was \$89,000. The journal entry to record the incurrence of the actual Manufacturing Overhead costs would include a:

- a. debit to Work in Process of \$89,000
- b. credit to Manufacturing Overhead of \$87,000
- C. debit to Manufacturing Overhead of \$87,000
- d. credit to Work in Process of \$89,000

Manufacturing Overhead	87,000	
Accounts Payable		87,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

61. Piekos Corporation incurred \$90,000 of actual Manufacturing Overhead costs during June. During the same period, the Manufacturing Overhead applied to Work in Process was \$92,000. The journal entry to record the application of Manufacturing Overhead to Work in Process would include a:

- a. debit to Manufacturing Overhead of \$92,000
- b. debit to Work in Process of \$90,000
- C. credit to Manufacturing Overhead of \$92,000
- d. credit to Work in Process of \$90,000

Work in Process	92,000	
Manufacturing Overhead		92,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

62. During March, Zea Inc. transferred \$50,000 from Work in Process to Finished Goods and recorded a Cost of Goods Sold of \$56,000. The journal entries to record these transactions would include a:

- a. credit to Cost of Goods Sold of \$56,000
- b. debit to Finished Goods of \$56,000
- C. credit to Work in Process of \$50,000
- d. credit to Finished Goods of \$50,000

Finished Goods	50,000	
Work in Process		50,000
Cost of Goods Sold	56,000	
Finished Goods		56,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

63. During June, Buttrey Corporation incurred \$67,000 of direct labor costs and \$7,000 of indirect labor costs. The journal entry to record the accrual of these wages would include a:

- A. debit to Work in Process of \$67,000
- b. credit to Work in Process of \$74,000
- c. debit to Work in Process of \$74,000
- d. credit to Work in Process of \$67,000

Work in Process	67,000	
Manufacturing Overhead	7,000	
Wages Payable		74,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

64. Wayne Company's beginning and ending inventories for the month of June were as follows:

	June 1	June 30
Direct Materials.....	\$67,000	\$62,000
Work in Process	\$145,000	\$171,000
Finished Goods	\$85,000	\$78,000

Production data for the month follow:

Direct labor cost incurred.....	\$200,000
Direct labor-hours	25,000
Actual manufacturing overhead cost incurred	\$132,000
Direct materials purchases	\$165,000

Wayne applies manufacturing overhead cost to jobs based on direct labor-hours, and the predetermined rate is \$5.75 per direct labor-hour. The company does not close underapplied or overapplied manufacturing overhead to Cost of Goods Sold until the end of the year. What is the amount of cost of goods manufactured?

- a. \$508,750
- b. \$502,000
- c. \$585,000
- D.** \$487,750

Chapter 002, Systems Design: Job-Order Costing

Schedule of Cost of Goods Manufactured

Direct materials:

Direct materials inventory, beginning	\$ 67,000	
Add purchases of raw materials.....	<u>165,000</u>	
Total raw materials available	232,000	
Deduct direct materials inventory, ending	<u>62,000</u>	
Raw materials used in production		\$170,000
Direct labor.....		200,000
Manufacturing overhead applied (\$ 5.75 × 25,000).....		<u>143,750</u>
Total manufacturing costs		513,750
Add: Work in process, beginning.....		<u>145,000</u>
		658,750
Deduct: Work in process, ending		<u>171,000</u>
Cost of goods manufactured.....		<u>\$487,750</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 6
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

65. Serritella Manufacturing Corporation uses a job-order costing system. At the beginning of the year, Serritella had \$38,000 in its Work in Process inventory account. The following information relates to Serritella's operations for the year:

Direct materials cost assigned to production	\$114,000
Direct labor cost assigned to production.....	\$78,000
Selling, general, and administrative expenses incurred..	\$25,000
Manufacturing overhead cost incurred	\$296,000
Underapplied manufacturing overhead cost.....	\$11,000
Cost of goods manufactured	\$502,000
Cost of goods sold.....	\$509,000

What is the balance in Serritella's Work in Process inventory account at the end of the year? (Assume that the Manufacturing Overhead account has not yet been closed out.)

- A.** \$13,000
- b. \$24,000
- c. \$35,000
- d. \$60,000

Work in Process			
		Cost of goods	
Bal.	38,000	manufactured	502,000
Direct material	114,000		
Direct labor	78,000		
*Applied Mfg.			
Overhead	285,000		
Bal.	13,000		

*Actual manufacturing overhead – Applied manufacturing overhead = Underapplied manufacturing overhead

\$296,000 – Applied manufacturing overhead = \$11,000

Applied manufacturing overhead = \$ 285,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 7
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

66. Marc Corp. has a job-order costing system. The following debits (credits) appeared in the Work in Process account for the month of May:

May 1	Balance	\$10,000
May 31	Direct materials	\$60,000
May 31	Direct labor	\$40,000
May 31	Manufacturing overhead	\$32,000
May 31	To finished goods	\$(120,000)

Marc applies overhead to jobs at a predetermined rate of 80% of direct labor cost. Job No. 23, the only job still in process at the end of May has been charged with direct labor of \$5,000. The amount of direct materials charged to Job No. 23 was:

- a. \$6,250
- b. \$7,500
- c. \$13,000**
- d. \$17,000

Work in Process			
Bal.	10,000	FG	120,000
DM	60,000		
DL	40,000		
Applied MOH	32,000		
Bal.	22,000		

Ending Balance of Work in Process	\$22,000
Less:	
Direct labor	\$5,000
Manufacturing overhead (80% × \$5,000)	<u>4,000</u>
Direct materials charged to Job No. 23	<u>9,000</u>
	<u><u>\$13,000</u></u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 7
Level: Hard
Source: CPA, adapted

Chapter 002, Systems Design: Job-Order Costing

67. Kirk Manufacturing Company uses a job-order costing system. At the beginning of April, Kirk only had one job in process, Job #898. This job was finished during April by incurring additional direct costs of \$350 for materials and \$700 for labor. Also during April, Job #899 was started and finished. The direct costs assigned to this job were \$1,200 for materials and \$950 for labor. Job #900 was started during April but was not finished by the end of the month. The direct costs assigned to this job were \$820 for materials and \$540 for labor. Kirk applies manufacturing overhead to its products at a rate of 300% of direct labor cost. Kirk's cost of goods manufactured for April was \$14,570. What was Kirk's work in process inventory balance at the beginning of April?

- a. \$3,440
- B. \$6,420**
- c. \$6,590
- d. \$9,570

Work in Process			
Bal.	?	COGM	14,570
Job 898–Material	350		
Job 898–Labor	700		
Job 898–MOH	*2,100		
Job 899–Material	1,200		
Job 899–Labor	950		
Job 899–MOH	*2,850		
Job 900–Material	820		
Job 900–Labor	540		
Job 900–MOH	*1,620		
**Bal.	2,980		

*Job 898–MOH = 300% × \$700 = \$2,100

Job 899–MOH = 300% × \$950 = \$2,850

Job 900–MOH = 300% × \$540 = \$1,620

**Ending balance is cost of Job 900 (\$820 + \$540 + \$1,620)

To make the T-account have an ending balance of \$2,980, the beginning balance would need to be \$6,420.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 7
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

68. The following information relates to Zamudio Manufacturing Company:

Predetermined overhead rate (based on direct labor-hours) ..	\$5.00 per DLH
Total direct labor-hours incurred during the year	25,000 DLHs
Manufacturing overhead overapplied for the year	\$4,600

How much manufacturing overhead cost did Zamudio actually incur?

- a. \$103,500
- b. \$119,600
- C. \$120,400**
- d. \$129,600

Applied manufacturing overhead = $\$5.00 \times 25,000$ direct labor-hours

Applied manufacturing overhead = \$125,000

Applied manufacturing overhead	–	Actual manufacturing overhead	=	Overapplied manufacturing overhead
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\$125,000	–	Actual manufacturing overhead	=	\$4,600
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Actual manufacturing overhead = \$120,400

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 8
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

69. The following information relates to Araceli Manufacturing Company:

Total estimated manufacturing overhead cost at beginning of year.....	\$864,000
Predetermined overhead rate (based on machine-hours).....	\$7.20 per hour
Total manufacturing overhead cost incurred during the year	\$885,000
Total machine-hours incurred during the year	118,000 hours

What was Araceli's underapplied or overapplied overhead for last year?

- a. \$35,400 overapplied
- B.** \$35,400 underapplied
- c. \$15,000 underapplied
- d. \$21,000 overapplied

Actual manufacturing overhead	\$885,000
Applied manufacturing overhead (118,000 hours × \$7.20 per hour).....	<u>849,600</u>
Manufacturing overhead underapplied.....	<u>\$ 35,400</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

70. Mackinaw Manufacturing Company uses a predetermined overhead rate based on direct labor-hours to apply manufacturing overhead to jobs. Last year, the company worked 17,000 actual direct labor-hours and incurred \$145,000 of actual manufacturing overhead cost. They had estimated at the beginning of the year that 16,000 direct labor-hours would be worked and \$144,000 of manufacturing overhead costs incurred. The company had calculated a predetermined overhead rate of \$9 per direct labor-hour. The company's manufacturing overhead for the year was:

- A. overapplied by \$8,000
- b. underapplied by \$8,000
- c. overapplied by \$1,000
- d. underapplied by \$1,000

Actual manufacturing overhead	\$145,000
Applied manufacturing overhead	
(17,000 hours × \$9 per hour).....	<u>153,000</u>
Manufacturing overhead overapplied.....	<u>\$ 8,000</u>

Since applied manufacturing overhead exceeds actual manufacturing overhead, manufacturing overhead is overapplied.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

71. Huang Aerospace Corporation manufactures aviation control panels in two departments, Fabrication and Assembly. In the Fabrication department, Huang uses a predetermined overhead rate of \$30 per machine-hour. In the Assembly department, Huang uses a predetermined overhead rate of \$12 per direct labor-hour. During the current year, Job #X2984 incurred the following number of hours in each department:

	Fabrication	Assembly
Machine-hours	40	12
Direct labor-hours	3	25

What is the total amount of manufacturing overhead that Huang should have applied to Job #X2984 during the current year?

- a. \$1,200
- B. \$1,500**
- c. \$1,560
- d. \$1,734

	Job #X2984
Fabrication—overhead applied	
(\$30 per machine-hour × 40 machine-hours)	\$1,200
Assembly—overhead applied	
(\$12 per direct labor-hour × 25 direct labor-hours)	<u>300</u>
Total overhead applied to Job #X2984.....	<u>\$1,500</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

72. Worley Company has underapplied overhead of \$45,000 for the year ended December 31. Before disposition of the underapplied overhead, selected December 31 data from Worley's accounting records are as follows:

Sales	\$1,200,000
Cost of goods sold.....	\$720,000
Overhead applied during the year in ending inventories:	
Work in process	\$54,000
Finished goods	\$90,000

Under Worley's cost accounting system, over- or underapplied overhead is allocated to ending inventories and cost of goods sold based on the amount of overhead applied during the year in the ending balance of each account. In its income statement, Worley should report cost of goods sold of:

- a. \$682,500
- b. \$684,000
- c. \$756,000
- D. \$757,500**

Overhead applied during the year in:		
Work in process	\$ 54,000	6.25 %
Finished goods.....	90,000	10.42 %
Cost of goods sold	<u>720,000</u>	<u>83.33 %</u>
Total.....	<u><u>\$864,000</u></u>	<u><u>100.00 %</u></u>

Cost of goods sold:

Applied	\$720,000
Underapplied portion (83.33% × \$45,000)	<u>37,500*</u>
Adjusted cost of goods sold.....	<u><u>\$757,500</u></u>

*Rounded

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Learning Objective: 8
Level: Hard
Source: CPA, adapted

Chapter 002, Systems Design: Job-Order Costing

73. Able Company uses a job-order costing system. In reviewing its records at the end of the year, the company has discovered that \$2,000 of raw materials has been drawn from the storeroom and used in the production of Job 110, but that no entry has been made in the accounting records for the use of these materials. Job 110 has been completed but it is unsold at year end. This error will cause:
- Work in Process to be understated by \$2,000 at year end.
 - Cost of Goods Manufactured to be overstated by \$2,000 for the year.
 - C.** Finished Goods to be understated by \$2,000 at the end of the year.
 - Cost of Goods Sold to be overstated by \$2,000 for the year.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 6
Level: Medium

74. Bottum Corporation, a manufacturing company, has provided data concerning its operations for May. The beginning balance in the raw materials account was \$20,000 and the ending balance was \$36,000. Raw materials purchases during the month totaled \$63,000. Manufacturing overhead cost incurred during the month was \$111,000, of which \$2,000 consisted of raw materials classified as indirect materials. The direct materials cost for May was:
- \$63,000
 - \$47,000
 - \$79,000
 - D.** \$45,000

Raw Materials			
Bal.	20,000	Indirect material to mfg. overhead	2,000
Purchases	63,000	Direct material to work in process	?*
Bal.	36,000		

$*\$20,000 + \$63,000 - \$2,000 - \text{Direct materials cost} = \$36,000$
 $\text{Direct materials cost} = \$45,000$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 6
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

75. Rediger Inc., a manufacturing company, has provided the following data for the month of June. The balance in the Work in Process inventory account was \$22,000 at the beginning of the month and \$17,000 at the end of the month. During the month, the company incurred direct materials cost of \$55,000 and direct labor cost of \$28,000. The actual manufacturing overhead cost incurred was \$53,000. The manufacturing overhead cost applied to Work in Process was \$51,000. The cost of goods manufactured for June was:

- a. \$141,000
- B. \$139,000**
- c. \$134,000
- d. \$136,000

Work in Process			
Bal.	22,000	COGM	139,000*
Direct material	55,000		
Direct labor	28,000		
Applied manufacturing overhead	51,000		
Bal.	17,000		
$*\$22,000 + \$55,000 + \$28,000 + \$51,000 - X = \$17,000$ $X = \$139,000$			

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 6
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

76. Luebke Inc. has provided the following data for the month of November. The balance in the Finished Goods inventory account at the beginning of the month was \$52,000 and at the end of the month was \$30,000. The cost of goods manufactured for the month was \$212,000. The actual manufacturing overhead cost incurred was \$55,000 and the manufacturing overhead cost applied to Work in Process was \$58,000. The adjusted cost of goods sold that would appear on the income statement for November is:

- A. \$231,000
- b. \$190,000
- c. \$234,000
- d. \$212,000

Finished Goods			
Bal.	52,000	COGS	234,000
From work in process	212,000		
Bal.	30,000		

Unadjusted cost of goods sold.....	\$234,000
Less: Overapplied manufacturing overhead*	3,000
Adjusted cost of goods sold.....	\$231,000

*Overapplied manufacturing overhead	=	Applied manufacturing overhead	–	Actual manufacturing overhead
Overapplied manufacturing overhead	=	\$58,000	–	\$55,000
Overapplied manufacturing overhead	=	\$3,000		

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 6
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

77. The following accounts are from last year's books of Sharp Manufacturing:

Raw Materials			
Beg Bal	0	(b)	77,000
(a)	82,000		
	5,000		

Finished Goods			
Beg Bal	0	(g)	230,000
(f)	255,000		
	25,000		

Work in Process			
Beg Bal	0	(f)	255,000
(b)	66,000		
(c)	84,000		
(e)	105,000		
	0		

Manufacturing Overhead			
(b)	11,000	(c)	105,000
(c)	13,000		
(d)	78,000		
(h)	3,000		3,000

Cost of Goods Sold			
(g)	230,000	(h)	3,000
	227,000		

Sharp uses job-order costing and applies manufacturing overhead to jobs based on direct labor costs. What is the amount of direct materials used for the year?

- a. \$82,000
- b. \$77,000
- c.** \$66,000
- d. \$84,000

Chapter 002, Systems Design: Job-Order Costing

Work in Process	66,000	
Manufacturing Overhead	11,000	
Raw Materials		77,000

The debit of \$ 66,000 represents the amount of direct materials used for the year.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Medium

78. The actual manufacturing overhead incurred at Gutekunst Corporation during March was \$53,000, while the manufacturing overhead applied to Work in Process was \$73,000. The company's Cost of Goods Sold was \$451,000 prior to closing out its Manufacturing Overhead account. The company closes out its Manufacturing Overhead account to Cost of Goods Sold. Which of the following statements is true?

- a. Manufacturing overhead was overapplied by \$20,000; Cost of Goods Sold after closing out the Manufacturing Overhead account is \$471,000
- b. Manufacturing overhead was underapplied by \$20,000; Cost of Goods Sold after closing out the Manufacturing Overhead account is \$431,000
- c. Manufacturing overhead was overapplied by \$20,000; Cost of Goods Sold after closing out the Manufacturing Overhead account is \$431,000**
- d. Manufacturing overhead was underapplied by \$20,000; Cost of Goods Sold after closing out the Manufacturing Overhead account is \$471,000

Actual manufacturing overhead	\$53,000
Applied manufacturing overhead	<u>73,000</u>
Manufacturing overhead applied.....	<u>\$20,000</u>

Since applied manufacturing overhead exceeds actual manufacturing overhead, manufacturing overhead is overapplied.

Beginning cost of goods sold = \$451,000; overapplied manufacturing overhead reduces the cost of goods sold so the adjusted cost of goods sold is as follows:

$$\$451,000 - 20,000 = \$431,000$$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

79. Faughn Corporation has provided the following data concerning manufacturing overhead for July:

Actual manufacturing overhead incurred.....	\$69,000
Manufacturing overhead applied to Work in Process	\$79,000

The company's Cost of Goods Sold was \$243,000 prior to closing out its Manufacturing Overhead account. The company closes out its Manufacturing Overhead account to Cost of Goods Sold. Which of the following statements is true?

- a. Manufacturing overhead was underapplied by \$10,000; Cost of Goods Sold after closing out the Manufacturing Overhead account is \$233,000
- b. Manufacturing overhead was overapplied by \$10,000; Cost of Goods Sold after closing out the Manufacturing Overhead account is \$233,000**
- c. Manufacturing overhead was overapplied by \$10,000; Cost of Goods Sold after closing out the Manufacturing Overhead account is \$253,000
- d. Manufacturing overhead was underapplied by \$10,000; Cost of Goods Sold after closing out the Manufacturing Overhead account is \$253,000

The applied manufacturing overhead exceeds the actual manufacturing overhead by \$10,000 (\$79,000 - \$69,000), so \$10,000 would be overapplied and this amount would be deducted from cost of goods sold to arrive at the adjusted cost of goods sold of \$233,000 (\$243,000 - \$10,000).

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

Parker Company has a job-order costing system and uses a predetermined overhead rate based on direct labor-hours to apply manufacturing overhead to jobs. At the beginning of the year, manufacturing overhead and direct labor-hours for the year were estimated at \$50,000 and 20,000 hours, respectively. In June, Job #461 was completed. Materials costs on the job totaled \$4,000 and labor costs totaled \$1,500 at \$5 per hour. At the end of the year it was determined that the company worked 24,000 direct labor-hours for the year and incurred \$54,000 in actual manufacturing overhead costs.

80. If Job #461 contained 100 units, the unit cost on the completed job cost sheet would be:
- a. \$61.75
 - B. \$62.50**
 - c. \$63.10
 - d. \$55.00

Estimated total manufacturing overhead	\$50,000
÷ Estimated total direct labor-hours (DLHs)	20,000 DLHs
= Predetermined overhead rate	\$2.50 per DLH

Job #461 Costs:

Materials	\$4,000
Labor.....	1,500
Manufacturing overhead (300 DLHs* × \$2.50 per DLH)	750
Total cost	\$6,250
	÷100 units
	\$62.50 per unit cost

*\$1,500 total labor cost ÷ \$5 per hour = 300 DLHs

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

81. The manufacturing overhead for the year was:

- a. \$6,000 overapplied
- b. \$10,000 overapplied
- c. \$10,000 underapplied
- d. \$4,000 underapplied

Actual manufacturing overhead	\$54,000
Applied manufacturing overhead (24,000 × \$2.50)	<u>60,000</u>
Overapplied manufacturing overhead	<u>(\$ 6,000)</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

Acheson Corporation, which applies manufacturing overhead on the basis of machine-hours, has provided the following data for its most recent year of operations.

Estimated manufacturing overhead.....	\$157,050
Estimated machine-hours	4,500
Actual manufacturing overhead	\$156,000
Actual machine-hours	4,580

The estimates of the manufacturing overhead and of machine-hours were made at the beginning of the year for the purpose of computing the company's predetermined overhead rate for the year.

82. The predetermined overhead rate is closest to:

- a. \$34.06
- B.** \$34.90
- c. \$34.67
- d. \$35.52

Estimated total manufacturing overhead	\$157,050
÷ Estimated total machine-hours (MHs).....	4,500 MHs
= Predetermined overhead rate	\$34.90 per MH

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

83. The applied manufacturing overhead for the year is closest to:

- a. \$162,682
- b. \$155,995
- c. \$158,789
- D. \$159,842**

Estimated total manufacturing overhead	\$157,050
÷ Estimated total machine-hours (MHs).....	4,500 MHs
= Predetermined overhead rate	\$34.90 per MH

$$\begin{array}{rcccl} \text{Applied manufacturing} & = & \text{Predetermined} & \times & \text{Actual} \\ \text{overhead} & & \text{overhead rate} & & \text{machine-hours} \end{array}$$

$$\begin{aligned} \text{Applied manufacturing overhead} &= \$34.90 \times 4,580 \\ &= \$159,842 \end{aligned}$$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

84. The overhead for the year was:

- a. \$2,792 underapplied
- B.** \$3,842 overapplied
- c. \$2,792 overapplied
- d. \$3,842 underapplied

Estimated total manufacturing overhead	\$157,050	
÷ Estimated total machine-hours (MHs).....	4,500 MHs	
= Predetermined overhead rate	\$34.90 per MH	

$$\begin{array}{rcccl} \text{Applied manufacturing} & = & \text{Predetermined} & \times & \text{Actual} \\ \text{overhead} & & \text{overhead rate} & & \text{machine-hours} \end{array}$$

$$\begin{aligned} \text{Applied manufacturing overhead} &= \$34.90 \times 4,580 \\ &= \$159,842 \end{aligned}$$

Actual manufacturing overhead	\$156,000	
Applied manufacturing overhead	<u>159,842</u>	
Overapplied manufacturing overhead	<u>(\$ 3,842)</u>	

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

Baka Corporation applies manufacturing overhead on the basis of direct labor-hours. At the beginning of the most recent year, the company based its predetermined overhead rate on total estimated overhead of \$239,700 and 4,700 estimated direct labor-hours. Actual manufacturing overhead for the year amounted to \$242,000 and actual direct labor-hours were 4,600.

85. The predetermined overhead rate for the year was closest to:

- a. \$52.61
- b. \$49.91
- c. \$51.00
- d. \$51.49

Estimated total manufacturing overhead	\$239,700
÷ Estimated total direct labor-hours (DLHs)	4,700 DLHs
= Predetermined overhead rate	\$51.00 per DLH

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

86. The applied manufacturing overhead for the year was closest to:

- a. \$229,586
- B. \$234,600**
- c. \$242,006
- d. \$236,854

Estimated total manufacturing overhead	\$239,700
÷ Estimated total direct labor-hours (DLHs)	4,700 DLHs
= Predetermined overhead rate	\$51.00 per DLH

$$\begin{array}{rcccl} \text{Applied manufacturing} & = & \text{Predetermined} & \times & \text{Actual} \\ \text{overhead} & & \text{overhead rate} & & \text{machine-hours} \end{array}$$

$$\text{Applied manufacturing overhead} = \$51 \times 4,600 = \$234,600$$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

87. The overhead for the year was:

- a. \$5,100 underapplied
- B. \$7,400 underapplied**
- c. \$5,100 overapplied
- d. \$7,400 overapplied

Estimated total manufacturing overhead	\$239,700	
÷ Estimated total direct labor-hours (DLHs)	4,700 DLHs	
= Predetermined overhead rate	\$51.00 per DLH	

$$\text{Applied manufacturing overhead} = \text{Predetermined overhead rate} \times \text{Actual machine-hours}$$

$$\text{Applied manufacturing overhead} = \$51 \times 4,600 = \$234,600$$

Actual manufacturing overhead	\$242,000	
Applied manufacturing overhead	<u>234,600</u>	
	<u>\$ 7,400</u>	underapplied

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

Caple Corporation applies manufacturing overhead on the basis of machine-hours. At the beginning of the most recent year, the company based its predetermined overhead rate on total estimated overhead of \$16,660. Actual manufacturing overhead for the year amounted to \$25,000 and actual machine-hours were 1,460. The company's predetermined overhead rate for the year was \$11.90 per machine-hour.

88. The predetermined overhead rate was based on how many estimated machine-hours?

- A. 1,400
- b. 2,101
- c. 2,742
- d. 1,460

$$\text{Predetermined overhead rate} = \frac{\text{Estimated manufacturing overhead}}{\text{Estimated machine-hours}}$$

$$\$11.90 = \$16,660 \div \text{Estimated machine-hours}$$

$$\text{Estimated machine-hours} = \$16,660 \div \$11.90 = 1,400$$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Level: Medium

89. The applied manufacturing overhead for the year was closest to:

- a. \$26,071
- b. \$18,119
- C. \$17,374
- d. \$16,660

$$\text{Applied manufacturing overhead} = \text{Predetermined overhead rate} \times \text{Actual machine-hours}$$

$$\text{Applied manufacturing overhead} = \$11.90 \times 1,460 = \$17,374$$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

90. The overhead for the year was:

- a. \$714 overapplied
- B.** \$7,626 underapplied
- c. \$714 underapplied
- d. \$7,626 overapplied

$$\text{Applied manufacturing overhead} = \text{Predetermined overhead rate} \times \text{Actual machine-hours}$$

$$\text{Applied manufacturing overhead} = \$11.90 \times 1,460 = \$17,374$$

Actual manufacturing overhead	\$25,000
Less applied manufacturing overhead	<u>17,374</u>
Underapplied manufacturing overhead	<u>\$ 7,626</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

Mallet Company has only Job 844 in process on March 1 of the current year. The job has been charged with \$2,000 of direct material cost, \$2,500 of direct labor cost, and \$1,750 of manufacturing overhead cost. The company assigns overhead cost to jobs at a predetermined rate of 70% of direct labor cost. Any underapplied or overapplied overhead cost is closed to Cost of Goods Sold at the end of the month.

During March, the following activity and amounts were recorded by the company:

Raw materials (all direct materials):	
Purchased during the month.....	\$29,500
Used in production.....	\$30,500
Labor:	
Direct labor-hours worked during the month.....	2,500
Direct labor cost incurred.....	\$26,500
Indirect labor costs incurred.....	\$5,500
Manufacturing overhead costs incurred (total)	\$18,500
Inventories:	
Raw materials (all direct) March 31	\$7,500
Work in process, March 31	\$14,500

Work in process inventory contains \$5,500 of direct labor cost.

Chapter 002, Systems Design: Job-Order Costing

91. The amount of direct materials cost in the March 31 work in process inventory account was:

- A. \$5,150
- b. \$9,350
- c. \$9,000
- d. \$3,850

March 31 Work in Process inventory balance.....	\$14,500
Less direct labor cost.....	5,500
Less manufacturing overhead applied (70% × \$5,500).....	<u>3,850</u>
Direct materials cost in March 31 Work in Process inventory....	<u><u>\$ 5,150</u></u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Medium

92. The cost of goods manufactured for March was:

- A. \$67,300
- b. \$67,250
- c. \$81,800
- d. \$75,550

Work in Process		
Balance	6,250	COGM
Raw materials used	30,500	
Direct labor	26,500	
Applied manufacturing overhead	*18,550	
Balance	14,500	
*Applied manufacturing overhead = 70% × 26,500 = 18,550		
**6,250 + 30,500 + 26,500 + 18,550 – COGM = 14,500		
COGM = \$67,300		

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Learning Objective: 5
Learning Objective: 6
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

93. The entry to dispose of the underapplied or overapplied overhead cost for the month would include:

- a. a debit of \$50 to Cost of Goods Sold
- B.** a debit of \$50 to Manufacturing Overhead
- c. a debit of \$5,500 to Manufacturing Overhead
- d. a credit of \$5,500 to Cost of Goods Sold

Actual manufacturing overhead	\$18,500
Applied manufacturing overhead (70% × 26,500).....	<u>18,550</u>
Overapplied manufacturing overhead	<u>\$ 50</u>

Manufacturing Overhead	\$50	
Cost of Goods Sold		\$50

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Learning Objective: 5
Learning Objective: 8
Level: Hard

94. The balance in the March 1 Raw Materials inventory was:

- a. \$10,500
- b. \$9,500
- c. \$6,500
- D.** \$8,500

Raw Materials Inventory			
Bal.	?*	Used	30,500
Purchased	29,500		
Bal.	7,500		

Beginning Balance + Purchased – Used = Ending Balance
 Beginning Balance + \$29,500 - \$30,500 = \$7,500
 Beginning Balance = \$8,500

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

The following journal entries without dollar data were taken from the accounting records of a company that has a job-order costing system in which overhead is applied to jobs using a predetermined overhead rate.

1.	Work in Process	XXX	
	Manufacturing Overhead	XXX	
	Wages Payable		XXX
2.	Salary Expense	XXX	
	Wages Payable		XXX
3.	Manufacturing Overhead	XXX	
	Accumulated Depreciation		XXX
4.	Work in Process	XXX	
	Raw Materials		XXX
5.	Work in Process	XXX	
	Manufacturing Overhead		XXX
6.	Manufacturing Overhead	XXX	
	Raw Materials		XXX
7.	Finished Goods	XXX	
	Work in Process		XXX
8.	Raw Materials	XXX	
	Accounts Payable		XXX

95. The entry to record the purchase of raw materials is:

- a. 8
- b. 4
- c. 6
- d. 1

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

96. The entry to transfer the cost of goods manufactured for the period is:

- a. 1
- b. 4
- C. 7**
- d. 5

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

97. The entry to record the application of overhead is:

- a. 1
- B. 5**
- c. 6
- d. 3

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

98. The entry to record depreciation on manufacturing equipment is:

- a. 1
- B. 3**
- c. 4
- d. 5

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

On November 1, Arvelo Corporation had \$32,000 of raw materials on hand. During the month, the company purchased an additional \$78,000 of raw materials. During November, \$95,000 of raw materials were requisitioned from the storeroom for use in production. These raw materials included both direct and indirect materials. The indirect materials totaled \$3,000.

Prepare journal entries to record these events. Use those journal entries to answer the following questions:

99. The debits to the Raw Materials account for the month of November total:

- a. \$95,000
- B.** \$78,000
- c. \$32,000
- d. \$110,000

Purchases (\$78,000) are debited to the Raw Materials account.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

100. The credits to the Raw Materials account for the month of November total:

- A.** \$95,000
- b. \$78,000
- c. \$32,000
- d. \$110,000

The \$95,000 of raw materials requisitioned is credited to the Raw Materials account.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

101. The debits to the Work in Process account as a consequence of the raw materials transactions in November total:

- a. \$78,000
- b. \$95,000
- C.** \$92,000
- d. \$0

The amount of the debit entry to Work in Process is \$92,000 as a result of the raw materials transactions (total requisition \$95,000 less the portion that was indirect materials \$3,000, leaving \$92,000 to be debited).

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

102. The credits to the Work in Process account as a consequence of the raw materials transactions in November total:

- a. \$78,000
- b. \$92,000
- C.** \$0
- d. \$95,000

There are no credits to Work in Process as a result of the raw materials transactions.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

103. The debits to the Manufacturing Overhead account as a consequence of the raw materials transactions in November total:

- a. \$95,000
- B.** \$3,000
- c. \$0
- d. \$92,000

The indirect materials of \$3,000 is the amount of the debit to the Manufacturing Overhead account.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

104. The credits to the Manufacturing Overhead account as a consequence of the raw materials transactions in November total:

- A.** \$0
- b. \$3,000
- c. \$92,000
- d. \$95,000

There were no credits to the Manufacturing Overhead account as a result of the raw materials transactions.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

On January 1, Schaf Corporation had \$23,000 of raw materials on hand. During the month, the company purchased an additional \$50,000 of raw materials. During January, \$50,000 of raw materials were requisitioned from the storeroom for use in production. These raw materials included both direct and indirect materials. The indirect materials totaled \$6,000.

105. The journal entry to record the purchase of raw materials would include a:

- a. debit to Raw Materials of \$73,000
- b. credit to Raw Materials of \$50,000
- c. credit to Raw Materials of \$73,000
- D.** debit to Raw Materials of \$50,000

Raw Materials	50,000	
Account Payable		50,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

106. The journal entry to record the requisition from the storeroom would include a:

- a. debit to Work in Process of \$50,000
- b. debit to Raw Materials of \$50,000
- c. credit to Manufacturing Overhead of \$6,000
- D.** debit to Work in Process of \$44,000

Work in Process*	44,000	
Manufacturing Overhead	6,000	
Raw Materials		50,000
*\$50,000 – \$6,000 = \$44,000		

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

During March, Pendergraph Corporation incurred \$60,000 of actual Manufacturing Overhead costs. During the same period, the Manufacturing Overhead applied to Work in Process was \$62,000.

107. The journal entry to record the incurrence of the actual Manufacturing Overhead costs would include a:

- a. credit to Manufacturing Overhead of \$60,000
- b. credit to Work in Process of \$62,000
- c. debit to Work in Process of \$62,000
- D.** debit to Manufacturing Overhead of \$60,000

Manufacturing Overhead	60,000	
Accounts Payable		60,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

108. The journal entry to record the application of Manufacturing Overhead to Work in Process would include a:

- A.** credit to Manufacturing Overhead of \$62,000
- b. debit to Work in Process of \$60,000
- c. credit to Work in Process of \$60,000
- d. debit to Manufacturing Overhead of \$62,000

Work in Process	62,000	
Manufacturing Overhead		62,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

The following T accounts are for Stanford Company:

Raw Materials			
Beg. Bal.	7,000	(2)	24,000
(1)	19,000		

Cost of Goods Sold	

Sales Salaries Expense	
(4) 11,000	

Work in Process			
Beg. Bal.	11,000		
(2)	15,000	(7)	?
(4)	18,000		
(6)	31,000		

Accounts Payable		
	(1)	19,000
	(5)	5,000

Chapter 002, Systems Design: Job-Order Costing

Manufacturing Overhead			
(2)	9,000	(6)	31,000
(3)	16,000		
(4)	8,000		
(5)	5,000		
	<u>7,000</u>		

Wages & Salaries Payable			
		Beg. Bal.	7,000
		(4)	37,000

Finished Goods			
Beg. Bal.	18,000		
(7)	62,000		
End. Bal.	15,000		

Accumulated Depreciation—Factory			
		Beg. Bal.	82,000
		(3)	16,000

109. The indirect labor cost is:

- A. \$8,000
- b. \$15,000
- c. \$18,000
- d. \$37,000

Journal entry (4):

Sales Salaries Expense	11,000	
Work in Process	18,000	
Manufacturing Overhead	8,000	
Wages and Salaries Payable		37,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

110. The cost of goods manufactured is:

- a. \$82,000
- b. \$64,000
- c. \$71,000
- D. \$62,000**

Journal entry (7):

Finished Goods	62,000	
Work in Process		62,000*

*To balance Finished Goods debit of \$62,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

111. The cost of goods sold (after adjustment for underapplied or overapplied overhead) is:

- a. \$58,000
- b. \$69,000
- C. \$72,000**
- d. \$65,000

Finished Goods			
Beg. Bal.	18,000	COGS	65,000*
(7)	62,000		
End. Bal.	15,000		
*18,000 + 62,000 – Cost of Goods Sold = 15,000			
Cost of Goods Sold = 65,000			

Manufacturing Overhead			
(2)	9,000	(6)	31,000
(3)	16,000		
(4)	8,000		
(5)	5,000		
7,000			

The \$7,000 debit balance represents underapplied overhead; the \$7,000 will be added to the original \$65,000 Cost of Goods Sold to arrive at an adjusted Cost of Goods Sold of \$72,000.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 6
Learning Objective: 7
Learning Objective: 8
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

112. The manufacturing overhead applied is:

- a. \$24,000
- B. \$31,000**
- c. \$38,000
- d. \$42,000

Journal entry (6):

Work in Process	31,000	
Manufacturing Overhead		31,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 6
Learning Objective: 7
Level: Medium

113. The cost of direct materials used is:

- a. \$14,000
- B. \$15,000**
- c. \$18,000
- d. \$24,000

Journal entry (2):

Work in Process	15,000	
Manufacturing Overhead	9,000	
Raw Materials		24,000

The debit to Work in Process (\$15,000) represents the direct materials used.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

114. The ending Work in Process account balance would be:

- A. \$13,000
- b. \$75,000
- c. \$20,000
- d. \$64,000

Journal entry (7):

Finished Goods	62,000	
Work in Process		62,000*

*To balance Finished Goods debit of \$62,000

Work in Process			
Beg. Bal.	11,000		
(2)	15,000	(7)	62,000
(4)	18,000		
(6)	31,000		
End. Bal.	13,000		

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

Dacosta Company had only one job in process on May 1. The job had been charged with \$1,800 of direct materials, \$6,966 of direct labor, and \$9,936 of manufacturing overhead cost. The company assigns overhead cost to jobs using the predetermined overhead rate of \$18.40 per direct labor-hour. During May, the activity was recorded:

Raw materials (all direct materials):	
Beginning balance.....	\$8,500
Purchased during the month.....	\$38,000
Used in production.....	\$39,300
Labor:	
Direct labor-hours worked during the month.....	1,900
Direct labor cost incurred.....	\$24,510
Actual manufacturing overhead costs incurred.....	\$33,300
Inventories:	
Raw materials, May 30	?
Work in process, May 30	\$16,937

Work in process inventory on May 30 contains \$3,741 of direct labor cost. Raw materials consist solely of items that are classified as direct materials.

115. The balance in the raw materials inventory account on May 30 was:

- A. \$7,200
- b. \$1,300
- c. \$29,500
- d. \$30,800

Raw Materials			
Beg. Bal.	8,500	Used	39,300
Purchased	38,000		
End. Bal.	7,200		

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 6
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

116. The cost of goods manufactured for May was:

- a. \$97,110
- b. \$110,600
- c. \$98,770
- D. \$100,535**

Raw materials used in production	\$ 39,300
Direct labor.....	24,510
Manufacturing overhead applied to work in process (\$18.40 × 1,900).....	34,960
Total manufacturing costs	98,770
Add: Work in process, beginning.....	18,702
	117,472
Deduct: Work in process, ending	16,937
Cost of goods manufactured.....	\$100,535

Direct materials	\$ 1,800
Direct labor.....	6,966
Manufacturing overhead.....	9,936
Work in process, May 1.....	\$18,702

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

117. The entry to dispose of the underapplied or overapplied overhead cost for the month would include a:

- a. credit of \$5,336 to Manufacturing Overhead.
- b. credit of \$1,660 to Manufacturing Overhead.
- c. debit of \$5,336 to Manufacturing Overhead.
- D.** debit of \$1,660 to Manufacturing Overhead.

Actual manufacturing overhead	\$33,300
Applied manufacturing overhead ($\$18.40 \times 1,900$) ..	<u>34,960</u>
Overapplied manufacturing overhead	<u>(\$ 1,660)</u>

Journal entry:

Manufacturing Overhead	1,660	
Cost of Goods Sold		1,660

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 8
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

Hamilton Company uses job-order costing. Manufacturing overhead is applied using a predetermined rate of 150% of direct labor cost. Any over- or underapplied manufacturing overhead is closed to the Cost of Goods Sold account at the end of each month. Additional information is available as follows:

◦ Job 101 was the only job in process at January 31. The job cost sheet for this job contained the following costs at the beginning of the month:

Direct materials	\$4,000
Direct labor	\$2,000
Applied manufacturing overhead.....	\$3,000

- Jobs 102, 103, and 104 were started during February.
- Direct materials requisitions for February totaled \$26,000.
- Direct labor cost of \$20,000 was incurred for February.
- Actual manufacturing overhead was \$32,000 for February.
- The only job still in process at February 28 was Job 104, with costs of \$2,800 for direct materials and \$1,800 for direct labor.

Chapter 002, Systems Design: Job-Order Costing

118. The cost of goods manufactured for February was:

- A.** \$77,700
- b. \$78,000
- c. \$79,700
- d. \$85,000

Raw materials used in production	\$26,000
Direct labor.....	20,000
Manufacturing overhead applied to work in process (150% × 20,000).....	<u>30,000</u>
Total manufacturing costs	76,000
Add: Work in process, beginning*	<u>9,000</u>
	85,000
Deduct: Work in process, ending**	<u>7,300</u>
Cost of goods manufactured.....	<u>\$77,700</u>

*Beginning Work in Process (Job 101):

Direct materials	\$4,000
Direct labor.....	2,000
Manufacturing overhead.....	<u>3,000</u>
Work in process, Feb 1	<u>\$9,000</u>

**Ending Work in Process (Job 104):

Direct materials	\$2,800
Direct labor.....	1,800
Manufacturing overhead (150% × 1,800)	<u>2,700</u>
Total ending work in process	<u>\$7,300</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 6
Level: Medium
Source: CPA, adapted

Chapter 002, Systems Design: Job-Order Costing

119. For the month of February, the manufacturing overhead was:

- a. \$700 overapplied
- b. \$1,000 overapplied
- c. \$2,000 overapplied
- D. \$2,000 underapplied**

Actual manufacturing overhead	\$32,000
Applied manufacturing overhead (150% × 20,000)....	<u>30,000</u>
Underapplied manufacturing overhead	<u>\$ 2,000</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 8
Level: Medium
Source: CPA, adapted

Chapter 002, Systems Design: Job-Order Costing

Wayne Company uses a job costing system and applies overhead to jobs using a predetermined overhead rate based on direct labor-hours. The company had the following inventories at the beginning and end of March:

	March 1	March 31
Direct Materials.....	\$36,000	\$30,000
Work in Process	\$18,000	\$12,000
Finished Goods	\$54,000	\$72,000

The following additional data pertain to operations during March:

Direct materials purchased.....	\$84,000
Direct labor cost	\$60,000
Direct labor rate	\$7.50 per direct labor-hour
Overhead rate	\$10.00 per direct labor-hour

Chapter 002, Systems Design: Job-Order Costing

120. During March total debits to Work in Process were:

- a. \$84,000
- b. \$220,000
- c. \$144,000
- D. \$230,000**

$$\text{Raw Materials Used} = \frac{\text{Beginning Balance}}{\text{Raw Materials}} + \text{Purchases} - \text{End Balance of Raw Materials}$$

$$\text{Raw Materials Used} = 36,000 + 84,000 - 30,000 = 90,000$$

$$\text{Direct Labor-hours} = \frac{\text{Direct Labor Cost}}{\text{Direct Labor Rate}}$$

$$\text{Direct Labor-hours} = \frac{\$60,000}{\$7.50}$$

$$\text{Direct Labor-hours} = 8,000$$

Debits to Work in Process:

Raw materials used.....	\$ 90,000
Direct labor.....	60,000
Manufacturing overhead (\$10 × 8,000).....	<u>80,000</u>
Total debits to work in process.....	<u><u>\$230,000</u></u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Level: Medium
Source: CPA, adapted

Chapter 002, Systems Design: Job-Order Costing

121. The Cost of Goods Manufactured for March was:

- a. \$212,000
- b. \$218,000
- c. \$230,000
- D. \$236,000**

$$\text{Raw Materials Used} = \frac{\text{Beginning Balance}}{\text{Raw Materials}} + \text{Purchases} - \text{End Balance of Raw Materials}$$

$$\text{Raw Materials Used} = 36,000 + 84,000 - 30,000 = 90,000$$

$$\text{Direct Labor-hours} = \frac{\text{Direct Labor Cost}}{\text{Direct Labor Rate}}$$

$$\text{Direct Labor-hours} = \frac{\$60,000}{\$7.50}$$

$$\text{Direct Labor-hours} = 8,000$$

Work in Process			
Beg. Bal.	18,000	COGM	236,000**
RM used	90,000		
DL	60,000		
MOH*	80,000		
End. Bal.	12,000		

*Manufacturing overhead = \$10 × 8,000

**18,000 + 90,000 + 60,000 + 80,000 – 12,000 = 236,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
Learning Objective: 6
Level: Medium
Source: CPA, adapted

Chapter 002, Systems Design: Job-Order Costing

The Milo Company's records for May contained the following information:

Actual direct labor-hours	9,000 hours
Actual direct labor cost	\$47,000
Direct material purchased	\$16,000
Direct material used	\$14,000
Cost of goods sold.....	\$100,000
Overapplied overhead	\$5,000
Ending inventories:	
Raw materials.....	\$30,000
Work in process	\$50,000
Finished goods	\$70,000

The company uses a predetermined overhead rate of \$5.00 per direct labor-hour to apply manufacturing overhead to jobs.

122. The actual overhead cost incurred during the month was:
- a. \$50,000
 - b. \$55,000
 - C. \$40,000**
 - d. \$45,000

Applied manufacturing overhead ($\$5.00 \times 9,000$ hours) ...	\$45,000
Less overapplied manufacturing overhead.....	<u>5,000</u>
	<u>\$40,000</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

123. The total cost added to Work in Process during May was:

- a. \$101,000
- B.** \$106,000
- c. \$61,000
- d. \$111,000

Direct materials	\$ 14,000
Direct labor.....	47,000
Manufacturing overhead*	<u>45,000</u>
Total cost added to Work in Process	<u>\$106,000</u>

*Applied manufacturing overhead: $\$5.00 \times 9,000$ direct labor-hours = \$45,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

Meyers Company had the following inventory balances at the beginning and end of November:

	November 1	November 30
Raw Materials	\$17,000	\$20,000
Finished Goods	\$50,000	\$44,000
Work in Process	\$9,000	\$11,000

During November, \$39,000 in raw materials (all direct materials) were drawn from inventory and used in production. The company's predetermined overhead rate was \$8 per direct labor-hour, and it paid its direct labor workers \$10 per hour. A total of 300 hours of direct labor time had been expended on the jobs in the beginning Work in Process inventory account. The ending Work in Process inventory account contained \$4,700 of direct materials cost. The Company incurred \$28,000 of actual manufacturing overhead cost during the month and applied \$26,400 in manufacturing overhead cost.

124. The raw materials purchased during November totaled:

- a. \$42,000
- b. \$45,000
- c. \$36,000
- d. \$39,000

Beginning Balance + Purchased – Used = End Balance of Raw Materials

Purchased = End Balance – Beginning Balance + Used

Purchased = \$20,000 – \$17,000 + \$39,000 = \$42,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

125. The direct materials cost in the November 1 Work in Process inventory account totaled:

- a. \$6,600
- b. \$6,000
- C.** \$3,600
- d. \$3,000

Beginning work in process inventory balance.....	\$9,000
Less: Direct labor cost (300 DLH × \$10 per DLH).....	3,000
Less: Manufacturing overhead (300 DLH × \$8 per DLH).....	<u>2,400</u>
Direct materials cost in beginning work in process inventory	<u><u>\$3,600</u></u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Medium

126. The actual direct labor-hours worked during November totaled:

- a. 2,800 hours
- B.** 3,300 hours
- c. 3,500 hours
- d. 3,600 hours

$$\begin{array}{rcccl} \text{Applied manufacturing} & & \text{Predetermined} & & \text{Direct} \\ \text{overhead} & \div & \text{overhead rate} & = & \text{Labor-Hours} \end{array}$$

$$\$26,400 \div \$8 \text{ per direct labor-hour} = 3,300 \text{ direct labor-hours}$$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Learning Objective: 5
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

127. The amount of direct labor cost in the November 30 Work in Process inventory was:

- a. \$2,800
- b. \$3,300
- c. \$3,500
- d. \$6,300

Ending work in process balance	\$11,000
Less: Direct materials cost.....	<u>4,700</u>
Amount in ending work in process that is direct labor and manufacturing overhead	<u>\$ 6,300</u>

Direct Labor-hours (DLHs) × \$10 per DLH = Direct Labor Cost

Direct Labor-hours (DLHs) × \$8 per DLH = Manufacturing Overhead

(DLHs × \$10 per DLH) + (DLHs × \$8 per DLH) = \$6,300

18 DLHs = \$6,300

DLHs = 350

350 DLHs × \$10 per DLH = \$3,500 Direct Labor Cost in Ending Work in Process

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Learning Objective: 5
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

The information below has been taken from the cost records of Tercel Company for the past year:

Raw materials used in production	\$326,000
Total manufacturing costs charged to jobs during the year (includes raw materials, direct labor, and manufacturing overhead applied at the rate of 60% of direct labor cost).....	\$686,000
Cost of goods available for sale	\$826,000
Selling and administrative expenses	\$25,000

Inventories

	Beginning	Ending
Raw Materials	\$75,000	\$85,000
Work in Process	\$80,000	\$30,000
Finished Goods	\$90,000	\$110,000

128. The cost of raw materials purchased during the year amounted to:

- a. \$411,000
- b. \$360,000
- c. \$316,000
- d.** \$336,000

Direct materials:

Raw materials inventory, beginning.....	\$ 75,000
Add purchases of raw materials*	<u>336,000</u>
Total raw materials available.....	411,000
Deduct raw materials inventory, ending.....	<u>85,000</u>
Raw materials used in production	<u>\$326,000</u>

* *This item must be found by working backwards up through the statements.*

*AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 6
Level: Medium
Source: CMA, adapted*

Chapter 002, Systems Design: Job-Order Costing

129. Direct labor costs charged to production during the year amounted to:

- a. \$135,000
- B. \$225,000**
- c. \$360,000
- d. \$216,000

Total manufacturing costs	\$686,000
Less: Raw materials used	<u>326,000</u>
Direct labor and manufacturing overhead combined	<u>\$360,000</u>

Since the manufacturing overhead is applied at the rate of 60% of the direct labor cost, the direct labor cost charged to production is \$225,000 (direct labor cost = \$360,000 ÷ 160%).

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 6
Level: Hard
Source: CMA, adapted

130. The Cost of Goods Manufactured during the year was:

- a. \$636,000
- b. \$766,000
- C. \$736,000**
- d. \$716,000

Total manufacturing costs	\$686,000
Add: Work in process, beginning	<u>80,000</u>
	766,000
Deduct: Work in process, ending	<u>30,000</u>
Cost of goods manufactured	<u>\$736,000</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Level: Medium
Source: CMA, adapted

Chapter 002, Systems Design: Job-Order Costing

131. The Cost of Goods Sold for the year (before disposition of any overhead underapplied or overapplied) was:

a. \$736,000

B. \$716,000

c. \$691,000

d. \$801,000

Finished goods inventory, beginning	\$ 90,000
Add: Cost of goods manufactured	<u>736,000</u>
Goods available for sale	826,000
Deduct: Finished goods inventory, ending	<u>110,000</u>
Cost of goods sold.....	<u><u>\$716,000</u></u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Level: Medium
Source: CMA, adapted

Chapter 002, Systems Design: Job-Order Costing

The following data are for Potras Company:

Finished goods inventory	\$30,000	\$40,000
Work in process inventory	\$20,000	\$13,000
Raw materials inventory	\$21,000	\$26,000
Purchases of raw materials.....	\$71,000	
Factory depreciation.....	\$5,000	
Other factory costs	\$10,000	
Direct labor	\$27,000	
Indirect labor	\$6,000	
Selling expense	\$12,000	
Underapplied or overapplied overhead.....	\$0	

132. The cost of raw materials used in production was:

- a. \$26,000
- b. \$71,000
- c. \$76,000
- D.** \$66,000

Direct materials:

Raw materials inventory, beginning.....	\$21,000	
Add purchases of raw materials	<u>71,000</u>	
Total raw materials available.....	92,000	
Deduct raw materials inventory, ending.....	<u>26,000</u>	
Raw materials used in production	<u>\$66,000</u>	

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

133. The cost of goods manufactured was:

- a. \$114,000
- b. \$133,000
- C. \$121,000**
- d. \$138,000

Direct materials:

Raw materials inventory, beginning.....	\$21,000	
Add purchases of raw materials	<u>71,000</u>	
Total raw materials available.....	92,000	
Deduct raw materials inventory, ending.....	<u>26,000</u>	
Raw materials used in production		\$ 66,000
Direct labor.....		27,000
Manufacturing overhead applied to work in process:		
Factory depreciation	5,000	
Other	10,000	
Indirect labor	<u>6,000</u>	<u>21,000</u>
Total manufacturing costs		114,000
Add: Work in process, beginning.....		<u>20,000</u>
		134,000
Deduct: Work in process, ending		<u>13,000</u>
Cost of goods manufactured.....		<u>\$121,000</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

134. The cost of goods sold was:

- a. \$131,000
- b. \$91,000
- c. \$81,000
- D. \$111,000**

Direct materials:

Raw materials inventory, beginning.....	\$21,000	
Add purchases of raw materials	<u>71,000</u>	
Total raw materials available.....	92,000	
Deduct raw materials inventory, ending.....	<u>26,000</u>	
Raw materials used in production		\$ 66,000
Direct labor.....		27,000
Manufacturing overhead applied to work in process:		
Factory depreciation	5,000	
Other	10,000	
Indirect labor	<u>6,000</u>	<u>21,000</u>
Total manufacturing costs		114,000
Add: Work in process, beginning.....		<u>20,000</u>
		134,000
Deduct: Work in process, ending		<u>13,000</u>
Cost of goods manufactured.....		<u>\$121,000</u>

Cost of goods sold:

Finished goods inventory, beginning.....	\$ 30,000
Add: Cost of goods manufactured	<u>121,000</u>
Goods available for sale.....	151,000
Deduct: Finished goods inventory, ending	<u>40,000</u>
Cost of goods sold.....	<u>\$111,000</u>

*AACSB: Analytic
 AICPA BB: Critical Thinking
 AICPA FN: Measurement
 AICPA FN: Reporting
 Learning Objective: 6
 Level: Medium*

Chapter 002, Systems Design: Job-Order Costing

The Bus Company uses a job-order costing system. The following information was recorded for September:

Job Number	September 1 Inventory	<u>Cost Added During September</u>	
		Direct Materials	Direct Labor
1	\$1,000	\$300	\$200
2	\$1,400	\$250	\$300
3	\$500	\$1,500	\$150
4	\$750	\$4,000	\$400

The direct labor wage rate is \$10 per hour. Overhead is applied at the rate of \$5 per direct labor-hour. Jobs 1, 2, and 3 have been completed and transferred to finished goods. Job 2 has been delivered to the customer.

Chapter 002, Systems Design: Job-Order Costing

135. The ending Work in Process inventory is:

- a. \$7,575
- B. \$5,350**
- c. \$4,325
- d. \$5,150

Cost Added During September

Job Number	September 1 Inventory	Direct Materials	Direct Labor	# of DLHs (DL\$ / \$10)	Overhead applied (DLH × \$5)	Total job cost
1	\$1,000	\$ 300	\$ 200	20	\$100	\$ 1,600
2	1,400	250	300	30	150	2,100
3	500	1,500	150	15	75	2,225
4	750	4,000	400	40	200	5,350
Totals	<u>\$3,650</u>	<u>\$6,050</u>	<u>\$1,050</u>		<u>\$525</u>	<u>\$11,275</u>

The only job remaining in work in process in Job 4, which has a total cost of \$5,350.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

136. The Cost of Goods Manufactured for September is:

- a. \$10,750
- b. \$11,275
- C. \$5,925**
- d. \$7,625

Cost Added During September

Job Number	September 1 Inventory	Direct Materials	Direct Labor	# of DLHs (DL\$ / \$10)	Overhead applied (DLH × \$5)	Total job cost
1	\$1,000	\$ 300	\$ 200	20	\$100	\$ 1,600
2	1,400	250	300	30	150	2,100
3	500	1,500	150	15	75	2,225
4	750	4,000	400	40	200	5,350 ⁽⁴⁾
Totals	<u>\$3,650</u>	<u>\$6,050 ⁽¹⁾</u>	<u>\$1,050 ⁽²⁾</u>		<u>\$525 ⁽³⁾</u>	<u>\$11,275</u>

Raw materials used	\$ 6,050	⁽¹⁾
Direct labor	1,050	⁽²⁾
Manufacturing overhead	<u>525</u>	⁽³⁾
Total manufacturing costs	7,625	
Add: Beginning work in process	<u>3,650</u>	
Available for use	11,275	
Less: Ending work in process	<u>5,350</u>	⁽⁴⁾
Cost of goods manufactured	<u>\$ 5,925</u>	

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

137. The Cost of Goods Sold for September (before disposition of any underapplied or overapplied overhead) is:

- A.** \$2,100
- b. \$5,925
- c. \$3,700
- d. \$1,950

Cost Added During September

Job Number	September 1 Inventory	Direct Materials	Direct Labor	# of DLHs (DL\$ / \$10)	Overhead applied (DLH × \$5)	Total job cost
1	\$1,000	\$ 300	\$ 200	20	\$100	\$ 1,600
2	1,400	250	300	30	150	2,100
3	500	1,500	150	15	75	2,225
4	750	4,000	400	40	200	⁽⁴⁾ 5,350
Totals	<u>\$3,650</u>	⁽¹⁾ \$6,050	⁽²⁾ \$1,050		⁽³⁾ \$525	<u>\$11,275</u>

Raw materials used	\$ 6,050	(1)
Direct labor	1,050	(2)
Manufacturing overhead	<u>525</u>	(3)
Total manufacturing costs	7,625	
Add: Beginning work in process	<u>3,650</u>	
Available for use	11,275	
Less: Ending work in process	<u>5,350</u>	(4)
Cost of goods manufactured	<u>\$ 5,925</u>	

(5) Job 1 (Total cost = \$1,600) and Job 3 (Total cost = \$2,225) compose the ending finished goods inventory of \$3,825.

Beginning finished goods inventory	\$ 0	
Add: Cost of goods manufactured	<u>5,925</u>	
Goods available for sale	5,925	
Less: Ending finished goods inventory	<u>3,825</u>	(5)
Cost of goods sold	<u>\$2,100</u>	

AACSB: Analytic
 AICPA BB: Critical Thinking
 AICPA FN: Measurement
 AICPA FN: Reporting
 Learning Objective: 6
 Level: Medium

Chapter 002, Systems Design: Job-Order Costing

Chavez Corporation reported the following data for the month of July:

Inventories	Beginning	Ending
Raw materials.....	\$27,000	\$30,000
Work in process	\$16,000	\$17,000
Finished goods	\$32,000	\$47,000

Additional information:

Raw materials purchases.....	\$66,000
Direct labor cost	\$91,000
Manufacturing overhead cost incurred	\$59,000
Indirect materials included in manufacturing overhead cost incurred.....	\$8,000
Manufacturing overhead cost applied to Work in Process.....	\$58,000

138. The direct materials cost for July is:

- a. \$55,000
- b. \$69,000
- c. \$63,000
- d. \$66,000

Direct materials:

Raw materials inventory, beginning.....	\$27,000
Add purchases of raw materials	<u>66,000</u>
Total raw materials available.....	93,000
Deduct raw materials inventory, ending.....	<u>30,000</u>
Raw materials used in production	63,000
Less: portion used for indirect materials	<u>8,000</u>
Direct materials cost	<u>\$55,000</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

139. The cost of goods manufactured for July is:

- A. \$203,000
- b. \$215,000
- c. \$204,000
- d. \$216,000

Direct materials:

Raw materials inventory, beginning.....	\$27,000	
Add purchases of raw materials	66,000	
Total raw materials available.....	93,000	
Deduct raw materials inventory, ending.....	30,000	
Raw materials used in production	63,000	
Less: portion used for indirect materials	8,000	
Direct materials cost	\$ 55,000	
Direct labor.....	91,000	
Manufacturing overhead applied to work in process	58,000	
Total manufacturing costs	204,000	
Add: Work in process, beginning.....	16,000	
	<u>220,000</u>	
Deduct: Work in process, ending	17,000	
Cost of goods manufactured.....	<u><u>\$203,000</u></u>	

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

140. The adjusted cost of goods sold that appears on the income statement for July is:
- a. \$218,000
 - b. \$188,000
 - c. \$203,000
 - D.** \$189,000

Chapter 002, Systems Design: Job-Order Costing

Direct materials:

Raw materials inventory, beginning.....	\$27,000	
Add purchases of raw materials	66,000	
Total raw materials available.....	93,000	
Deduct raw materials inventory, ending.....	30,000	
Raw materials used in production	63,000	
Less: portion used for indirect materials	8,000	
Direct materials cost		\$ 55,000
Direct labor.....		91,000
Manufacturing overhead applied to work in process		58,000
Total manufacturing costs		204,000
Add: Work in process, beginning.....		16,000
		220,000
Deduct: Work in process, ending		17,000
Cost of goods manufactured.....		<u><u>\$203,000</u></u>

Cost of goods sold:

Finished goods inventory, beginning	\$ 32,000
Add: Cost of goods manufactured.....	203,000
Goods available for sale	235,000
Deduct: Finished goods inventory, ending.....	47,000
Unadjusted cost of goods sold.....	188,000
Add: Underapplied manufacturing overhead	1,000*
Adjusted cost of goods sold.....	<u><u>\$189,000</u></u>

*Actual manufacturing overhead.....	\$59,000	
Applied manufacturing overhead	58,000	
To be added to cost of goods sold	<u><u>\$ 1,000</u></u>	underapplied

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Learning Objective: 8
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

Koczela Inc. has provided the following data for the month of May:

Inventories	Beginning	Ending
Work in process	\$17,000	\$12,000
Finished goods	\$46,000	\$50,000

Additional information:

Direct materials	\$57,000
Direct labor cost	\$87,000
Manufacturing overhead cost incurred	\$63,000
Manufacturing overhead cost applied to Work in Process...	\$61,000

141. The cost of goods manufactured for May is:

- a. \$205,000
- B. \$210,000**
- c. \$207,000
- d. \$212,000

Direct materials cost	\$57,000	
Direct labor	87,000	
Manufacturing overhead applied to work in process	61,000	
Total manufacturing costs		\$205,000
Add: Work in process, beginning		17,000
		222,000
Deduct: Work in process, ending		12,000
Cost of goods manufactured		\$210,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

142. The adjusted cost of goods sold that appears on the income statement for May is:

- a. \$206,000
- b. \$214,000
- c. \$208,000**
- d. \$210,000

Direct materials cost	\$57,000	
Direct labor	87,000	
Manufacturing overhead applied to work in process	61,000	
Total manufacturing costs		\$205,000
Add: Work in process, beginning		17,000
		222,000
Deduct: Work in process, ending		12,000
Cost of goods manufactured		\$210,000

Cost of goods sold:

Finished goods inventory, beginning	\$ 46,000	
Add: Cost of goods manufactured	210,000	
Goods available for sale	256,000	
Deduct: Finished goods inventory, ending	50,000	
Cost of goods sold	206,000	
Add: underapplied manufacturing overhead*	2,000	
Adjusted cost of goods sold		\$208,000

* Actual manufacturing overhead	\$63,000	
Applied manufacturing overhead	61,000	
To be added to cost of goods sold	\$ 2,000	underapplied

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

The Tse Manufacturing Company uses a job-order costing system and applies overhead to jobs using a predetermined overhead rate. The company closes any balance in the Manufacturing Overhead account to Cost of Goods Sold. During the year the company's Finished Goods inventory account was debited for \$125,000 and credited for \$110,000. The ending balance in the Finished Goods inventory account was \$28,000. At the end of the year, manufacturing overhead was overapplied by \$4,500.

143. The balance in the Finished Goods inventory account at the beginning of the year was:
- a. \$28,000
 - b. \$13,000**
 - c. \$17,500
 - d. \$8,500

Finished Goods			
Bal.	13,000*		
Given	125,000	Given	110,000
Bal.	28,000		

*Beginning Balance + Purchased – Used = Ending Balance

Beginning Balance + 125,000 – 110,000 = 28,000

Beginning Balance = 13,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

144. If the estimated manufacturing overhead for the year was \$24,000, and the applied overhead was \$26,500, the actual manufacturing overhead cost for the year was:

- a. \$19,500
- B. \$22,000**
- c. \$28,500
- d. \$31,000

Applied manufacturing overhead	\$26,500
Less amount of overapplied manufacturing overhead.....	<u>4,500</u>
Actual manufacturing overhead	<u><u>\$22,000</u></u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Learning Objective: 8
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

Summit Company has provided the following inventory balances and manufacturing cost data for the month of January:

Inventories	January 1	January 31
Direct materials	\$30,000	\$40,000
Work in process	\$15,000	\$20,000
Finished goods	\$65,000	\$50,000

Month of January

Cost of goods manufactured	\$515,000
Manufacturing overhead applied	\$150,000
Direct materials used.....	\$190,000
Actual manufacturing overhead.....	\$144,000

Under Summit's job-order costing system, any over or underapplied overhead is closed to the Cost of Goods Sold account at the end of the calendar year (i.e., December 31).

145. What was the total amount of direct material purchases during January?

- a. \$180,000
- b. \$190,000
- c. \$195,000
- d. \$200,000**

Direct materials:

Direct materials inventory, beginning	\$ 30,000
Add: Purchases of direct materials*	200,000
Total direct materials available	230,000
Deduct: Direct materials inventory, ending.....	40,000
Direct materials used in production.....	\$190,000

* This item must be found by working backwards up through the statement.

*AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Medium
Source: CPA, adapted*

Chapter 002, Systems Design: Job-Order Costing

146. How much direct labor cost was incurred during January?

- a. \$170,000
- b. \$175,000
- C. \$180,000**
- d. \$186,000

Direct materials:

Direct materials inventory, beginning	\$ 30,000
Add purchases of direct materials	200,000
Total direct materials available	230,000
Deduct direct materials inventory, ending.....	40,000
Direct materials used in production.....	\$190,000
Direct labor*	180,000
Manufacturing overhead applied to work in process ...	150,000
Total manufacturing costs	520,000
Add: Work in process, beginning.....	15,000
	535,000
Deduct: Work in process, ending	20,000
Cost of goods manufactured.....	\$515,000

*Solve backwards ($\$520,000 - 190,000 - 150,000 = 180,000$)

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Learning Objective: 8
Level: Hard
Source: CPA, adapted

Chapter 002, Systems Design: Job-Order Costing

Echher Corporation uses a job-order costing system and applies overhead to jobs using a predetermined overhead rate. During the year the company's Finished Goods inventory account was debited for \$218,000 and credited for \$218,500. The ending balance in the Finished Goods inventory account was \$13,000. At the end of the year, manufacturing overhead was overapplied by \$36,700.

147. The balance in the Finished Goods inventory account at the beginning of the year was:

- A.** \$13,500
- b. \$36,700
- c. \$500
- d. \$13,000

Finished Goods			
Bal. *	13,500		
Given	218,000	Given	218,500
Bal.	13,000		

*Beginning Balance + Purchased – Used = End Balance

Beginning Balance + 218,000 – 218,500 = 13,000

Beginning Balance = 13,500

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

148. If the applied manufacturing overhead was \$223,900, the actual manufacturing overhead cost for the year was:

- a. \$200,700
- b. \$260,600
- c. \$200,200
- D.** \$187,200

Applied manufacturing overhead	\$223,900
Less amount of overapplied manufacturing overhead.....	<u>36,700</u>
Actual manufacturing overhead	<u><u>\$187,200</u></u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

The following partially completed T-accounts summarize transactions for Faaberg Company during the year:

Raw Materials		
Bal.	4,500	8,000
	4,700	

Finished Goods		
Bal.	1,700	19,900
	21,700	

Work in Process		
Bal.	3,600	21,700
	5,700	
	8,000	
	7,800	

Manufacturing Overhead		
	2,300	7,800
	3,000	
	2,700	

Wages & Salaries Payable		
	19,900	Bal. 2,000
		11,000

Cost of Goods Sold		
	19,900	

Chapter 002, Systems Design: Job-Order Costing

149. The Cost of Goods Manufactured was:

- a. \$19,900
- B.** \$21,700
- c. \$41,600
- d. \$7,700

Journal entry for Cost of Goods Manufactured:

Finished Goods	21,700	
Work in Process		21,700

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Medium

150. The direct labor cost was:

- a. \$11,600
- b. \$19,900
- C.** \$8,000
- d. \$11,000

Journal entry for direct labor cost:

Work in Process	8,000	
Manufacturing Overhead	3,000	
Wages and Salaries Payable		11,000

The direct labor cost is the debit to Work in Process in this journal entry.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

151. The direct materials cost was:

- a. \$8,000
- B.** \$5,700
- c. \$3,600
- d. \$8,000

Journal entry for direct materials used:

Work in Process	5,700	
Manufacturing Overhead	2,300	
Raw Materials		8,000

The debit to Work in Process represents the direct materials cost.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Hard

152. The manufacturing overhead applied was:

- a. \$2,700
- b. \$3,000
- C.** \$7,800
- d. \$13,700

The credit to Manufacturing Overhead is the manufacturing overhead applied.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

153. The manufacturing overhead was:

- a. \$200 overapplied
- b. \$2,700 overapplied
- C.** \$200 underapplied
- d. \$2,700 underapplied

Actual manufacturing overhead	
(2,300 + 3,000 + 2,700).....	\$8,000
Applied manufacturing overhead*	<u>7,800</u>
Underapplied manufacturing overhead	<u>\$ 200</u>

* The credit to Manufacturing Overhead is the manufacturing overhead applied.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Medium

Essay Questions

154. A number of companies in different industries are listed below:

1. Electric utility
2. Frozen orange juice processor
3. Specialty coffee roaster (roasts small batches of specialty coffee beans)
4. Natural gas production company
5. Commercial photographer
6. Contract oil drilling company

Required:

For each company, indicate whether the company is most likely to use job-order costing or process costing.

1. Electric utility: Process Costing
2. Frozen orange juice processor: Process Costing
3. Specialty coffee roaster (roasts small batches of specialty coffee beans): Job-Order Costing
4. Natural gas production company: Process Costing
5. Commercial photographer: Job-Order Costing
6. Contract oil drilling company: Job-Order Costing

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA BB: Industry
AICPA FN: Reporting
Learning Objective: 1
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

155. Whether a company uses process costing or job-order costing depends on its industry. A number of companies in different industries are listed below:

1. Flour mill
2. Dairy farm
3. Electric utility
4. Custom boat builder
5. Management consulting firm
6. Aluminum refiner that makes aluminum ingots from bauxite ore

Required:

For each company, indicate whether the company is most likely to use job-order costing or process costing.

1. Flour mill: Process Costing
2. Dairy farm: Process Costing
3. Electric utility: Process Costing
4. Custom boat builder: Job-Order Costing
5. Management consulting firm: Job-Order Costing
6. Aluminum refiner that makes aluminum ingots from bauxite ore: Process Costing

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA BB: Industry
AICPA FN: Reporting
Learning Objective: 1
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

156. Some companies use process costing and some use job-order costing. Which method a company uses depends on its industry. A number of companies in different industries are listed below:

1. Construction company that builds office buildings
2. Winery that produces a variety of wines
3. Cement manufacturer
4. Mushroom farm that produces the standard button mushroom in caves
5. Aluminum refiner that makes aluminum ingots from bauxite ore

Required:

For each company, indicate whether the company is most likely to use job-order costing or process costing.

1. Construction company that builds office buildings: Job-Order Costing
2. Winery that produces a variety of wines: Job-Order Costing
3. Cement manufacturer: Process Costing
4. Mushroom farm that produces the standard button mushroom in caves: Process Costing
5. Aluminum refiner that makes aluminum ingots from bauxite ore: Process Costing

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA BB: Industry
AICPA FN: Reporting
Learning Objective: 1
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

157. Gilford Inc. uses a job-order costing system. Costs going through the company's work in process account during June are given below. Manufacturing overhead is applied to production using a predetermined overhead rate based on direct labor cost.

Work in Process			
Balance	0	Transferred out	95,000
Direct materials	20,000		
Direct labor	30,000		
Manufacturing overhead	60,000		
Balance	15,000		

Only Job 105 was still in process at the end of the month. This job had been charged with \$3,000 in direct materials cost.

Required:

a. Complete the following job-order costing card for Job 105:

Direct materials	\$3,000
Direct labor	_____
Manufacturing overhead	_____
Total cost at June 30.....	_____

b. Determine the total amount of materials cost charged to completed jobs during the month.

Chapter 002, Systems Design: Job-Order Costing

a. Since only Job 105 was in process at the end of the month, all of the \$15,000 balance in the Work in Process account must apply to it.

Total cost in Work in Process (all Job 105).....	\$15,000
Less materials cost in Job 105.....	<u>3,000</u>
Direct labor and manufacturing overhead cost	<u>\$12,000</u>

From the Work in Process T-account, it appears that manufacturing overhead is being applied at 200% of direct labor cost.

Let X = Direct labor cost

$$X + 2.00X = \$12,000$$

$$3X = \$12,000$$

$$X = \$4,000$$

Thus, direct labor cost in Job 105 is \$4,000, and manufacturing overhead cost is 200% × \$4,000 = \$8,000. Therefore,

Direct materials	\$ 3,000
Direct labor	4,000
Manufacturing overhead	<u>8,000</u>
Total cost at June 30.....	<u>\$15,000</u>

b. Since \$20,000 in materials cost was charged to Work in Process, and since only \$3,000 in materials cost applies to Job 105, the difference of \$17,000 represents the cost charged to completed jobs during the month.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Learning Objective: 3
Learning Objective: 5
Learning Objective: 7
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

158. Parker Company uses a job-order costing system and applies manufacturing overhead to jobs using a predetermined overhead rate based on direct labor-hours. Last year manufacturing overhead and direct labor-hours were estimated at \$50,000 and 20,000 hours, respectively, for the year. In June, Job #461 was completed. Materials costs on the job totaled \$4,000 and labor costs totaled \$1,500 at \$5 per hour. At the end of the year, it was determined that the company worked 24,000 direct labor-hours for the year and incurred \$54,000 in actual manufacturing overhead costs.

Required:

a. Job #461 contained 100 units. Determine the unit cost that would appear on the job cost sheet.

b. Determine the underapplied or overapplied overhead for the year.

a.

Direct materials.....	\$4,000
Direct labor	1,500
Manufacturing overhead (300* × \$2.50**).	<u>750</u>
Total.....	\$6,250
Unit product cost	\$62.50

* $\$1,500 \div \$5.00 \text{ per DLH} = 300 \text{ DLHs}$

** $\$50,000 \div 20,000 \text{ DLHs} = \2.50 per DLH

b.

Actual overhead cost	\$54,000
Overhead applied:	
24,000 DLHs × \$2.50 per DLH.....	<u>60,000</u>
Overapplied overhead.....	\$(6,000)

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

159. Stan Wilson, a newly hired worker at Superior Molding, was puzzled by the job cost sheets attached to the jobs he worked on. He understood the materials and labor cost entries—these represent the actual costs of materials he requisitioned for the job and the cost of the labor-hours he recorded for the job. However, he did not understand the entry for Manufacturing Overhead. This entry was made at the end of the day by the accountants and he had no idea where this number came from. He asked the company's controller, Mary Donner, but the only part of the explanation he understood was that the overhead entries do not represent actual overhead costs.

Required:

Explain to Stan what the Manufacturing Overhead entries on the job cost sheet mean.

The Manufacturing Overhead entries on the job cost sheet are arrived at by applying a predetermined overhead rate to the base, which is most likely direct labor-hours. This number does not represent actual overhead costs. There are several reasons for this. First, by definition, it is difficult or impossible to trace overhead costs to particular jobs. Therefore, actual overhead costs cannot really be traced to the jobs Stan works on. Even so, an "actual" rate could be used instead of a predetermined rate for spreading overhead costs among jobs. However, most companies choose to use a predetermined rate since actual rates tend to fluctuate and cannot be determined until the close of the accounting period.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Learning Objective: 3
Learning Objective: 5
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

160. Job 243 was recently completed. The following data have been recorded on its job cost sheet:

Direct materials	\$48,870
Direct labor-hours	405 labor-hours
Direct labor wage rate	\$13 per labor-hour
Machine-hours	486 machine-hours
Number of units completed.....	2,700 units

The company applies manufacturing overhead on the basis of machine-hours. The predetermined overhead rate is \$11 per machine-hour.

Required:

Compute the unit product cost that would appear on the job cost sheet for this job.

Cost Summary

Direct materials	\$48,870
Direct labor \$13 per DLH × 405 DLHs	5,265
Manufacturing overhead \$11 per MH × 486 MHs	<u>5,346</u>
Total cost.....	\$59,481
Unit product cost.....	\$22.03

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Learning Objective: 5
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

161. Job 652 was recently completed. The following data have been recorded on its job cost sheet:

Direct materials	\$59,400
Direct labor-hours	1,224 DLHs
Direct labor wage rate	\$15 per DLH
Number of units completed.....	3,600 units

The company applies manufacturing overhead on the basis of direct labor-hours. The predetermined overhead rate is \$35 per direct labor-hour.

Required:

Compute the unit product cost that would appear on the job cost sheet for this job.

Cost Summary

Direct materials	\$ 59,400
Direct labor \$15 per DLH \times 1,224 DLHs	18,360
Manufacturing overhead \$35 per DLH \times 1,224 DLHs ...	<u>42,840</u>
Total cost.....	\$120,600
Unit product cost	\$33.50

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 2
Learning Objective: 5
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

162. Alagan Company is a manufacturing firm that uses job-order costing. At the beginning of the year, the company's inventory balances were as follows:

Raw materials.....	\$10,000
Work in process	\$81,000
Finished goods	\$20,000

The company applies overhead to jobs using a predetermined overhead rate based on machine-hours. At the beginning of the year, the company estimated that it would work 37,000 machine-hours and incur \$222,000 in manufacturing overhead cost. The following transactions were recorded for the year:

- a. Raw materials were purchased, \$372,000.
- b. Raw materials were requisitioned for use in production, \$367,000 (\$345,000 direct and \$22,000 indirect).
- c. The following employee costs were incurred: direct labor, \$309,000; indirect labor, \$44,000; and administrative salaries, \$155,000.
- d. Selling costs, \$140,000.
- e. Factory utility costs, \$21,000.
- f. Depreciation for the year was \$163,000 of which \$154,000 is related to factory operations and \$9,000 is related to selling, general, and administrative activities.
- g. Manufacturing overhead was applied to jobs. The actual level of activity for the year was 37,000 machine-hours.
- h. The cost of goods manufactured for the year was \$894,000.
- i. Sales for the year totaled \$1,233,000 and the costs on the job cost sheets of the goods that were sold totaled \$879,000.
- j. The balance in the Manufacturing Overhead account was closed out to Cost of Goods Sold.

Required:

Prepare the appropriate journal entry for each of the items above. You can assume that all transactions with employees, customers, and suppliers were conducted in cash.

Chapter 002, Systems Design: Job-Order Costing

a.	Raw Materials Inventory	372,000	
	Cash		372,000
b.	Work in Process Inventory	345,000	
	Manufacturing Overhead	22,000	
	Raw Materials Inventory		367,000
c.	Work in Process Inventory	309,000	
	Manufacturing Overhead	44,000	
	Administrative Salary Expense	155,000	
	Cash		508,000
d.	Selling Expenses	140,000	
	Cash		140,000
e.	Manufacturing Overhead	21,000	
	Cash		21,000
f.	Manufacturing Overhead	154,000	
	Depreciation Expense	9,000	
	Accumulated Depreciation		163,000
g.	Work in Process	222,000	
	Manufacturing Overhead		222,000
h.	Finished Goods	894,000	
	Work in Process		894,000
i.	Cash	1,233,000	
	Sales		1,233,000
	Cost of Goods Sold	879,000	
	Finished Goods		879,000
j.	Cost of Goods Sold	19,000	
	Manufacturing Overhead		19,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 4
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

163. The Collins Company uses a job-order costing system and applies manufacturing overhead cost to jobs on the basis of the cost of materials used in production. At the beginning of the most recent year, the following estimates were made as a basis for computing the predetermined overhead rate for the year: manufacturing overhead cost, \$200,000; direct materials cost, \$160,000. The following transactions took place during the year (all purchases and services were acquired on account):

- a. Raw materials purchased, \$86,000.
- b. Raw materials requisitioned for use in production (all direct materials), \$98,000.
- c. Utility costs incurred in the factory, \$15,000.
- d. Salaries and wages incurred as follows:
 - Direct labor, \$175,000.
 - Indirect labor, \$70,000.
 - Selling and administrative salaries, \$125,000.
- e. Maintenance costs incurred in the factory, \$15,000.
- f. Advertising costs incurred, \$89,000.
- g. Depreciation recorded for the year, \$80,000 (80% relates to factory assets and the remainder relates to selling, general, and administrative assets).
- h. Rental cost incurred on buildings, \$70,000, (75% of the space is occupied by the factory, and 25% is occupied by sales and administration).
- i. Miscellaneous selling, general, and administrative costs incurred, \$11,000.
- j. Manufacturing overhead cost was applied to jobs as per company policy.
- k. Cost of goods manufactured for the year, \$500,000.
- l. Sales for the year totaled \$1,000,000. These goods cost \$600,000 to manufacture.

Required:

Prepare journal entries for each of the above transactions. Assume that all transactions with external suppliers, employees, and customers were conducted in cash.

Chapter 002, Systems Design: Job-Order Costing

a.	Raw Materials Inventory	86,000	
	Cash		86,000
b.	Work in Process Inventory	98,000	
	Raw Materials Inventory		98,000
c.	Manufacturing Overhead	15,000	
	Cash		15,000
d.	Work in Process	175,000	
	Manufacturing Overhead	70,000	
	Salaries Expense	125,000	
	Cash		370,000
e.	Manufacturing Overhead	15,000	
	Cash		15,000
f.	Advertising Expense	89,000	
	Cash		89,000
g.	Manufacturing Overhead	64,000	
	Depreciation Expense	16,000	
	Accumulated Depreciation		80,000
h.	Manufacturing Overhead	52,500	
	Rent Expense	17,500	
	Cash		70,000
i.	Miscellaneous Expense	11,000	
	Cash		11,000
j.	Work in Process	122,500	
	Manufacturing Overhead		122,500
	(((\$200,000/\$160,000) × \$98,000))		
k.	Finished Goods	500,000	
	Work in Process		500,000
l.	Cash	1,000,000	
	Sales		1,000,000
	Cost of Goods Sold	600,000	
	Finished Goods		600,000

Chapter 002, Systems Design: Job-Order Costing

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 4
Learning Objective: 5
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

164. Baba Company is a manufacturing firm that uses job-order costing. The company's inventory balances were as follows at the beginning and end of the year:

	Beginning Balance	Ending Balance
Raw materials.....	\$22,000	\$25,000
Work in process	\$52,000	\$34,000
Finished goods	\$121,000	\$136,000

The company applies overhead to jobs using a predetermined overhead rate based on machine-hours. At the beginning of the year, the company estimated that it would work 40,000 machine-hours and incur \$200,000 in manufacturing overhead cost. The following transactions were recorded for the year:

- Raw materials were purchased, \$412,000.
- Raw materials were requisitioned for use in production, \$409,000 (\$362,000 direct and \$47,000 indirect).
- The following employee costs were incurred: direct labor, \$324,000; indirect labor, \$57,000; and administrative salaries, \$129,000.
- Selling costs, \$135,000.
- Factory utility costs, \$22,000.
- Depreciation for the year was \$102,000 of which \$94,000 is related to factory operations and \$8,000 is related to selling, general, and administrative activities.
- Manufacturing overhead was applied to jobs. The actual level of activity for the year was 44,000 machine-hours.
- Sales for the year totaled \$1,198,000.

Required:

- a. Prepare a schedule of cost of goods manufactured in good form.
- b. Was the overhead underapplied or overapplied? By how much?
- c. Prepare an income statement for the year in good form. The company closes any underapplied or overapplied overhead to Cost of Goods Sold.

Chapter 002, Systems Design: Job-Order Costing

a. Schedule of cost of goods manufactured

Estimated total manufacturing overhead (a)	\$200,000
Estimated total machine-hours (b)	<u>40,000</u>
Predetermined overhead rate (a) ÷ (b)	<u>\$5.00</u>
Actual total machine-hours (a).....	44,000
Predetermined overhead rate (b).....	<u>\$5.00</u>
Overhead applied (a) × (b).....	<u>\$220,000</u>
Direct materials:	
Raw materials inventory, beginning	\$ 22,000
Add: purchases of raw materials.....	<u>412,000</u>
Total raw materials available	434,000
Deduct: raw materials inventory, ending	<u>25,000</u>
Raw materials used in production.....	409,000
Less: indirect materials	<u>47,000</u>
Direct materials	\$362,000
Direct labor	324,000
Manufacturing overhead applied	<u>220,000</u>
Total manufacturing costs	906,000
Add: Beginning work in process inventory	<u>52,000</u>
	958,000
Deduct: Ending work in process inventory.....	<u>34,000</u>
Cost of goods manufactured	<u>\$924,000</u>

b. Overhead underapplied or overapplied

Actual manufacturing overhead cost incurred:	
Indirect materials	\$ 47,000
Indirect labor.....	57,000
Factory utilities	22,000
Factory depreciation.....	<u>94,000</u>
Manufacturing overhead cost incurred	220,000
Manufacturing overhead applied	220,000
Overhead is neither underapplied nor overapplied	\$0

c. Income Statement

Chapter 002, Systems Design: Job-Order Costing

Beginning finished goods inventory	\$ 121,000	
Cost of goods manufactured	<u>924,000</u>	
Goods available for sale	1,045,000	
Ending finished goods inventory	<u>136,000</u>	
Unadjusted cost of goods sold	909,000	
Deduct: underapplied or overapplied overhead	<u>0</u>	
Adjusted cost of goods sold	<u>\$ 909,000</u>	
Sales		\$1,198,000
Cost of goods sold (adjusted).....		<u>909,000</u>
Gross margin		289,000
Less selling and administrative expenses:		
Administrative salaries.....	\$129,000	
Selling costs	135,000	
Depreciation	<u>8,000</u>	<u>272,000</u>
Net operating income		<u>\$ 17,000</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Learning Objective: 6
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

165. Dotsero Technology, Inc., has a job-order costing system. The company uses predetermined overhead rates in applying manufacturing overhead cost to individual jobs. The predetermined overhead rate in Department A is based on machine-hours, and the rate in Department B is based on direct materials cost. At the beginning of the most recent year, the company's management made the following estimates for the year:

	Department A	Department B
Machine-hours	70,000	19,000
Direct labor-hours	30,000	60,000
Direct materials cost.....	\$195,000	\$282,000
Direct labor cost.....	\$260,000	\$520,000
Manufacturing overhead cost.....	\$420,000	\$705,000

Job 243 entered into production on April 1 and was completed on May 12. The company's cost records show the following information about the job:

	Department A	Department B
Machine-hours	250	60
Direct labor-hours	70	120
Direct materials cost.....	\$840	\$1,100
Direct labor cost.....	\$610	\$880

At the end of the year, the records of Dotsero showed the following actual cost and operating data for all jobs worked on during the year:

	Department A	Department B
Machine-hours	61,000	20,000
Direct labor-hours	28,000	66,000
Direct materials cost.....	\$156,000	\$284,000
Manufacturing overhead cost.....	\$385,000	\$705,000

Required:

- a. Compute the predetermined overhead rates for Department A and Department B.
- b. Compute the total overhead cost applied to Job 243.
- c. Compute the amount of underapplied or overapplied overhead in each department at the end of the current year.

Chapter 002, Systems Design: Job-Order Costing

a. Department A predetermined overhead rate:

Estimated overhead cost/Estimated machine-hours = $\$420,000/70,000 = \6.00

Department B predetermined overhead rate:

Estimated overhead cost/Estimated direct materials cost = $\$705,000/\$282,000$
 = 250% of direct materials cost

b. Overhead applied to Job 243:

Department A: $250 \times \$6.00$	\$1,500
Department B: $\$1,100 \times 2.5$	<u>2,750</u>
	<u>\$4,250</u>

c.

	Department A	Department B
Manufacturing overhead incurred.....	\$385,000	\$705,000
Manufacturing overhead applied:		
$61,000 \times \$6.00$	<u>366,000</u>	
$\$284,000 \times 250\%$		<u>710,000</u>
Underapplied (overapplied) overhead.....	<u>\$ 19,000</u>	<u>\$ (5,000)</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 10
Learning Objective: 3
Learning Objective: 5
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

166. Carver Test Systems manufactures automated testing equipment. The company uses a job-order costing system and applies overhead on the basis of machine-hours. At the beginning of the year, estimated manufacturing overhead was \$1,960,000 and the estimated machine-hours was 98,000. Data regarding several jobs at Carver are presented below.

Job Number	Beginning Balance	Direct Materials	Direct Labor	Machine Hours
XJ-107.....	\$118,600	\$4,000	\$8,400	150
ST-211.....	\$121,450	\$2,500	\$12,160	300
XD-108.....	\$21,800	\$86,400	\$36,650	3,100
SL-205.....	\$34,350	\$71,800	\$32,175	2,700
RX-115.....	\$0	\$18,990	\$21,845	1,400

By the end of the first month (January), all jobs but RX-115 were completed, and all completed jobs had been delivered to customers except for SL-205.

Required:

What was the balance in Finished Goods inventory at the end of January?

The Finished Goods inventory consists only of Job SL-205. The balance in the account is computed as follows:

Beginning balance, Job SL-205	\$ 34,350
November charges to Job SL-205:	
Direct materials.....	71,800
Direct labor	32,175
Manufacturing overhead applied*	<u>54,000</u>
Ending balance, Job SL-205	<u>\$192,325</u>

* Predetermined overhead rate = $\$1,960,000 \div 98,000 \text{ MHs} = \20 per MH

Overhead applied = $2,700 \text{ MHs} \times \$20 \text{ per MH} = \$54,000$

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 5
Level: Hard

Chapter 002, Systems Design: Job-Order Costing

167. Scanlon Company has a job-order costing system and applies manufacturing overhead cost to products on the basis of machine-hours. The following estimates were used in preparing the predetermined overhead rate for the most recent year:

Machine-hours	95,000
Manufacturing overhead cost.....	\$1,710,000

During the most recent year, a severe recession in the company's industry caused a buildup of inventory in the company's warehouses. The company's cost records revealed the following actual cost and operating data for the year:

Machine-hours	75,000
Manufacturing overhead cost.....	\$1,687,500
Amount of applied overhead in inventories at year-end:	
Work in process	\$337,500
Finished goods	\$253,125
Amount of applied overhead in cost of goods sold.....	\$759,375

Required:

- Compute the company's predetermined overhead rate for the year and the amount of underapplied or overapplied overhead for the year.
- Determine the difference between net operating income for the year if the underapplied or overapplied overhead is allocated to the appropriate accounts rather than closed directly to Cost of Goods Sold.

Chapter 002, Systems Design: Job-Order Costing

The company's predetermined overhead rate for the year is:

$$\$1,710,000/95,000 \text{ MHs} = \$18 \text{ per MH}$$

The amount of underapplied/overapplied overhead is:

Actual overhead	\$1,687,500
Applied overhead (\$18 × 75,000)	<u>1,350,000</u>
Underapplied overhead	<u>\$ 337,500</u>

Allocation of underapplied overhead:

Overhead applied in work in process	\$ 337,500	25.00%	\$ 84,375
Overhead applied in finished goods	253,125	18.75%	63,281
Overhead applied in cost of goods sold	<u>759,375</u>	56.25%	<u>189,844</u>
Total overhead applied	<u>\$1,350,000</u>	100.00%	<u>\$337,500</u>

The entire amount of underapplied overhead \$337,500 is added to Cost of Goods Sold where no allocation occurs. Allocation results in only \$189,844 being added to Cost of Goods Sold. Net operating income would be higher under allocation by \$337,500 - \$189,844 = \$147,656.

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 3
Learning Objective: 8
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

168. Bushman Co., Inc., uses a job-order costing system in its manufacturing operations. The company recorded the following transactions during the past week:

- a. Purchased 75 kilograms of raw materials at \$30 per kilogram.
- b. The payroll showed 412 hours of factory labor at \$7 per hour. Analysis shows that 38 of the 412 hours are classified as indirect labor and the remainder are classified as direct labor.
- c. Requisitions filled by the raw materials storeroom consisted of \$1,875 of direct materials and \$224 of indirect materials.
- d. Depreciation on factory equipment totaled \$380.
- e. The plant superintendent's salary was \$1,775.
- f. Other manufacturing overhead items incurred amounted to \$2,016.
- g. Manufacturing overhead was applied at the rate of \$8 per direct labor-hour.
- h. Jobs having a total cost of \$6,023 were completed and transferred to the finished goods warehouse.
- i. Sales (all on account) totaled \$12,701.
- j. Cost of Goods Sold for the sales noted in (i) amounted to \$8,090.

Required:

Prepare journal entries to record the transactions for the week. Assume all purchases are on account. Key your answers to letters a. through j. above.

Chapter 002, Systems Design: Job-Order Costing

a.	Raw materials	2,250	
	Accounts payable		2,250
b.	Work in process	2,618	
	Manufacturing overhead	266	
	Wages payable		2,884
c.	Work in process	1,875	
	Manufacturing overhead	224	
	Raw materials		2,099
d.	Manufacturing overhead	380	
	Accumulated depreciation		380
e.	Manufacturing overhead	1,775	
	Wages payable		1,775
f.	Manufacturing overhead	2,016	
	Accounts payable		2,016
g.	Work in process	2,992	
	Manufacturing overhead		2,992
	(412 hours – 38 hours) × \$8 per hour		
h.	Finished goods	6,023	
	Work in process		6,023
i.	Accounts receivable	12,701	
	Sales		12,701
j.	Cost of goods sold	8,090	
	Finished goods		8,090

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Learning Objective: 5
Learning Objective: 6
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

169. During June, Briganti Corporation purchased \$79,000 of raw materials on credit to add to its raw materials inventory. A total of \$64,000 of raw materials was requisitioned from the storeroom for use in production. These requisitioned raw materials included \$4,000 of indirect materials.

Required:

Prepare journal entries to record the purchase of materials and their use in production.

Raw Materials	79,000	
Accounts Payable		79,000
Work in Process	60,000	
Manufacturing Overhead	4,000	
Raw Materials		64,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

170. During December, Moulding Corporation incurred \$76,000 of actual Manufacturing Overhead costs. During the same period, the Manufacturing Overhead applied to Work in Process was \$74,000.

Required:

Prepare journal entries to record the incurrence of manufacturing overhead and the application of manufacturing overhead to Work in Process.

Manufacturing Overhead	76,000	
Various accounts		76,000
Work in Process	74,000	
Manufacturing Overhead		74,000

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 4
Level: Easy

Chapter 002, Systems Design: Job-Order Costing

171. Mat Company's actual manufacturing overhead cost for the month ended March 31 was \$78,000. The company's predetermined overhead rate was 50% of direct labor cost. Other information pertaining to Mat Company's inventories and production for the month of March is as follows:

Beginning inventories, March 1:	
Direct materials	\$20,000
Work in process	\$40,000
Finished goods	\$102,000
Purchases of direct materials during March.....	\$110,000
Direct labor cost	\$160,000
Ending inventories, March 31	
Direct materials	\$26,000
Work in process	\$36,000
Finished goods	\$105,000

Required:

- Determine the amount of direct materials used during March.
- Determine the underapplied or overapplied overhead for the month.
- Determine the Cost of Goods Manufactured for the month.

Chapter 002, Systems Design: Job-Order Costing

a.

Direct materials:	
Beginning inventory	\$ 20,000
Purchases	<u>110,000</u>
Direct materials available.....	130,000
Less ending inventory	<u>26,000</u>
Direct materials used.....	<u>\$104,000</u>

b.

Actual overhead cost	\$78,000
Applied overhead cost 50% × \$160,000 .	<u>80,000</u>
Overapplied overhead cost	<u>\$(2,000)</u>

c.

Direct materials (above).....	\$104,000
Direct labor.....	160,000
Manufacturing overhead cost applied	<u>80,000</u>
Total manufacturing costs	344,000
Add: Beginning work in process	<u>40,000</u>
	384,000
Deduct: Ending work in process	<u>36,000</u>
Cost of goods manufactured.....	<u>\$348,000</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 5
Learning Objective: 6
Learning Objective: 8
Level: Medium
Source: CPA, adapted

Chapter 002, Systems Design: Job-Order Costing

172. Bledsoe Corporation has provided the following data for the month of November:

Inventories:	Beginning	Ending
Raw materials.....	\$25,000	\$21,000
Work in process	\$17,000	\$10,000
Finished goods	\$48,000	\$56,000

Additional information:

Raw materials purchases.....	\$72,000
Direct labor cost.....	\$92,000
Manufacturing overhead cost incurred	\$42,000
Indirect materials included in manufacturing overhead cost incurred.....	\$4,000
Manufacturing overhead cost applied to Work in Process	\$41,000

Required:

Prepare a Schedule of Cost of Goods Manufactured and a Schedule of Cost of Goods Sold in good form.

Chapter 002, Systems Design: Job-Order Costing

Cost of Goods Manufactured

Direct materials:		
Beginning materials inventory	\$25,000	
Add: Purchases of raw materials.....	<u>72,000</u>	
Raw materials available for use	97,000	
Deduct: Ending raw materials inventory	<u>21,000</u>	
Raw materials used in production.....	76,000	
Less indirect materials included in manufacturing overhead incurred	<u>4,000</u>	\$ 72,000
Direct labor		92,000
Manufacturing overhead applied to Work in Process		<u>41,000</u>
Total manufacturing costs		205,000
Add: Beginning work in process inventory		<u>17,000</u>
		222,000
Deduct: Ending work in process inventory.....		<u>10,000</u>
Cost of goods manufactured		<u>\$212,000</u>

Cost of Goods Sold

Beginning finished goods inventory	\$ 48,000
Add: Cost of goods manufactured	<u>212,000</u>
Goods available for sale	260,000
Deduct: Ending finished goods inventory.....	<u>56,000</u>
Unadjusted cost of goods sold	204,000
Add: Underapplied overhead	<u>1,000</u>
Adjusted cost of goods sold	<u>\$205,000</u>

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Measurement
AICPA FN: Reporting
Learning Objective: 6
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

173. Eppich Corporation has provided the following data for the most recent month:

Raw materials, beginning balance	\$16,000
Work in process, beginning balance	\$31,000
Finished Goods, beginning balance	\$49,000
Transactions:	
(1) Raw materials purchases	\$80,000
(2) Raw materials used in production (all direct materials).....	\$77,000
(3) Direct labor.....	\$51,000
(4) Manufacturing overhead costs incurred	\$88,000
(5) Manufacturing overhead applied.....	\$71,000
(6) Cost of units completed and transferred from Work in Process to Finished Goods.....	\$190,000
(7) Any overapplied or underapplied manufacturing overhead is closed to Cost of Goods Sold	?
(8) Finished goods are sold	\$219,000

Required:

Prepare T-accounts for Raw Materials, Work in Process, Finished Goods, Manufacturing Overhead, and Cost of Goods Sold. Record the beginning balances and each of the transactions listed above. Finally, determine the ending balances.

Chapter 002, Systems Design: Job-Order Costing

Raw Materials			
Beginning balance	\$16,000	(2) Direct materials	\$77,000
(1) Raw materials purchases	\$80,000		
Ending balance			
	\$19,000		

Work in Process			
Beginning balance	\$31,000	(6) Transfer to FG	\$190,000
(2) Direct materials	\$77,000		
(3) Direct labor	\$51,000		
(5) Manufacturing overhead applied	\$71,000		
Ending balance			
	\$40,000		

Finished Goods			
Beginning balance	\$49,000	(8) Cost of goods sold	\$219,000
(6) Transfer from WIP	\$190,000		
Ending balance			
	\$20,000		

Manufacturing Overhead			
(4) Manufacturing overhead incurred	\$88,000	(5) Manufacturing overhead applied	\$71,000
Manufacturing overhead underapplied	\$17,000	(7) To COGS	\$17,000

Cost of Goods Sold			
(7) Manufacturing overhead underapplied	\$17,000		
(8) Cost of goods sold	\$219,000		
	\$236,000		

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

174. During May, Sharpton Corporation recorded the following:

Raw materials, beginning balance	\$18,000
Work in process, beginning balance	\$32,000
Finished Goods, beginning balance	\$56,000

Transactions:

(1) Raw materials purchases	\$65,000
(2) Raw materials used in production (all direct materials).....	\$73,000
(3) Direct labor.....	\$74,000
(4) Manufacturing overhead costs incurred	\$72,000
(5) Manufacturing overhead applied.....	\$89,000
(6) Cost of units completed and transferred from Work in Process to Finished Goods.....	\$252,000
(7) Any overapplied or underapplied manufacturing overhead is closed to Cost of Goods Sold	?
(8) Finished goods are sold	\$288,000

Required:

Prepare T-accounts for Raw Materials, Work in Process, Finished Goods, and Manufacturing Overhead, and Cost of Goods Sold. Record the beginning balances and each of the transactions listed above. Finally, determine the ending balances.

Chapter 002, Systems Design: Job-Order Costing

Raw Materials

Beginning balance	\$18,000	(2) Direct materials	\$73,000
(1) Raw materials purchases	\$65,000		
Ending balance	\$10,000		

Work in Process

Beginning balance	\$32,000	(6) Transfer to FG	\$252,000
(2) Direct materials	\$73,000		
(3) Direct labor	\$74,000		
(5) Manufacturing overhead applied	\$89,000		
Ending balance	\$16,000		

Finished Goods

Beginning balance	\$56,000	(8) Cost of goods sold	\$288,000
(6) Transfer from WIP	\$252,000		
Ending balance	\$20,000		

Manufacturing Overhead

(4) Manufacturing overhead incurred	\$72,000	(5) Manufacturing overhead applied	\$89,000
(7) To COGS	\$17,000	Manufacturing overhead overapplied	\$17,000

Cost of Goods Sold

		(7) Manufacturing overhead overapplied	\$17,000
(8) Cost of goods sold	\$288,000		
	\$271,000		

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Medium

Chapter 002, Systems Design: Job-Order Costing

175. Prahm Inc. has provided the following data for August:

Raw materials, beginning balance	\$19,000
Work in process, beginning balance	\$33,000
Finished Goods, beginning balance	\$52,000

Transactions:

(1) Raw materials purchases	\$67,000
(2) Raw materials used in production (all direct materials)	\$78,000
(3) Direct labor.....	\$77,000
(4) Manufacturing overhead costs incurred	\$64,000
(5) Manufacturing overhead applied.....	\$71,000
(6) Cost of units completed and transferred from Work in Process to Finished Goods	\$255,000
(7) Any overapplied or underapplied manufacturing overhead is closed to Cost of Goods Sold.....	?
(8) Finished goods are sold	\$294,000

Required:

Prepare T-accounts for Raw Materials, Work in Process, Finished Goods, and Manufacturing Overhead, and Cost of Goods Sold. Record the beginning balances and each of the transactions listed above. Finally, determine the ending balances.

Chapter 002, Systems Design: Job-Order Costing

Raw Materials			
Beginning balance	\$19,000	(2) Direct materials	\$78,000
(1) Raw materials purchases	\$67,000		
Ending balance	\$8,000		

Work in Process			
Beginning balance	\$33,000	(6) Transfer to FG	\$255,000
(2) Direct materials	\$78,000		
(3) Direct labor	\$77,000		
(5) Manufacturing overhead applied	\$71,000		
Ending balance	\$4,000		

Finished Goods			
Beginning balance	\$52,000	(8) Cost of goods sold	\$294,000
(6) Transfer from WIP	\$255,000		
Ending balance	\$13,000		

Manufacturing Overhead			
(4) Manufacturing overhead incurred	\$64,000	(5) Manufacturing overhead applied	\$71,000
(7) To COGS	\$7,000	Manufacturing overhead overapplied	\$7,000

Cost of Goods Sold			
		(7) Manufacturing overhead overapplied	\$7,000
(8) Cost of goods sold	\$294,000		
	\$287,000		

AACSB: Analytic
AICPA BB: Critical Thinking
AICPA FN: Reporting
Learning Objective: 7
Level: Medium