Chapter 3: Product Costing and Cost Accumulation in a Batch Production Environment

MULTIPLE CHOICE QUESTIONS

1. Product costing in a manufacturing firm is the process of:
   A. accumulating the company's period costs.
   B. allocating costs among the firm's departments.
   C. placing a value on the company's fixed assets.
   D. assigning costs to the firm's inventory.
   E. assigning costs to the company's managers.

   Answer: D LO: 1 Type: RC

2. Which of the following statements is true?
   A. Service firms have little need for determining the cost of their services.
   B. The concept of product costing is relevant only for manufacturing firms.
   C. The cost of year-end inventory appears on the balance sheet as an expense.
   D. Service companies use cost information for planning and control purposes.
   E. Mining and petroleum companies have no inventoriable costs.

   Answer: D LO: 1 Type: RC

3. Which of the following manufacturers would most likely use job-order costing?
   A. Chemical manufacturers.
   B. Microchip processors.
   C. Custom-furniture manufacturers.
   D. Gasoline refiners.
   E. Fertilizer manufacturers.

   Answer: C LO: 3 Type: RC

4. A custom-home builder would likely utilize:
   A. job-order costing.
   B. process costing.
   C. mass customization.
   D. process budgeting.
   E. joint costing.

   Answer: A LO: 3 Type: RC

5. Which of the following types of companies would most likely use process costing?
   A. Aircraft manufacturers.
   B. Textile manufacturers.
   C. Textbook publishers.
   D. Custom-machining firms.
   E. Shipbuilders.

   Answer: B LO: 3 Type: RC

6. A manufacturing firm produces goods in accordance with customer specifications, commencing production upon receipt of a purchase order. To accumulate the cost of each order, the company would use a:
   A. job-cost record.
   B. cost allocation matrix.
   C. production log.
   D. overhead sheet.
   E. manufacturing cost record.

   Answer: A LO: 3 Type: RC

7. A typical job-cost record would provide information about all of the following items related to an order except:
   A. the cost of direct materials used.
   B. administrative costs.
   C. direct labor costs incurred.
   D. applied manufacturing overhead.
   E. direct labor hours worked.

   Answer: B LO: 3 Type: RC

8. Which of the following statements about material requisitions is false?
   A. Material requisitions are often computerized.
   B. Material requisitions are a common example of source documents.
   C. Material requisitions contain information that is useful to the cost accounting department.
   D. Material requisitions authorize the transfer of materials from the production floor to the raw materials warehouse.
   E. Material requisitions are routinely linked to a bill of materials that lists all of the materials needed to complete a job.

   Answer: D LO: 3 Type: RC

9. Pruitt Company has developed an integrated system that coordinates the flow of all goods, services, and information into and out of the organization, working with raw material vendors as well as customers to improve service and reduce costs. The firm is said to be using:
   A. participative management.
   B. top-down management.
   C. strategic cost management.
   D. supply chain management.
   E. management by objectives (MBO).

   Answer: D LO: 3 Type: RC

10. The assignment of direct labor cost to individual jobs is based on:
    A. an estimate of the total time spent on the job.
    B. actual total payroll cost divided equally among all jobs in process.
    C. estimated total payroll cost divided equally among all jobs in process.
    D. the actual time spent on each job multiplied by the wage rate.
    E. the estimated time spent on each job multiplied by the wage rate.

    Answer: D LO: 3 Type: N

11. The total production cost of a job is composed of:
    A. direct material and direct labor.
    B. direct material, direct labor, manufacturing overhead, and outlays for selling costs.
    C. direct material, direct labor, manufacturing overhead, and outlays for both selling and administrative costs.
    D. direct material, direct labor, and applied manufacturing overhead.
    E. direct material, direct labor, and actual manufacturing overhead.

    Answer: D LO: 3 Type: RC

12. Manufacturing overhead:
    A. includes direct materials, indirect materials, indirect labor, and factory depreciation.
    B. is easily traced to jobs.
    C. includes all selling costs.
    D. should not be assigned to individual jobs because it bears no obvious relationship to them.
    E. is a pool of indirect production costs that must somehow be attached to each unit manufactured.

    Answer: E LO: 3 Type: RC

13. As production takes place, all manufacturing costs are added to the:
    A. Work-in-Process Inventory account.
    B. Manufacturing-Overhead Inventory account.
    C. Cost-of-Goods-Sold account.
    D. Finished-Goods Inventory account.
    E. Production Labor account.

    Answer: A LO: 2, 5 Type: RC

14. Which of the following statements regarding work in process is <u>not</u> correct?
    A. Work in process is partially completed inventory.
    B. Work in process consists of direct labor, direct material, and manufacturing overhead.
    C. Work-in-Process Inventory is debited to record direct material used and direct labor incurred.
    D. Work-in-Process Inventory appears on the year-end balance sheet.
    E. Work-in-Process Inventory is credited when goods are sold.

    Answer: E LO: 2, 5 Type: N

15. Which of the following statements about manufacturing cost flows is false?
    A. Direct materials, direct labor, and manufacturing overhead are entered in the Work-in-Process Inventory account.
    B. The Finished-Goods Inventory account will contain entries that reflect the cost of goods sold during the period.
    C. The cost of units sold during the period will typically appear on the income statement.
    D. When a company sells goods that cost $54,000 for $60,000, the firm will enter $6,000 in an account entitled Profit on Sale.
    E. Units are normally transferred from Work-in-Process Inventory to Finished-Goods Inventory.

    Answer: D LO: 2, 5 Type: N

16. Which of the following statements about materials is false?
    A. Acquisitions of materials are normally charged to the Purchases account.
    B. The use of direct materials gives rise to a debit to Work-in-Process Inventory.
    C. The use of indirect materials gives rise to a debit to Manufacturing Overhead.
    D. The use of indirect materials gives rise to a credit to Manufacturing Supplies Inventory.
    E. Direct materials are accounted for in a different manner than indirect materials.

    Answer: A LO: 5 Type: A

17. Longview Corporation recently used $72,000 of direct materials and $3,000 of indirect materials in production activities. The journal entries reflecting these transactions would include:
    A. a debit to Raw-Material Inventory for $72,000.
    B. a debit to Manufacturing Overhead for $3,000.
    C. a credit to Manufacturing Overhead for $3,000.
    D. a debit to Work-in-Process Inventory for $75,000.
    E. a debit to Manufacturing Overhead for $75,000.

    Answer: B LO: 5 Type: A

18. A review of a company's Work-in-Process Inventory account found a debit for materials of $67,000. If all procedures were performed in the correct manner, this means that the firm:
    A. also recorded a credit to Raw-Material Inventory.
    B. also recorded a credit to Manufacturing Supplies Inventory.
    C. was accounting for the usage of direct materials.
    D. was accounting for the usage of indirect materials.
    E. was accounting for the usage of direct materials by also crediting the Raw-Material Inventory account.

    Answer: E LO: 5 Type: N

19. Oregon Manufacturing incurred $106,000 of direct labor and $11,000 of indirect labor. The proper journal entry to record these events would include a debit to Work in Process for:
    A. $0 because Work in Process should be credited.
    B. $0 because Work in Process is not affected.
    C. $11,000.
    D. $106,000.
    E. $117,000.

    Answer: D LO: 5 Type: A

20. The following information relates to October:

    Production supervisor's salary: $2,500
    Factory maintenance wages: 250 hours at $8 per hour

    The journal entry to record the preceding information is:

A.	Manufacturing Overhead	4,500	
	Wages Payable		4,500
B.	Wages Payable	4,500	
	Manufacturing Overhead		4,500
C.	Work-in-Process Inventory	4,500	
	Wages Payable		4,500
D.	Wages Payable	4,500	
	Work-in-Process Inventory		4,500
E.	Work-in-Process Inventory	2,500	
	Manufacturing Overhead	2,000	
	Wages Payable		4,500

    Answer: A LO: 5 Type: A

21. Electricity costs that were incurred by a company's production processes should be debited to:
    A. Utilities Expense.
    B. Accounts Payable.
    C. Cash.
    D. Manufacturing Overhead.
    E. Work-in-Process Inventory.

    Answer: D LO: 5 Type: A

22. The journal entry needed to record $5,000 of advertising for Westwood Manufacturing would include:
    A. a debit to Advertising Expense.
    B. a credit to Advertising Expense.
    C. a debit to Manufacturing Overhead.
    D. a credit to Manufacturing Overhead.
    E. a debit to Projects-in-Process.

    Answer: A LO: 5 Type: A

23. Regency Company incurred $90,000 of depreciation for the year. Eighty percent relates to the firm's production facilities, and 20% relates to sales and administrative offices. If all items are handled in the proper manner, a review of the company's accounting records should reveal a:
    A. debit to Depreciation Expense for $90,000.
    B. debit to Manufacturing Overhead for $90,000.
    C. debit to Manufacturing Overhead for $72,000.
    D. debit to Work-in-Process Inventory for $18,000.
    E. credit to Cash for $90,000.

    Answer: C LO: 5 Type: A

24. The process of assigning overhead costs to the jobs that are worked on is commonly called:
    A. service department cost allocation.
    B. overhead cost distribution.
    C. overhead application.
    D. transfer costing.
    E. overhead cost apportionment.

    Answer: C LO: 4, 5 Type: RC

25. Which of the following is the correct method to calculate a predetermined overhead rate?
    A. Budgeted total manufacturing cost ÷ budgeted amount of cost driver.
    B. Budgeted overhead cost ÷ budgeted amount of cost driver.
    C. Budgeted amount of cost driver ÷ budgeted overhead cost.
    D. Actual overhead cost ÷ budgeted amount of cost driver.
    E. Actual overhead cost ÷ actual amount of cost driver.

    Answer: B LO: 4, 5 Type: RC

26. Metro Corporation uses a predetermined overhead rate of $20 per machine hour. In deriving this figure, the company's accountant used:
    A. a denominator of budgeted machine hours for the current accounting period.
    B. a denominator of actual machine hours for the current accounting period.
    C. a denominator of actual machine hours for the previous accounting period.
    D. a numerator of budgeted machine hours for the current accounting period.
    E. a numerator of actual machine hours for the current accounting period.

    Answer: A LO: 4, 5 Type: N

27. Horton Company applies overhead based on direct labor hours. At the beginning of 20x1, the company estimated that manufacturing overhead would be $500,000, and direct labor hours would be 10,000. Actual overhead by the conclusion of 20x1 amounted to $400,000. On the basis of this information, Horton's 20x1 predetermined overhead rate is:
    A. $0.02 per direct labor hour.
    B. $0.025 per direct labor hour.
    C. $40 per direct labor hour.
    D. $50 per direct labor hour.
    E. none of the above.

    Answer: D LO: 4, 5 Type: A

28. Dale Company, which applies overhead at the rate of 190% of direct labor cost, began work on job no. 101 during June. The job was completed in July and sold during August, having accumulated direct material and labor charges of $27,000 and $15,000, respectively. On the basis of this information, the total overhead applied to job no. 101 amounted to:
    A. $0.
    B. $28,500.
    C. $51,300.
    D. $70,500.
    E. $79,800.

    Answer: B LO: 4, 5 Type: A

29. Huxtable charges manufacturing overhead to products by using a predetermined application rate, computed on the basis of machine hours. The following data pertain to the current year:

    Budgeted manufacturing overhead: $480,000
    Actual manufacturing overhead: $440,000
    Budgeted machine hours: 20,000
    Actual machine hours: 16,000

    Overhead applied to production totaled:
    A. $352,000.
    B. $384,000.
    C. $550,000.
    D. $600,000.
    E. some other amount.

    Answer: B LO: 4, 5 Type: A

30. Treetops worked on four jobs during its first year of operation: nos. 401, 402, 403, and 404. Nos. 401 and 402 were completed by year-end, and no. 401 was sold at a profit of 40% of cost. A review of job no. 403's cost record revealed direct material charges of $20,000 and total manufacturing costs of $25,000. If Treetops applies overhead at 150% of direct labor cost, the overhead applied to job no. 403 must have been:
    A. $0.
    B. $2,000.
    C. $3,000.
    D. $3,333.
    E. $5,000.

    Answer: C LO: 4, 5 Type: A

31. The left side of the Manufacturing Overhead account is used to accumulate:
    A. actual manufacturing overhead costs incurred throughout the accounting period.
    B. overhead applied to Work-in-Process Inventory.
    C. underapplied overhead.
    D. predetermined overhead.
    E. overapplied overhead.

    Answer: A LO: 5 Type: RC

32. Throughout the accounting period, the credit side of the Manufacturing Overhead account is used to accumulate:
    A. actual manufacturing overhead costs.
    B. overhead applied to Work-in-Process Inventory.
    C. overapplied overhead.
    D. underapplied overhead.
    E. predetermined overhead.

    Answer: B LO: 5 Type: RC

33. An accountant recently debited Work-in-Process Inventory and credited Manufacturing Overhead. The accountant was:
    A. applying a predetermined overhead amount to production.
    B. recognizing receipt of the factory utilities bill.
    C. recording a year-end adjustment for an insignificant amount of underapplied overhead.
    D. recognizing actual overhead incurred during the period.
    E. recognizing the completion of production.

    Answer: A LO: 5 Type: N

34. The final step in recognizing the completion of production requires a company to:
    A. debit Finished-Goods Inventory and credit Work-in-Process Inventory.
    B. debit Work-in-Process Inventory and credit Finished-Goods Inventory.
    C. add direct labor to Work-in-Process Inventory.
    D. add direct materials, direct labor, and manufacturing overhead to Work-in-Process Inventory.
    E. add direct materials to Finished-Goods Inventory.

    Answer: A LO: 2, 5 Type: RC

35. Job no. C12 was completed in November at a cost of $18,500, subdivided as follows: direct material, $3,500; direct labor, $6,000; and manufacturing overhead, $9,000. The journal entry to record this information is:

A.	Finished-Goods Inventory	18,500	
	Work-in-Process Inventory		18,500
B.	Work-in-Process Inventory	18,500	
	Finished-Goods Inventory		18,500
C.	Work-in-Process Inventory	18,500	
	Raw-Material Inventory		3,500
	Wages Payable		6,000
	Manufacturing Overhead		9,000
D.	Cost of Goods Sold	18,500	
	Finished-Goods Inventory		18,500
E.	Finished-Goods Inventory	18,500	
	Cost of Goods Sold		18,500

    Answer: A LO: 5 Type: A

36. If a company sells goods that cost $70,000 for $82,000, the firm will:
    A. reduce Finished-Goods Inventory by $70,000.
    B. reduce Finished-Goods Inventory by $82,000.
    C. report sales revenue on the balance sheet of $82,000.
    D. reduce Cost of Goods Sold by $70,000.
    E. follow more than one of the above procedures.

    Answer: A LO: 2, 5 Type: A

37. Selto Manufacturing recently sold goods that cost $35,000 for $45,000 cash. The journal entries to record this transaction would include:
    A. a credit to Work-in-Process Inventory for $35,000.
    B. a debit to Sales Revenue for $45,000.
    C. a credit to Profit on Sale for $10,000.
    D. a debit to Finished-Goods Inventory for $35,000.
    E. a credit to Sales Revenue for $45,000.

    Answer: E LO: 2, 5 Type: A

38. A computer manufacturer recently shipped several laptops to a customer (cost: $25,000) and billed the customer $30,000. Which of the following options correctly expresses the accounts that are debited and credited to record this transaction?
    A. Debits: Accounts Receivable, Finished-Goods Inventory; credits: Sales Revenue, Cost of Goods Sold.
    B. Debits: Accounts Receivable, Cost of Goods Sold; credits: Sales Revenue, Finished-Goods Inventory.
    C. Debits: Sales Revenue, Cost of Goods Sold; credits: Accounts Receivable, Finished-Goods Inventory.
    D. Debits: Sales Revenue, Finished-Goods Inventory; credits: Accounts Receivable, Cost of Goods Sold.
    E. Debits: Accounts Receivable; credits: Finished-Goods Inventory, Profit on Sale.

    Answer: B LO: 5 Type: A

39. Barney Company applies manufacturing overhead by using a predetermined rate of 200% of direct labor cost. The data that follow pertain to job no. 764:

Direct material cost	$55,000
Direct labor cost	40,000

    If Barney adds a 40% markup on total cost to generate a profit, which of the following choices depicts a portion of the accounting needed to record the sale of job no. 764?

	Account Debited	Amount
A.	Cost of Goods Sold	$175,000
B.	Cost of Goods Sold	$245,000
C.	Finished-Goods Inventory	$175,000
D.	Finished-Goods Inventory	$245,000
E.	Sales Revenue	$245,000

    Answer: A LO: 5 Type: A

40. Armada Company applies manufacturing overhead by using a predetermined rate of 150% of direct labor cost. The data that follow pertain to job no. 831:

Direct material cost	$72,000
Direct labor cost	38,000

If Armada adds a 30% markup on total cost to generate a profit, which of the following choices depicts a portion of the accounting needed to record the sale of job no. 831?

	Account Debited	Amount
A.	Accounts Receivable	$167,000
B.	Accounts Receivable	$217,100
C.	Finished-Goods Inventory	$167,000
D.	Finished-Goods Inventory	$217,100
E.	Sales Revenue	$217,100

Answer: B LO: 5 Type: A

41. Media, Inc., an advertising agency, applies overhead to jobs on the basis of direct professional labor hours. Overhead was estimated to be $150,000, direct professional labor hours were estimated to be 15,000, and direct professional labor cost was projected to be $225,000. During the year, Media incurred actual overhead costs of $146,000, actual direct professional labor hours of 14,500, and actual direct labor cost of $222,000. By year-end, the firm's overhead was:
A. $1,000 underapplied.
B. $1,000 overapplied.
C. $4,000 underapplied.
D. $4,000 overapplied.
E. $5,000 underapplied.

Answer: A LO: 5 Type: A

42. Maher, Inc., applies manufacturing overhead at the rate of $60 per machine hour. Budgeted machine hours for the current period were anticipated to be 80,000; however, a lengthy strike resulted in actual machine hours being worked of only 65,000. Budgeted and actual manufacturing overhead figures for the year were $4,800,000 and $4,180,000, respectively. On the basis of this information, the company's year-end overhead was:
A. overapplied by $280,000.
B. underapplied by $280,000.
C. overapplied by $620,000.
D. underapplied by $620,000.
E. underapplied by $900,000.

Answer: B LO: 5 Type: A

43. Carlson charges manufacturing overhead to products by using a predetermined application rate, computed on the basis of labor hours. The following data pertain to the current year:

    Budgeted manufacturing overhead: $1,600,000
    Actual manufacturing overhead: $1,632,000
    Budgeted labor hours: 50,000
    Actual labor hours: 48,000

    Which of the following choices denotes the correct status of manufacturing overhead at year-end?
    A. Overapplied by $32,000.
    B. Underapplied by $32,000.
    C. Overapplied by $68,000.
    D. Overapplied by $96,000.
    E. Underapplied by $96,000.

    Answer: E LO: 5 Type: A

44. Sanger Corporation debited Cost of Goods Sold and credited Manufacturing Overhead at year-end. On the basis of this information, one can conclude that:
    A. budgeted overhead exceeded actual overhead.
    B. budgeted overhead exceeded applied overhead.
    C. budgeted overhead was less than applied overhead.
    D. actual overhead exceeded applied overhead.
    E. actual overhead was less than applied overhead.

    Answer: D LO: 5 Type: N

45. Howard Manufacturing's overhead at year-end was underapplied by $5,800, a small amount given the firm's size. The year-end journal entry to record this amount would include:
    A. a debit to Cost of Goods Sold.
    B. a debit to Manufacturing Overhead.
    C. a debit to Work-in-Process Inventory.
    D. a credit to Cost of Goods Sold.
    E. a credit to Work-in-Process Inventory.

    Answer: A LO: 5 Type: A

46. Fog Company, which uses labor hours to apply overhead to manufacturing, may have increased amounts of underapplied overhead at month-end if:
    A. suppliers of direct materials have an across-the-board price increase.
    B. an accountant failed to record the period's charges for plant maintenance and security.
    C. employees are hit hard with a widespread outbreak of the flu.
    D. direct laborers are granted a wage increase.
    E. outlays for advertising expenditures are increased.

    Answer: C LO: 5 Type: N

47. The estimates used to calculate the predetermined overhead rate will virtually always:
    A. prove to be correct.
    B. result in a year-end balance of zero in the Manufacturing Overhead account.
    C. result in overapplied overhead that is closed to Cost of Goods Sold if it is immaterial in amount.
    D. result in underapplied overhead that is closed to Cost of Goods Sold if it is immaterial in amount.
    E. result in either underapplied or overapplied overhead that is closed to Cost of Goods Sold if it is immaterial in amount.

    Answer: E LO: 5 Type: N

48. Under- or overapplied manufacturing overhead at year-end is most commonly:
    A. charged or credited to Work-in-Process Inventory.
    B. charged or credited to Cost of Goods Sold.
    C. charged or credited to a special loss account.
    D. prorated among Work-in-Process Inventory, Finished-Goods Inventory, and Cost of Goods Sold.
    E. ignored because there is no effect on the Cash account.

    Answer: B LO: 5 Type: RC

49. When underapplied or overapplied manufacturing overhead is prorated, amounts can be assigned to which of the following accounts?
    A. Raw-Material Inventory, Manufacturing Overhead, and Direct Labor.
    B. Cost of Goods Sold, Work-in-Process Inventory, and Finished-Goods Inventory.
    C. Work-in-Process Inventory, Raw-Material Inventory, and Cost of Goods Sold.
    D. Raw-Material Inventory, Finished-Goods Inventory, and Cost of Goods Sold.
    E. Raw-Material Inventory, Work-in-Process Inventory, and Finished-Goods Inventory

    Answer: B LO: 5 Type: RC

50. Fletcher, Inc., disposes of under- or overapplied overhead at year-end as an adjustment to cost of goods sold. Prior to disposal, the firm reported cost of goods sold of $590,000 in a year when manufacturing overhead was underapplied by $15,000. If sales revenue totaled $1,400,000, determine (1) Fletcher's adjusted cost of goods sold and (2) gross margin.

	Adjusted Cost of Goods Sold	Gross Margin
A.	$575,000	$810,000
B.	$575,000	$825,000
C.	$590,000	$810,000
D.	$605,000	$795,000
E.	$605,000	$810,000

    Answer: D LO: 6 Type: A

51. Which of the following statement(s) is (are) correct regarding overhead application?

I. Actual overhead rates result in more accurate but less timely information.
II. Predetermined overhead rates result in less accurate but more timely information.
III. Predetermined overhead rates tend to smooth product costs over time.

A. III only.
B. I and II.
C. I and III.
D. II and III.
E. I, II, and III.

Answer: E LO: 6 Type: RC

52. The term "normal costing" refers to the use of:
A. job-costing systems.
B. computerized accounting systems.
C. targeted overhead rates.
D. predetermined overhead rates.
E. actual overhead rates.

Answer: D LO: 6 Type: RC

53. Which of the following statements about the use of direct labor as a cost driver is <u>false</u>?
A. Direct labor is the most commonly used cost driver when calculating a predetermined overhead rate.
B. Direct labor is gaining in importance in many manufacturing applications with respect to being a significant cost driver.
C. Direct labor is an inappropriate cost driver to use if a company is highly automated.
D. If direct labor is a good cost driver, increases in direct labor are matched with increases in manufacturing overhead.
E. Companies can use either direct labor cost or direct labor hours as a cost driver.

Answer: B LO: 6 Type: RC

54. If the amount of effort and attention to products varies substantially throughout a firm's various manufacturing operations, the firm might consider the use of:
A. a plant-wide overhead rate.
B. departmental overhead rates.
C. actual overhead rates instead of predetermined overhead rates.
D. direct labor hours to determine the overhead rate.
E. machine hours to determine the overhead rate.

Answer: B LO: 6 Type: N

55. In the two-stage cost allocation process, costs are assigned:
    A. from jobs, to service departments, to production departments.
    B. from service departments, to jobs, to production departments.
    C. from service departments, to production departments, to jobs.
    D. from production departments, to jobs, to service departments.
    E. from the balance sheet (when goods are produced), to the income statement (when goods are sold).

    Answer: C LO: 7 Type: RC

56. Which of the following entities would not likely be a user of job-costing systems?
    A. Custom-furniture manufacturers.
    B. Repair shops.
    C. Hospitals.
    D. Accounting firms.
    E. None of the above, as all are likely users.

    Answer: E LO: 8 Type: N

57. Which of the following would not likely be used by service providers to accumulate job costs?
    A. Projects.
    B. Contracts.
    C. Clients.
    D. Processes.
    E. All of the above, as service providers cannot use job-costing systems.

    Answer: D LO: 8 Type: RC

58. At the Nassau Advertising Agency, partner and staff compensation cost is a key driver of agency overhead. In light of this fact, which of the following is the correct expression to determine the amount of overhead applied to a particular client job?
    A. (Budgeted overhead ÷ budgeted compensation) x budgeted compensation cost on the job.
    B. (Budgeted overhead ÷ budgeted compensation) x actual compensation cost on the job.
    C. (Budgeted compensation ÷ budgeted overhead) x budgeted compensation cost on the job.
    D. (Budgeted compensation ÷ budgeted overhead) x actual compensation cost on the job.
    E. None of the above, because service providers do not apply overhead to jobs.

    Answer: B LO: 8 Type: RC

59. In comparison with firms that use plantwide overhead rates and departmental overhead rates, companies that have adopted activity-based costing will typically use:
    A. more cost pools and more cost drivers.
    B. more cost pools and fewer cost drivers.
    C. fewer cost pools and more cost drivers.
    D. fewer cost pools and fewer cost drivers.
    E. only one cost pool and one cost driver.

    Answer: A LO: 9 Type: RC

EXERCISES

Manufacturing Cost Flows, Journal Entries

60. The selected data that follow relate to the Berger Furniture Company.

Direct material purchased	$160,000
Direct material used	79,000
Direct labor	170,000
Manufacturing overhead incurred	100,000
Manufacturing overhead applied	90,000

During the year, products costing $310,000 were completed, and products costing $316,000 were sold for $455,000.

Required:
Prepare journal entries to record the preceding transactions and events.

LO: 2, 5 Type: A

Answer:

Raw-Material Inventory	160,000	
Accounts Payable		160,000
Work-in-Process Inventory	79,000	
Raw-Material Inventory		79,000
Work-in-Process Inventory	170,000	
Wages Payable		170,000
Manufacturing Overhead	100,000	
Miscellaneous Accounts		100,000
Work-in-Process Inventory	90,000	
Manufacturing Overhead		90,000
Finished-Goods Inventory	310,000	
Work-in-Process Inventory		310,000
Cost of Goods Sold	316,000	
Finished-Goods Inventory		316,000
Accounts Receivable	455,000	
Sales Revenue		455,000

Basic Journal Entries, Job-Order Costing

61. Quartz Products started and finished job no. C19 during June. The job required $15,000 of direct material and 75 hours of direct labor at $12 per hour. The predetermined overhead rate is $16 per direct labor hour.

    During June, direct materials requisitions for all jobs totaled $149,000; the total direct labor hours and cost were 6,200 hours at $12 per hour; and the total cost of jobs completed was $337,500. All of these figures include data that pertain to job no. C19.

    Required:
    A. Prepare journal entries that summarize June's total activity.
    B. Determine the cost of job no. C19.

    LO: 5 Type: A

    Answer:

A.	Work-in-Process Inventory	149,000	
	Raw-Material Inventory		149,000
	Work-in-Process Inventory	74,400	
	Wages Payable		74,400
	Work-in-Process Inventory	99,200	
	Manufacturing Overhead		99,200
	Finished-Goods Inventory	337,500	
	Work-in-Process Inventory		337,500

B.	Direct material	$15,000
	Direct labor (75 x $12)	900
	Manufacturing overhead applied (75 x $16)	1,200
	Total cost of job no. C19	$17,100

Job Costing: Journal-Entry Emphasis

62. Dexter Corporation, which uses a job costing system, had two jobs in process at the start of 20x1: job no. 59 ($95,000) and job no. 60 ($39,500). The following information is available:
    - The company applies manufacturing overhead on the basis of machine hours. Budgeted overhead and machine activity for the year were anticipated to be $720,000 and 20,000 hours, respectively.
    - The company worked on three jobs during the first quarter. Direct materials used, direct labor incurred, and machine hours consumed were:

Job No.	Direct Material	Direct Labor	Machine Hours
59	$18,000	$45,000	900
60	----	25,000	600
61	37,000	35,000	1,200

- Manufacturing overhead during the first quarter included charges for depreciation ($20,000), indirect labor ($50,000), indirect materials used ($4,000), and other factory costs ($108,700).
- Dexter completed job no. 59 and job no. 60. Job no. 59 was sold for cash, producing a profit of $24,600 for the firm.

Required:

A. Determine the company's predetermined overhead application rate.
B. Prepare journal entries as of March 31 to record the following. *(Note:* Use summary entries where appropriate by combining individual job data.)
   1. The issuance of direct material to production, and the direct labor incurred.
   2. The manufacturing overhead incurred during the quarter.
   3. The application of manufacturing overhead to production.
   4. The completion of job no. 59 and no. 60.
   5. The sale of job no. 59.

LO: 4, 5 Type: A

Answer:

A. Predetermined overhead rate: $720,000 ÷ 20,000 hours = $36 per machine hour

B.	1.	Work-in-Process Inventory	55,000*	
		Raw-Material Inventory		55,000
		Work-in-Process Inventory	105,000**	
		Wages Payable		105,000
		* $18,000 + $37,000 = $55,000		
		**$45,000 + $25,000 + $35,000 = $105,000		
	2.	Manufacturing Overhead	182,700	
		Accumulated Depreciation		20,000
		Wages Payable		50,000
		Manufacturing Supplies Inventory		4,000
		Miscellaneous Accounts		108,700
	3.	Work-in-Process Inventory	97,200*	
		Manufacturing Overhead		97,200
		*(900 + 600 + 1,200) x $36 = $97,200		
	4.	Finished-Goods Inventory	276,500*	
		Work-in-Process Inventory		276,500
		*No. 59: $95,000 + $18,000 + $45,000 + (900 x $36) = $190,400		
		No. 60: $39,500 + $25,000 + (600 x $36) = $86,100		
	5.	Cash	215,000*	
		Sales Revenue		215,000
		*$190,400 + $24,600 = $215,000		
		Cost of Goods Sold	190,400	
		Finished-Goods Inventory		190,400

Fundamentals of Manufacturing Accounting

63. Brickman Corporation, which began operations on January 1 of the current year, reported the following information:

Estimated manufacturing overhead	$ 600,000
Actual manufacturing overhead	639,000
Estimated direct labor cost	480,000
Actual direct labor cost	500,000
Total debits in the Work-in-Process account	1,880,000
Total credits in the Finished-Goods account	920,000

Brickman applies manufacturing overhead to jobs on the basis of direct labor cost and adds a 60% markup to the cost of completed production when finished goods are sold. On December 31, job no. 18 was the only job that remained in production. That job had direct-material and direct-labor charges of $16,500 and $36,000, respectively.

Required:
A. Determine the company's predetermined overhead rate.
B. Determine the amount of under- or overapplied overhead. Be sure to label your answer.
C. Compute the amount of direct materials used in production.
D. Calculate the balance the company would report as ending work-in-process inventory.
E. Prepare the journal entry(ies) needed to record Brickman's sales, which are all made on account.

LO: 2, 4, 5 Type: A

Answer:
A. Predetermined overhead rate: $600,000 ÷ $480,000 = 125% of direct labor cost

B. Actual manufacturing overhead ($639,000) - applied overhead ($500,000 x 125% = $625,000) = $14,000 underapplied

C. Total debits to Work-in-Process ($1,880,000) - direct labor ($500,000) - applied overhead ($625,000) = direct materials used ($755,000)

D. The only job in production is job no. 18, which has direct material of $16,500 and direct labor of $36,000. Applied overhead amounts to $45,000 ($36,000 x 125%), yielding a total job cost of $97,500 ($16,500 + $36,000 + $45,000).

E. The company's cost of goods sold equals $920,000, resulting in sales revenues of $1,472,000 ($920,000 x 160%). Thus:

Accounts Receivable	1,472,000	
Sales Revenue		1,472,000
Cost of Goods Sold	920,000	
Finished-Goods Inventory		920,000

Job-Costing Computations, Overhead Application

64. Montgomery, Inc., which uses a job-costing system, is a labor-intensive firm, with many skilled craftspeople on the payroll. Job no. 789 was the only job in process on January 1, having costs of $22,500 as of that date. Direct materials used and direct labor incurred during January were:

Job No.	Direct Materials	Direct Labor
789	$ 2,000	$ 6,000
790	9,000	10,000
791	14,000	8,000

Job no. 791 was the only job in production as of January 31.

Required:

A. Should Montgomery use direct labor or machine hours as a cost driver. Why?
B. Assume that the company decided to use direct labor as its cost driver. If the budgeted amounts of direct labor and manufacturing overhead are anticipated to be $200,000 and $300,000, respectively, what is the firm's predetermined overhead rate?
C. Compute the cost of work-in-process inventory as of January 31.
D. Compute the cost of jobs completed during January.
E. Suppose that the company sold all of its completed jobs, adding a 40% markup to cost. How much would the firm report as sales revenue?

LO: 4, 5 Type: A

Answer:

A. The company should use direct labor because it is a labor-intensive firm, with many skilled craftspeople on the payroll. More than likely, a majority of overhead is "driven" by people rather than machine operation.

B. $300,000 ÷ $200,000 = 150% of direct labor cost

C.

Direct material	$14,000
Direct labor	8,000
Manufacturing overhead ($8,000 x 150%)	12,000
Total cost of job no. 791	$34,000

D.

Beginning work in process	$22,500
Direct material ($2,000 + $9,000)	11,000
Direct labor ($6,000 + $10,000)	16,000
Manufacturing overhead ($16,000 x 150%)	24,000
Total cost of job nos. 789 and 790	$73,500

E. Sales revenue: $102,900 ($73,500 x 140%)

Overview of Job-Costing Systems, Overhead Accounting

65. Rockville, Inc., which uses a job-costing system, began business on January 1, 20x3 and applies manufacturing overhead on the basis of direct-labor cost. The following information relates to 20x3:
    - Budgeted direct labor and manufacturing overhead were anticipated to be $200,000 and $250,000, respectively.
    - Job nos. 1, 2, and 3 were begun during the year and had the following charges for direct material and direct labor:

Job No.	Direct Materials	Direct Labor
1	$145,000	$35,000
2	320,000	65,000
3	55,000	80,000

    - Job nos. 1 and 2 were completed and sold on account to customers at a profit of 60% of cost. Job no. 3 remained in production.
    - Actual manufacturing overhead by year-end totaled $233,000. Rockville adjusts all under- and overapplied overhead to cost of goods sold.

    Required:
    A. Compute the company's predetermined overhead application rate.
    B. Compute Rockville's ending work-in-process inventory.
    C. Determine Rockville's sales revenue.
    D. Was manufacturing overhead under- or overapplied during 20x3? By how much?
    E. Present the necessary journal entry to handle under- or overapplied manufacturing overhead at year-end.
    F. Does the presence of under- or overapplied overhead at year-end indicate that Rockville's accountants made a serious error? Briefly explain.

    LO: 4, 5 Type: A, N

    Answer:
    A. $250,000 ÷ $200,000 = 125% of direct labor cost

    B. Job no. 3:

Direct material	$ 55,000
Direct labor	80,000
Manufacturing overhead ($80,000 x 125%)	100,000
Total cost of job no. 3	$235,000

    C. Job nos. 1 and 2:

Direct material ($145,000 + $320,000)	$465,000
Direct labor ($35,000 + $65,000)	100,000
Manufacturing overhead ($100,000 x 125%)	125,000
Total cost of job nos. 1 and 2	$690,000

    Sales revenue: $1,104,000 ($690,000 x 160%)

D. Actual overhead $233,000
Applied overhead: [($35,000 + $65,000 + $80,000) x 125%] 225,000
Underapplied overhead $ 8,000

E. Cost of Goods Sold 8,000
Manufacturing Overhead 8,000

F. No. Companies use a predetermined application rate for several reasons, including the fact that manufacturing overhead is not easily traced to jobs and products. The predetermined rate is based on estimates of both overhead and an appropriate cost driver, and situations where these amounts coincide precisely with actual experiences are rare. As a result, under- or overapplied overhead typically arises at year-end.

Overhead Calculations

66. Athens Corporation uses a job-cost system and applies manufacturing overhead to products on the basis of machine hours. The company's accountant estimated that overhead and machine hours would total $800,000 and 50,000, respectively, for 20x1. Actual costs incurred follow.

Direct material used	$250,000
Direct labor	300,000
Manufacturing overhead	816,000

The manufacturing overhead figure presented above excludes $27,000 of sales commissions incurred by the firm. An examination of job-cost records revealed that 18 jobs were sold during the year at a total cost of $2,960,000. These goods were sold to customers for $3,720,000. Actual machine hours worked totaled 51,500, and Athens adjusts under- or overapplied overhead at year-end to Cost of Goods Sold.

Required:
A. Determine the company's predetermined overhead application rate.
B. Determine the amount of under- or overapplied overhead at year-end. Be sure to indicate whether overhead was under- or overapplied.
C. Compute the company's cost of goods sold.
D. What alternative accounting treatment could the company have used at year-end to adjust for under- or overapplied overhead? Is the alternative that you suggested appropriate in this case? Why?

LO: 4, 5, 6 Type: A, N

Answer:
A. $800,000 ÷ 50,000 = $16 per machine hour

B. Applied overhead (51,500 x $16) $ 824,000
Actual overhead 816,000
Overapplied overhead $ 8,000

C. Cost of goods sold, as reported $2,960,000
Less: Overapplied overhead 8,000
Cost of goods sold, adjusted $2,952,000

D. The company could have allocated the overapplication to work in process, finished goods, and cost of goods sold. Although this method is acceptable, it is not suggested in this case because of the immaterial dollar amount in relation to cost of goods sold.

Job Costing: Focus on Overhead

67. Packard Products uses a job-costing system for its units, which pass from the Machining Department, to the Assembly Department, to finished-goods inventory. The Machining Department is heavily automated; in contrast, the Assembly Department performs a number of manual-assembly activities. The following information relates to the Machining Department for the year just ended:

Budgeted manufacturing overhead	$8,000,000
Actual manufacturing overhead	7,975,000
Budgeted machine hours	500,000
Actual machine hours	510,000

The Machining Department data that follow pertain to job no. 243, the only job in production at year-end.

Direct materials	$64,800
Direct labor cost	35,200
Machine hours	450

Required:

A. Assuming the use of normal costing, calculate the predetermined overhead rate that is used in the Machining Department.
B. Compute the cost of the Machining Department's year-end work-in-process inventory.
C. Determine whether overhead was under- or overapplied during the year in the Machining Department.
D. If Packard disposes of the Machining Department's under- or overapplied overhead as an adjustment to Cost of Goods Sold, would the company's Cost-of-Goods-Sold account increase or decrease? Explain.
E. How much overhead would have been charged to the Machining Department's Work-in-Process account during the year?
F. Comment on the appropriateness of direct labor cost to apply manufacturing overhead in the Assembly Department.

LO: 4, 5, 6 Type: A

Answer:

A. Machining overhead rate: $8,000,000 ÷ 500,000 hours = $16 per machine hour

B. The ending work in process is carried at a cost of $107,200, computed as follows:

Direct materials	$ 64,800
Direct labor	35,200
Manufacturing overhead (450 x $16)	7,200
Total cost	$107,200

C. Actual overhead in the Machining Department amounted to $7,975,000, whereas applied overhead totaled $8,160,000 (510,000 hours x $16). Thus, overhead was overapplied by $185,000 during the year.

D. The department's manufacturing overhead was overapplied by $185,000. As a result of this situation, excessive overhead flowed from Work in Process, to Finished Goods, to Cost of Goods Sold, meaning that the Cost-of-Goods-Sold account must be decreased at year-end.

E. The Work-in-Process account is charged with applied overhead, or $8,160,000.

F. The firm's selection of application bases is likely appropriate. The bases should "drive" the costs, meaning there should be a strong cause-and-effect relationship between the base that is used and the amount of overhead incurred. In the Assembly Department, a considerable portion of the overhead incurred is related to manual-assembly (i.e., labor) operations.

Overhead Accounting: Working Backwards

68. Kent Products uses a predetermined overhead application rate of $18 per labor hour. A review of the company's accounting records revealed budgeted manufacturing overhead for the period of $621,000, applied manufacturing overhead of $590,400, and overapplied overhead of $11,900.

Required:

A. Determine Kent's actual labor hours, budgeted labor hours, and actual manufacturing overhead.
B. Present the necessary year-end journal entry to handle the overapplied overhead, assuming that the firm allocates over- or underapplied overhead to Cost of Goods Sold.

LO: 4, 5 Type: A

Answer:

A. Actual labor hours: $590,400 ÷ $18 per hour = 32,800 hours
Budgeted labor hours: $621,000 ÷ $18 per hour = 34,500 hours
Actual manufacturing overhead: $590,400 - $11,900 = $578,500

B.

Manufacturing Overhead	11,900	
Cost of Goods Sold		11,900

Analysis of Accounts to Derive Overhead Figures; Working Backwards

69. A review of the records of Milgrim, Inc., a new company, disclosed the following year-end information:
    - *Manufacturing Overhead account:* Contained debits of $872,000, which included $20,000 of sales commissions.
    - *Work-in-Process Inventory account:* Contained charges for overhead of $875,000.
    - *Cost-of-Goods-Sold account:* Contained a year-end debit balance of $3,680,000. This amount was computed prior to any year-end adjustment for under- or overapplied overhead.

    Milgrim applies manufacturing overhead to production by using a predetermined rate of $20 per machine hour. Budgeted overhead for the period was anticipated to be $900,000.

    Required:
    A. Determine the actual manufacturing overhead for the year.
    B. Determine the amount of manufacturing overhead applied to production.
    C. Is overhead under- or overapplied? By how much?
    D. Compute the adjusted cost-of-goods-sold figure that should be disclosed on the company's income statement.
    E. How many machine hours did Milgrim actually work during the year?
    F. Compute budgeted machine hours for the year.

    LO: 4, 5, 6 Type: A

    Answer:

    A. $872,000 - $20,000 sales commissions = $852,000

    B. $875,000 (given)

    C. Manufacturing overhead is overapplied by $23,000 ($875,000 - $852,000).

    D.

Cost of goods sold	$3,680,000
Less: Overapplied overhead	23,000
Cost of goods sold, adjusted	$3,657,000

    E. Milgrim would have applied overhead to production by using the actual machine hours worked and the $20 application rate. Thus, the actual hours worked total 43,750 ($875,000 ÷ $20).

    F. $900,000 ÷ $20 = 45,000 hours

Project Costing in a Service Business

70. Fine & Associates is an interior decorating firm in Tucson. The following costs were incurred in a project to redecorate the mayor's offices:

Direct material	$ 29,000
Direct professional labor	42,000

The firm's budget for the year included the following estimates:

Budgeted overhead	$800,000
Budgeted direct professional labor	640,000

Overhead is applied to contracts by using a predetermined overhead rate that is based on direct professional labor cost. Actual professional labor during the year was $655,000 and actual overhead was $793,000.

Required:
A. Determine the total cost to redecorate the mayor's offices.
B. Calculate the under- or overapplied overhead for the year. Be sure to label your answer.

LO: 8 Type: A

Answer:

A.	Direct material	$ 29,000
	Direct professional labor	42,000
	Applied overhead ($42,000 x 125%*)	52,500
	Total cost to redecorate	$123,500

*$800,000 ÷ $640,000 = 125%

B.	Applied overhead ($655,000 x 125%)	$818,750
	Actual overhead	793,000
	Overapplied overhead	$ 25,750

Project Costing, Architecture Firm

71. Boswell and Associates designs relatively small sports stadiums and arenas at various sites throughout the country. The firm's accountant prepared the following budget for the upcoming year:

Professional staff salaries	$3,000,000
Administrative support staff	800,000
Other operating costs	200,000

Eighty percent of professional staff salaries are directly traceable to client projects, a figure that falls to 60% for the administrative support staff and other operating costs. Traceable costs are charged directly to client projects; nontraceable costs, on the other hand, are treated as firm overhead and charged to projects by using a predetermined overhead application rate.

Boswell had one project in process at year-end: an arena that was being designed for Charlotte County. Costs directly chargeable to this project were:

Professional staff salaries	$90,000
Administrative support staff	17,300
Other operating costs	6,700

Required:

A. Determine Boswell's overhead for the year and the firm's predetermined overhead application rate. The rate is based on costs directly chargeable to firm projects.
B. Compute the cost of the Charlotte County arena project as of year-end.
C. Present three examples of "other operating costs" that might be directly traceable to the Charlotte County project.

LO: 8 Type: A, N

Answer:

A.	Professional staff salaries		$3,000,000
	Administrative support staff		800,000
	Other operating costs		200,000
	Subtotal		$4,000,000
	Less: Direct costs		
	Professional staff salaries ($3,000,000 x 80%)	$2,400,000	
	Administrative support staff and other costs [($800,000 + $200,000) x 60%]	600,000	3,000,000
	Nontraceable costs (i.e., overhead)		$1,000,000

Predetermined application rate: $1,000,000 ÷ $3,000,000 = 33.33%

B.	Professional staff salaries	$ 90,000
	Administrative support staff	17,300
	Other operating costs	6,700
	Subtotal	$114,000
	Overhead: $114,000 x 33.33%	38,000
	Total	$152,000

C. Possible examples include travel, overnight delivery fees, postage, selected costs related to conducting focus-group studies, photocopying, and supplies related to model construction.

Job Costing in a Consulting Firm

72. KLP provides consulting services and uses a job-order system to accumulate the cost of client projects. Traceable costs are charged directly to individual clients; in contrast, other costs incurred by KLP, but not identifiable with specific clients, are charged to jobs by using a predetermined overhead application rate. Clients are billed for directly chargeable costs, overhead, and a markup.

KLP anticipates the following costs for the upcoming year:

	Cost	Percentage of Cost Directly Traceable to Clients
Professional staff salaries	$5,000,000	80%
Administrative support staff	600,000	50
Travel	200,000	80
Other operating costs	200,000	20
Total	$6,000,000	

KLP's partners desire to make a $480,000 profit for the firm and plan to add a percentage markup on total cost to achieve that figure.

On May 14, KLP completed work on a project for Lawson Manufacturing. The following costs were incurred: professional staff salaries, $68,000; administrative support staff, $8,900; travel, $10,500; and other operating costs, $2,600.

Required:

A. Determine KLP's total traceable costs for the upcoming year and the firm's total anticipated overhead.
B. Calculate the predetermined overhead rate. The rate is based on total costs traceable to client jobs.
C. What percentage of total cost will KLP add to each job to achieve its profit target?
D. Determine the total cost of the Lawson Manufacturing project. How much would Lawson be billed for services performed?

LO: 8 Type: A, N

Answer:

A. Traceable costs total $4,500,000, computed as follows:

	Total Cost	Percent Traceable	Traceable Cost
Professional staff salaries	$5,000,000	80%	$4,000,000
Administrative support staff	600,000	50	300,000
Travel	200,000	80	160,000
Other operating costs	200,000	20	40,000
Total	$6,000,000		$4,500,000

KLP's overhead (i.e., the nontraceable costs) totals $1,500,000 ($6,000,000 - $4,500,000).

B. Predetermined overhead rate: $1,500,000 ÷ $4,500,000 = 33.33%

C. Target profit percentage: $480,000 ÷ $6,000,000 = 8%

D. The total cost of the Lawson Manufacturing project is $120,000, and the billing is $129,600, as follows:

Professional staff salaries	$ 68,000
Administrative support staff	8,900
Travel	10,500
Other operating costs	2,600
Subtotal	$ 90,000
Overhead ($90,000 x 33.33%)	30,000
Total cost	$120,000
Markup ($120,000 x 8%)	9,600
Billing to Lawson	$129,600

DISCUSSION QUESTIONS

Process Costing Versus Job-Order Costing

73. Describe the types of manufacturing environments that would best be suited for (1) job-order costing and (2) process costing. Include two examples of manufacturers that would likely use job-cost systems.

LO: 3 Type: RC

Answer:
Job-order costing is typically used in manufacturing environments where goods are produced in distinct batches, called jobs. Typically, there are differences among the various jobs produced. In contrast, process costing is used in environments where large numbers of identical product units are manufactured. Two examples of job-costing firms are aircraft and custom-furniture manufacturers.

Underapplied Manufacturing Overhead

74. Manufacturing overhead is applied to production.
    A. Describe several situations that may give rise to underapplied overhead.
    B. Assume that underapplied manufacturing overhead is treated as an adjustment to Cost of Goods Sold. Explain why an underapplication of overhead increases Cost of Goods Sold.

    LO: 5 Type: N

    Answer:
    A. Overhead will be underapplied when total actual overhead costs exceed applied overhead. This can occur for a variety of reasons including underestimation of some overhead costs, incorrect estimation of the application base and/or production, or changes in the mix of products that affect the level of overhead costs incurred.

    B. In most manufacturing environments, many products made during the period are also sold and ending work in process is modest relative to the amount of goods manufactured. Therefore the vast majority of the overhead applied to the Work-in-Process Inventory account will flow through Finished-Goods Inventory and on to Cost of Goods Sold. However, if overhead is underapplied, Cost of Goods Sold has been increased by an insufficient amount. Consequently, the underapplied overhead should be added to Cost of Goods Sold.

Applied Overhead Versus Actual Overhead

75. Discuss the reasons for using applied overhead rather than actual overhead to determine the cost of production jobs.

    LO: 4, 6 Type: RC

    Answer:
    There are several reasons. First, overhead costs usually bear no direct relationship to individual jobs or products, but must be incurred for the production process to take place. Therefore, it is crucial that overhead be applied to products in order to have a complete picture of manufacturing costs. Second, actual overhead is not known until after the end of the accounting period. The cost of jobs would not be available in a timely fashion if actual overhead costs were used. Finally, overhead costs often vary due to seasonal factors. This variation is not relevant (once a decision has been made to operate through the seasonal factors) to decisions that involve products or pricing in the short term. It is therefore better to use applied overhead to eliminate cost variations from one season to another.

Use of Predetermined Overhead Application Rates

76. The use of predetermined overhead application rates results in a trade-off between accuracy and timeliness. Explain what this statement means.

    LO: 6 Type: RC

Answer:
Predetermined rates are computed by using budgeted (rather than actual) amounts of both manufacturing overhead and cost drivers. Thus, the rate is really an estimate of overhead per "unit" of driver, a rate that can be employed to cost products and jobs as the products and jobs are completed. In addition, such rates may be helpful in decision making. If one desired to focus on actual overhead amounts, the proper rate can be developed only at the conclusion of the period when such amounts become known.

In view of this situation, a trade-off arises. Namely, the user is forsaking accuracy (estimated amounts vs. actual amounts) in exchange for the ability to generate more timely accounting information.

Selecting the Proper Cost Driver

77. Harris, Inc., has just completed job nos. 78 and 79, which were similar in terms of complexity, production processes, and units manufactured. Job no. 78 was manufactured by Joe Barton who earns $14 per hour, whereas job no. 79 was completed by Susan Franklin who earns $20 per hour. If Joe and Susan are equally efficient, would the company be better off using direct labor cost or direct labor hours as the cost driver in its predetermined overhead rate? Briefly explain.

    LO: 6 Type: N

    Answer:
    The jobs produced by Barton and Franklin are similar in terms of complexity, production processes, and units manufactured, and both workers are equally efficient. Thus, the amount of overhead incurred on job no. 78 should be relatively the same as that incurred on job no. 79. If direct labor hours are used in the predetermined overhead rate, the overhead applied to the two jobs will be the same, which is good accounting in this case. Conversely, if direct labor cost were used, Susan's job would absorb more overhead because of the higher labor cost—an improper accounting since both jobs incurred the same amount.

The Two-Stage Allocation Process for Assigning Overhead Costs

78. Briefly describe the stages used in the two-stage allocation process for assigning overhead costs.

    LO: 7 Type: RC

    Answer:
    In Stage One (Cost Distribution or Allocation), all manufacturing costs are assigned to departmental overhead centers. For service departments, the related costs are reassigned to the production departments through this process. In Stage Two (Overhead Application), all of the manufacturing costs accumulated in each production department are then assigned to the production jobs that passed through the department.