

Cost Accounting, Cdn. Ed., 7e (Horngren)
Chapter 4 Job Costing

4.1 Describe the building-block concepts of costing systems.

1) Cost assignment includes cost allocation for indirect costs and direct costs.

Answer: TRUE

Explanation: *Cost assignment* is a general term for assigning costs, whether direct or indirect, to a *cost object*.

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-1

2) Cost pools are defined as groupings of individual cost items which can range from broad, company-wide categories to very narrow categories.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-1

3) A cost allocation base is only financial in nature, and is usually the cost driver of the particular costs being measured.

Answer: FALSE

Explanation: A cost-allocation base (e.g., number of machine-hours, or number of labour-hours) is a systematic way to link an indirect cost or group of indirect costs to cost objects.

Diff: 2 Type: TF

Skill: Remember

Objective: LO 4-1

4) Direct costs are allocated to the cost object using a cost-allocation method.

Answer: FALSE

Explanation: Indirect costs are allocated to the cost object using a cost-allocation method.

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-1

5) The objective of allocating indirect costs is to measure the underlying usage of indirect resources by jobs.

Answer: FALSE

Diff: 2 Type: TF

Skill: Remember

Objective: LO 4-1

6) For each cost pool, the indirect cost rate equals the indirect cost pool divided by the cost allocation base.

Answer: TRUE

Diff: 2 Type: TF

Skill: Remember

Objective: LO 4-1

7) Raw materials that can be traced to a cost object are an example of an indirect cost.

Answer: FALSE

Explanation: Raw materials are an example of a direct cost.

Diff: 1 Type: TF

Skill: Understand

Objective: LO 4-1

8) Fixed and variable costs may be allocated to a cost object.

Answer: TRUE

Diff: 1 Type: TF

Skill: Understand

Objective: LO 4-1

9) The cost driver of an indirect cost is often used as the cost allocation base.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-1

10) *Cost tracing* is a specific term for assigning indirect costs.

Answer: FALSE

Explanation: *Cost tracing* is a specific term for assigning direct costs

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-1

11) Transferring costs from indirect cost pools to cost objects is called

A) cost allocation.

B) cost control.

C) cost pool.

D) cost factoring.

E) cost processing.

Answer: A

Diff: 1 Type: MC

Skill: Remember

Objective: LO 4-1

12) A factor used to systematically link an indirect cost to a cost object is called

- A) a cost allocation base.
- B) a cost pool.
- C) cost assignment.
- D) a traceable cost.
- E) a non-traceable cost.

Answer: A

Diff: 1 Type: MC

Skill: Remember

Objective: LO 4-1

13) Which of the following includes both traced direct costs and allocated indirect costs?

- A) cost tracing
- B) cost pools
- C) assigned costs
- D) cost allocation
- E) cost recording

Answer: C

Diff: 2 Type: MC

Skill: Remember

Objective: LO 4-1

14) In general terms the process of assigning costs to a particular product or service is called

- A) a cost allocation system.
- B) a cost assignment system.
- C) a job costing system.
- D) a process costing system.
- E) a cost recording system.

Answer: B

Diff: 2 Type: MC

Skill: Remember

Objective: LO 4-1

15) Which of the following would most likely be a direct cost in a manufacturing company?

- A) supervision and engineering
- B) utilities
- C) repairs
- D) utilities and repairs
- E) raw materials

Answer: E

Diff: 2 Type: MC

Skill: Understand

Objective: LO 4-1

16) A grouping of individual cost items is called a

- A) cost objective.
- B) costing group.
- C) cost department.
- D) cost pool.
- E) cost base.

Answer: D

Diff: 1 Type: MC

Skill: Remember

Objective: LO 4-1

17) Assigning direct costs to a cost object is called

- A) cost allocation.
- B) job costing.
- C) cost pooling.
- D) process costing.
- E) cost tracing.

Answer: E

Diff: 1 Type: MC

Skill: Remember

Objective: LO 4-1

18) In a costing system

- A) cost tracing allocates indirect costs.
- B) cost allocation assigns direct costs.
- C) there may never be more than one indirect cost pool.
- D) a cost object should be a product and not a department or a geographic territory.
- E) a cost allocation base can be either financial or nonfinancial.

Answer: E

Diff: 2 Type: MC

Skill: Understand

Objective: LO 4-1

19) Which of the following is NOT possible to use as a cost allocation base for manufacturing overhead?

- A) direct labour dollars
- B) direct labour hours
- C) direct material dollars
- D) direct labour hours or dollars
- E) indirect labour hours

Answer: E

Diff: 2 Type: MC

Skill: Understand

Objective: LO 4-1

- 20) Cost pools are often organized in conjunction with
- A) direct labour pools.
 - B) the general ledger control accounts.
 - C) variable and fixed costs.
 - D) direct cost tracing techniques.
 - E) cost-allocation bases.

Answer: E

Diff: 2 Type: MC

Skill: Remember

Objective: LO 4-1

21) Larry's Appliance Shop operates retail stores that sell appliances. The cost objects are the individual sales of a given type of appliance and sales support. For refrigerators in July, the following costs were recorded:

Professional sales staff commissions	\$84,000
Amortization on office space	4,000
Selling supplies	6,400
Office staff expenses	24,800
Customer relations	8,600
Training expenses	6,000
Utilities	1,400

Required:

- Which of the costs will be subject to direct cost tracing?
- What is the total cost for refrigerators?
- What is the total cost of the Sales Support for refrigerators?

Answer:

- Professional sales staff commissions are traced to each refrigerator sold.

b. Total costs of refrigerators:

Professional sales staff commissions	\$84,000
Amortization on office space	4,000
Selling supplies	6,400
Office staff expenses	24,800
Customer relations	8,600
Training expenses	6,000
Utilities	<u>1,400</u>
Total	<u>\$135,200</u>

c. Total costs of sales support:

Amortization on office space	\$4,000
Selling supplies	6,400
Office staff expenses	24,800
Customer relations	8,600
Training expenses	6,000
Utilities	<u>1,400</u>
Total	<u>\$51,200</u>

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-1

22) The new manager of the insurance division does not understand how the company can have so many overhead rates for assigning costs to the activities of the company's life insurance underwriters. There is one rate schedule for average assignable costs when agents write standard policies. There is another rate schedule which the agents must complete when they write special policies, and these policies are costed out differently from those that are categorized as standard policies.

Required:

Why might the company have different costing systems with different overhead rates for the standard and specialized policies?

Answer: Because the standard policies are written the same way each time, the company knows how long it takes to complete such a policy and the average effort expended by the agents in doing standard policy work. Special policies, on the other hand, are different and the amount of effort and time to complete such a policy is difficult to standardize. The agents are thus required to keep track of their time and expenses in completing such policies. A company needs to be able to accurately price its products, particularly in a competitive industry. While there is no mention of allocation of indirect costs, it appears that the company is using a modified job-costing system to price its various products.

Diff: 2 Type: ES

Skill: Understand

Objective: LO 4-1

4.2 Distinguish job costing from process costing.

1) A job costing system assigns costs to a distinct unit or set of units of a product or service.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-2

2) A process costing system assigns costs to groups of similar units during a specified time period and then computes the average unit cost.

Answer: TRUE

Diff: 2 Type: TF

Skill: Remember

Objective: LO 4-2

3) Process costing is a useful system for tracking the costs of building a house.

Answer: FALSE

Diff: 2 Type: TF

Skill: Understand

Objective: LO 4-2

4) In each period, job costing divides the total cost of producing an identical or similar product by the total number of units produced to obtain a per-unit cost.

Answer: FALSE

Explanation: This describes process-costing.

Diff: 2 Type: TF

Skill: Understand

Objective: LO 4-2

5) In a job cost system, the cost object is a unit or multiple units of a distinct product or service called a job.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-2

6) Which of the following would be appropriately costed using a process costing system?

A) oil refining

B) a law firm managing individual legal cases

C) assembly of individual aircraft by Bombardier

D) movies produced by Lions Gate Entertainment

E) audit engagements performed by KPMG

Answer: A

Diff: 2 Type: MC

Skill: Understand

Objective: LO 4-2

7) Which of the following would be appropriately costed using a job costing system?

A) oil refining

B) bank clearing at TD Canada Trust

C) beverage production

D) replacing a homeowner's furnace

E) lumber dealing by Weyerhaeuser

Answer: D

Diff: 2 Type: MC

Skill: Understand

Objective: LO 4-2

8) Provide examples of three companies that would likely use job costing, and three companies that would likely use process costing.

Answer: Students will offer varied examples. From exercise 4-17:

Job costing:

- a. A CA firm
- c. A custom furniture manufacturer
- e. A textbook publisher
- g. An advertising agency
- h. An apparel manufacturing factory
- k. A medical care facility
- l. A landscaping company
- n. A movie studio
- o. A law firm
- p. A commercial aircraft manufacturer
- q. A management consulting firm
- s. A catering service
- u. An auto repair garage

Process costing:

- b. An oil refinery
- d. A tire manufacturer
- f. A pharmaceutical company
- i. A flour mill
- j. A paint manufacturer
- m. A cola-drink-concentrate producer
- o. A law firm
- r. A breakfast cereal company
- t. A paper mill

Diff: 2 Type: ES

Skill: Understand

Objective: LO 4-2

9) Describe job-costing and process-costing systems. Explain when it would be appropriate to use each.

Answer: Job costing accumulates costs for different jobs required by specific customers. Process costing computes and allocates an equal amount of cost to each product. Job costing is the logical choice when the production process has many distinct products or many heterogeneous jobs, while process costing is typically used when it is not necessary to keep separate cost records for individual jobs and the products are relatively homogeneous.

Diff: 2 Type: ES

Skill: Understand

Objective: LO 4-2

4.3 Describe the approaches to evaluating and implementing job costing systems.

1) Actual costing systems are commonly found in practice because the indirect cost information is readily available.

Answer: FALSE

Explanation: Actual costing systems are not commonly found in practice because actual costs cannot be computed in a timely manner.

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-3

2) Actual costing allocates indirect costs based on the predetermined indirect-cost rates multiplied by the actual quantities of the cost-allocation bases.

Answer: FALSE

Explanation: Actual costing allocates indirect costs based on the actual indirect-cost rates multiplied by the actual quantities of the cost-allocation bases.

Diff: 2 Type: TF

Skill: Remember

Objective: LO 4-3

3) In the five-step decision-making process which of the following is an element of the last step in the process?

- A) evaluate performance
- B) choose among alternatives
- C) identify uncertainties
- D) identify the problems
- E) make predictions about the future

Answer: A

Diff: 2 Type: MC

Skill: Remember

Objective: LO 4-3

4.4 Distinguish between actual and normal costing.

1) The difference between the actual costing and normal costing methods is that actual costing uses a budgeted indirect cost rate while normal costing uses an actual indirect cost rate.

Answer: FALSE

Explanation: The reverse is true.

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-4

2) Actual costing can also be a method of job costing.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-4

3) Actual costing traces direct costs to a cost object by multiplying the budgeted direct cost rate and the actual quantity.

Answer: FALSE

Explanation: Actual costing traces direct costs to a cost object by multiplying the actual direct cost rate and the actual quantity.

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-4

4) At the end of the year, the direct costs traced to jobs using the budgeted rates will equal actual direct costs.

Answer: FALSE

Explanation: The actual rate and budgeted rate are different because they are developed at different times.

Diff: 2 Type: TF

Skill: Remember

Objective: LO 4-4

5) For normal costing, even though the budgeted indirect-cost rate is based on estimates, indirect costs are allocated to products based on actual levels of the cost-allocation base.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-4

6) Direct costs are traced the same way for actual costing and normal costing.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-4

7) Managers and accountants gather the information that goes into their cost systems through source documents, which are the original records that support journal entries in an accounting system.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-4

8) To smooth seasonal fluctuating levels of output, separate indirect-cost rates should be calculated for each month.

Answer: FALSE

Explanation: To smooth seasonal costs and fluctuating levels of output, indirect-cost rates should be calculated on an *annual* basis.

Diff: 2 Type: TF

Skill: Understand

Objective: LO 4-4

9) A job cost record (or job cost sheet) is a document where the costs are recorded and accumulated.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-4

10) Place the following steps in the order suggested by the seven steps used to assign costs to individual jobs:

- A. Select the cost-allocation bases to use for allocating indirect costs to the job
- B. Compute the rate per unit of each cost-allocation base used to allocate indirect costs to the job
- C. Compute the total cost of the job by adding all direct and indirect costs assigned to the job
- D. Identify the direct costs of the job
- E. Compute the indirect costs allocated to the job
- F. Identify the indirect costs associated with each cost-allocation base
- G. Identify the job that is the chosen cost object

A) G, F, A, B, E, D, C

B) G, D, A, B, F, E, C

C) G, A, F, B, E, D, C

D) G, A, D, F, B, E, C

E) G, D, A, F, B, E, C

Answer: E

Diff: 2 Type: MC

Skill: Remember

Objective: LO 4-4

11) The first step in job costing is to

- A) identify the cost object.
- B) identify the direct costs.
- C) select the cost allocation base.
- D) identify the indirect costs.
- E) compute the rate per unit.

Answer: A

Diff: 1 Type: MC

Skill: Remember

Objective: LO 4-4

12) Which of the following is one of the steps used in assigning manufacturing overhead costs to individual jobs?

- A) combine different cost objects into pools
- B) assign direct costs to the cost object
- C) identify the direct cost pools associated with the job
- D) calculate the direct cost allocation rate for each direct cost pool
- E) select the cost-allocation base to use in allocating indirect costs to the cost object

Answer: E

Diff: 1 Type: MC

Skill: Remember

Objective: LO 4-4

13) Managers and accountants collect most of the cost information that goes into their information systems through

- A) an information databank.
- B) computer programs.
- C) source documents.
- D) time surveys.
- E) interviewing workers.

Answer: C

Diff: 1 Type: MC

Skill: Remember

Objective: LO 4-4

14) A materials requisition record and a labour time record are examples of which of the following?

- A) normal cost schedule
- B) job cost sheets
- C) job cost records
- D) cost object statements
- E) source documents

Answer: E

Diff: 1 Type: MC

Skill: Remember

Objective: LO 4-4

15) Normal costing refers to

- A) the average cost.
- B) costs within the relevant range.
- C) costs that behave like other similar costs.
- D) costs included in normal pools.
- E) allocating indirect costs at budgeted rates.

Answer: E

Diff: 1 Type: MC

Skill: Remember

Objective: LO 4-4

16) Using normal costing the amount of supervisory salaries to allocate is determined by calculating

- A) actual direct-cost rates times actual quantities of direct-cost inputs.
- B) actual indirect-cost rates times actual quantities of cost-allocation bases.
- C) actual direct-cost rates times budgeted quantities of input.
- D) budgeted indirect-cost rates times actual quantities of cost-allocation bases.
- E) budgeted indirect-cost rates times budgeted quantities of cost-allocation bases.

Answer: D

Diff: 2 Type: MC

Skill: Remember

Objective: LO 4-4

17) The difference between actual costing and normal costing is

- A) normal costing uses actual direct cost rates.
- B) actual costing uses actual quantities of direct cost inputs.
- C) normal costing uses budgeted quantities of actual direct cost inputs and budgeted indirect cost rates.
- D) actual costing uses actual quantities of cost allocation bases.
- E) normal costing uses budgeted indirect cost rates.

Answer: E

Diff: 1 Type: MC

Skill: Understand

Objective: LO 4-4

18) The main advantage of using budgeted cost rates rather than actual cost rates is

- A) budgeted costs allow managers to have cost information on a timely basis.
- B) budgeted costs may be subject to short-run fluctuations.
- C) budgeted indirect-cost rates are known prior to the inception of a new job.
- D) actual indirect-cost rates are affected by work done on other jobs.
- E) budgeted rates are just as accurate and require less effort.

Answer: A

Diff: 2 Type: MC

Skill: Understand

Objective: LO 4-4

19) Which of the following statements about normal costing is TRUE?

- A) Direct costs and indirect costs are allocated using an actual rate.
- B) Direct costs and indirect costs are traced using budgeted rates.
- C) Direct costs are traced using a budgeted rate, and indirect costs are allocated using an actual rate.
- D) Direct costs are traced using an actual rate, and indirect costs are allocated using a budgeted rate.
- E) Direct costs are traced by using the actual direct-cost rate times the budgeted quantity of the direct costs input.

Answer: D

Diff: 2 Type: MC

Skill: Remember

Objective: LO 4-4

20) Which of the following is part of the approach to computing the budgeted indirect cost allocation rate?

- A) identify the costs which are part of the indirect cost pool
- B) identify costs associated with the direct cost pool
- C) estimate the cost items for direct cost pool
- D) adjust the cost allocation base for variances
- E) divide the total quantity of the cost allocation base into the total costs in the direct cost pool

Answer: A

Diff: 1 Type: MC

Skill: Remember

Objective: LO 4-4

21) A machine shop has direct materials cost of \$1,800,000 direct labour of \$4,200,000 (direct labour rate is \$50 per hour) and budgeted indirect manufacturing costs of \$850,000. Management believes that indirect manufacturing costs increase with direct labour hours. What is the budgeted indirect manufacturing cost rate?

- A) \$2.12
- B) \$2.33
- C) \$4.94
- D) \$10.12
- E) \$17.00

Answer: D

Explanation: D) $\$850,000 / (4,200 / 50) = \10.12

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

22) A local financial consulting firm employs 30 full-time employees. The budgeted compensation per employee is \$50,000. The annual maximum chargeable time to each client is 1,000 hours. Clients always receive their full amount of time. All labour costs are included in a single direct-cost category and are traced to jobs on a per-hour basis.

Any other costs are included in a single indirect-cost pool, allocated according to professional labour-hours. Budgeted indirect costs for the year are \$1,050,000, and the firm expects to have 60 clients during the coming year.

What is the budgeted indirect-cost rate per hour?

- A) \$1,050.00 per hour
- B) \$50.00 per hour
- C) \$35.00 per hour
- D) \$17.50 per hour
- E) \$10.00 per hour

Answer: D

Explanation: D) Indirect cost rate per hour = $\$1,050,000 / 60,000 = \17.50 per hour

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

23) A local financial consulting firm employs 30 full-time staff. The budgeted compensation per employee is \$50,000, for 2,000 hours. All direct labour costs are charged to clients.

Any other costs are included in a single indirect-cost pool, allocated according to labour-hours. Actual indirect costs were \$750,000. Budgeted indirect costs for the year are \$525,000 and the firm expects to have 60 clients during the coming year.

What is the total cost of a job which took 27 hours, using normal costing?

- A) \$911.25
- B) \$1,012.50
- C) \$27,337.50
- D) \$30,375.00
- E) \$50,000.00

Answer: A

Explanation: A) $\$50,000/2,000 \text{ hours} = \25.00 per hour DL

$\$525,000/(30 \times 2,000) = \underline{\$8.75}$ indirect

total cost per hour = $\$33.75$

total hours = $\underline{27}$

total cost = $\underline{\$911.25}$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

24) A company employs 25 full-time staff. The company spent \$75,000 in advertising in the year (this amount is a period cost with a constant amount spent each year). Budgeted indirect manufacturing costs total \$250,000 and the direct labour rate is \$15 per hour. Budgeted labour hours were 500,000, and actual labour hours were 524,000. Actual indirect overhead was \$274,600.

What are the actual and normal indirect-cost rates respectively?

- A) \$0.52 and \$0.50
- B) \$0.50 and \$0.52
- C) \$0.55 and \$0.48
- D) \$0.67 and \$0.65
- E) \$0.65 and \$0.67

Answer: A

Explanation: A) actual = $274,600/524,000 = 0.52$

normal = $250,000/500,000 = 0.50$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

25) Budgeted fixed indirect costs remain constant at \$150,000 per month. During high-output months variable indirect costs are budgeted at \$120,000, and during low-output months budgeted variable costs are \$60,000. What are the respective high and low indirect cost rates if budgeted professional labour-hours are 6,000 for high-output months and 2,000 for low-output months?

- A) \$31.25 per hour, \$87.50 per hour
- B) \$45.00 per hour, \$95.00 per hour
- C) \$45.00 per hour, \$105.00 per hour
- D) \$56.20 per hour, \$105.00 per hour
- E) \$59.00 per hour, \$105.00 per hour

Answer: C

Explanation: C) $\$120,000/6,000 = \20.00 $\$60,000/2,000 = \30.00

$\$150,000/6,000 = \underline{25.00}$ $\$150,000/2,000 = \underline{75.00}$

High Month = \$45.00 Low Month = \$105.00

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

26) Fixed costs remain constant at \$200,000 per month. During high-output months variable costs are \$160,000, and during low-output months variable costs are \$40,000. What are the respective high and low indirect cost allocation rates if professional labour-hours are 8,000 for high-output months and 2,000 for low-output months?

- A) \$45.00 per hour; \$120.00 per hour
- B) \$45.00 per hour; \$45.00 per hour
- C) \$25.00 per hour; \$20.00 per hour
- D) \$56.20 per hour; \$120.00 per hour
- E) \$25.00 per hour; \$100.00 per hour

Answer: A

Explanation: A) $\$200,000/8,000 = 25.00$ $\$200,000/2,000 = \100.00

$\$160,000/8,000 = \underline{20.00}$ $\$40,000/2,000 = \underline{20.00}$

High Month = \$45.00 Low Month = \$120.00

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

27) A law office employs full-time attorneys and five paraprofessionals. For the current year indirect costs were budgeted at \$225,000, but actually amounted to \$350,000.

Direct and indirect costs are applied on a professional labour-hour basis which includes both attorney and paraprofessional hours. Total budgeted labour-hours were 25,000; however, actual labour-hours were 30,000.

What is the actual indirect-cost rate, if a client used 5,000 professional labour-hours?

- A) \$5.00
- B) \$9.00
- C) \$7.50
- D) \$14.00
- E) \$11.67

Answer: E

Explanation: E) $350,000 \div 30,000 = \$11.67$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

Use the information below to answer the following question(s).

A dental office is in the process of changing their costing system. Their system currently uses a single direct cost pool (professional labour) and a single indirect cost pool (staff support). The direct categories in the new, refined costing system include:

1. Professional partner labour. Average total annual compensation of the two partners is \$100,000; and, each partner has 2,000 hours of budgeted billable time.
2. Dental assistant labour. Average total annual compensation of the four assistants is \$22,500 each, and each assistant has 2,000 hours of budgeted billable time.
3. Office staff. Average total annual compensation of the two staff members is \$15,000 each, and each has 2,000 hours of budgeted billable time.

The indirect category in the new refined costing system includes professional liability insurance. The budgeted indirect amount is \$200,000, and the allocation base is budgeted professional labour hours. The dentist and dental assistants are considered professional labour hours.

28) What is the budgeted indirect cost allocation rate per unit of the allocation base for the professional liability insurance?

- A) \$16.67
- B) \$25.00
- C) \$1.67
- D) \$26.67
- E) \$12.50

Answer: A

Explanation: A) $\$200,000 / [(2,000 \times 2) + (2,000 \times 4)] = \16.67 per hour

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

29) What is the budgeted direct cost rate per hour for professional partner labour?

- A) \$25.00 per hour
- B) \$50.00 per hour
- C) \$44.50 per hour
- D) \$38.00 per hour
- E) \$46.00 per hour

Answer: B

Explanation: B) $(\$100,000 \times 2) / (2,000 \times 2) = \50.00 per hour

Diff: 1 Type: MC

Skill: Apply

Objective: LO 4-4

30) What is the budgeted direct cost rate for dental assistant labour?

- A) \$17.875 per hour
- B) \$16.125 per hour
- C) \$13.750 per hour
- D) \$11.250 per hour
- E) \$9.125 per hour

Answer: D

Explanation: D) $(\$22,500 \times 4) / (2,000 \times 4) = \11.25 per hour

Diff: 1 Type: MC

Skill: Apply

Objective: LO 4-4

31) What is the budgeted direct cost rate per hour for office staff?

- A) \$11.250 per hour
- B) \$9.625 per hour
- C) \$7.500 per hour
- D) \$6.875 per hour
- E) \$6.125 per hour

Answer: C

Explanation: C) $(\$15,000 \times 2) / (2,000 \times 2) = \7.50 per hour

Diff: 1 Type: MC

Skill: Apply

Objective: LO 4-4

32) What would be the percentage change in the budgeted direct cost rate if they consider hiring one more employee, as part of the office staff?

- A) 3.0%
- B) 2.0%
- C) 1.0%
- D) 0.5%
- E) 0%

Answer: E

Explanation: E) $(\$15,000 \times 3) / (2,000 \times 3) = \7.50 ; $(\$7.50 - \$7.50) / \$7.50 = 0$ percent

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

33) What would be the new budgeted direct cost rate if they decided to give all of the dental assistants a 10% raise?

- A) \$13.000 per hour
- B) \$12.375 per hour
- C) \$11.250 per hour
- D) \$9.875 per hour
- E) \$9.125 per hour

Answer: B

Explanation: B) $[(\$22,500 \times 110\%) \times 4] / (2,000 \times 4) = \12.375

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

Use the information below to answer the following question(s).

A Hospital uses a job cost system for all surgery patients. In February, the pre-operating room (PRE-OP) and operating room (OR) had budgeted allocation bases of 1,000 nursing hours and 500 nursing hours, respectively, and budgeted nursing overhead charges were \$28,000 and \$22,000, respectively. The hospital ward rooms for surgery patients had budgeted overhead costs of \$200,000 and 2,500 nursing hours for the month. PRE-OP, OR and the hospital ward have separate indirect cost pools. The hospital uses a budgeted overhead rate for applying overhead to patient stays.

For patient Jones, actual hours incurred were six and eight hours, respectively, in the PRE-OP and OR rooms. He was in the hospital for 5 days (120 hours). Other costs related to Jones were:

	PRE-OP <u>Costs</u>	OR <u>Costs</u>	Ward In-room <u>Costs</u>
Patient medicine	\$200	\$500	\$2,400
Direct nursing time	1,200	1,750	2,700

34) What is the budgeted overhead rate for the hospital floor for surgery?

- A) \$28.00
- B) \$44.00
- C) \$45.75
- D) \$47.75
- E) \$80.00

Answer: E

Explanation: E) $\$200,000 / 2,500 = \80

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

35) What was the total OR cost for patient Jones?

- A) \$2,418
- B) \$2,514
- C) \$2,250
- D) \$2,602
- E) \$2,474

Answer: D

Explanation: D) $\$500 + \$1,750 + [8 \text{ hours} \times (\$22,000/500 \text{ hours})] = \$2,602$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

36) What was the total PRE-OP cost for patient Jones?

- A) \$1,400
- B) \$1,568
- C) \$1,624
- D) \$1,664
- E) \$1,752

Answer: B

Explanation: B) $\$200 + \$1,200 + [6 \times (\$28,000/1,000 \text{ hours})] = \$1,568$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

Use the information below to answer the following question(s).

Jim's Computer Products manufactures keyboards for computers. In June, the two production departments had budgeted allocation bases of 10,000 machine hours in Department 1 and 5,000 direct manufacturing labour hours in Department 2. The budgeted manufacturing overheads for the month were \$34,500 and \$37,500, respectively. For Job 501, the actual costs incurred in the two departments were as follows:

	<u>Department 1</u>	<u>Department 2</u>
Direct materials purchased on account	\$66,000	\$106,500
Direct materials used	19,500	8,100
Direct manufacturing labour	31,500	32,100
Indirect manufacturing labour	6,600	5,400
Indirect materials used	4,500	2,850
Lease on equipment	9,750	2,250
Utilities	600	750

Job 501 incurred 1,000 machine hours in Department 1 and 300 manufacturing labour hours in Department 2. The company uses a budgeted departmental overhead rate for applying overhead to production.

37) What is the budgeted indirect cost allocation rate for Department 1?

- A) \$3.45 per hour
- B) \$3.75 per hour
- C) \$6.90 per hour
- D) \$7.50 per hour
- E) \$8.00 per hour

Answer: A

Explanation: A) $\$34,500/10,000 = \3.45

Diff: 1 Type: MC

Skill: Apply

Objective: LO 4-4

38) What is the budgeted indirect cost allocation rate for Department 2?

- A) \$3.45
- B) \$3.75
- C) \$4.60
- D) \$7.50
- E) \$8.00

Answer: D

Explanation: D) $\$37,500/5,000 = \7.50

Diff: 1 Type: MC

Skill: Apply

Objective: LO 4-4

39) What is the total cost assigned to Job 501 based on normal costing?

- A) \$27,600
- B) \$91,200
- C) \$96,900
- D) \$123,900
- E) \$126,500

Answer: C

Explanation: C) $\$19,500 + \$31,500 + 1,000 (\$3.45) + \$8,100 + \$32,100 + 300 (\$7.50) = \$96,900$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

Use the information below to answer the following question(s).

Capable Carts manufactures custom carts for a variety of uses. The following data have been recorded for Job 892, which was recently completed. Direct materials used cost \$6,300, the budgeted direct materials were \$5,900. There were 180 direct labour hours worked on this job at a direct labour wage rate of \$20 per hour; the budgeted direct labour wage rate was \$21 per hour. There were 75 machine hours used on this job. The budgeted and actual indirect cost allocation rates are \$32 and \$29 per machine hour used, respectively.

40) What is the total manufacturing cost of Job 892 using normal costing?

- A) \$9,900
- B) \$12,300
- C) \$12,080
- D) \$12,255
- E) \$12,075

Answer: B

Explanation: B) $\$6,300 + (180 \times \$20) + (75 \times \$32) = \$12,300$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

41) What is the total manufacturing cost of Job 892 using actual costing?

- A) \$9,900
- B) \$12,300
- C) \$12,080
- D) \$12,255
- E) \$12,075

Answer: E

Explanation: E) $\$6,300 + (180 \times \$20) + (75 \times \$29) = \$12,075$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

Use the information below to answer the following question(s).

World Engines Ltd. manufactures custom engines for use in the lawn and garden equipment industry. The company allocates manufacturing overhead based on machine hours. Selected data for costs incurred for Job 787 are as follows:

Direct materials used	\$3,500
Direct labour hours worked	300
Machine hours used	400
Direct labour rate per hour	\$16
Predetermined overhead rate based on machine hours	\$18
Budgeted direct labour rate per hour	\$20
Budgeted direct labour hours	310
Budgeted machine hours	370
Overhead rate based on actual indirect costs and actual machine hours	\$15
Direct materials budgeted	\$3,900

42) What is the total manufacturing cost of Job 787 using normal costing?

- A) \$17,100
- B) \$14,960
- C) \$12,800
- D) \$15,500
- E) \$14,300

Answer: D

Explanation: A)

D) $\$3,500 + (300 \text{ hrs.} \times \$16) + (400 \text{ hrs.} \times \$18) = \$15,500$

E)

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

43) What is the total manufacturing cost of Job 787 using actual costing?

- A) \$17,100
- B) \$14,960
- C) \$12,800
- D) \$15,500
- E) \$14,300

Answer: E

Explanation: A)

D)

E) $\$3,500 + (300 \text{ hrs.} \times \$16) + (400 \text{ hrs.} \times \$15) = \$14,300$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

Use the information below to answer the following question(s).

The following data were taken from the records of Big Sky Ltd., a manufacturing company. The company has been calculating the actual indirect cost allocation rate using direct labour hours as the allocation base.

Actual total indirect costs	\$1,152,000
Budgeted total indirect costs	\$1,216,000
Actual direct labour costs	\$3,200,000
Actual direct labour rate	\$50 per hour
Actual machine hours	30,000 hours
# of employees	32

44) What is the actual indirect cost rate at Big Sky Ltd. using direct labour hours as the allocation base?

- A) \$384.00
- B) \$7.68
- C) \$18.00
- D) \$19.00
- E) \$138.89

Answer: C

Explanation: C) $\$1,152,000/64,000 = \18.00

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

45) What is the actual indirect cost rate at Big Sky Ltd. using machine hours as the allocation base?

- A) \$60.67
- B) \$10.67
- C) \$7.89
- D) \$4.05
- E) \$3.84

Answer: E

Explanation: E) $1,152,000/300,000 = \$3.84$

Diff: 1 Type: MC

Skill: Apply

Objective: LO 4-4

46) Normandeau Company's actual indirect cost pool amounted to \$1,400,000 and the direct labour pool was \$5,400,000. Overhead is allocated on the basis of direct labour hours. Actual and budgeted direct labour hours were 25,000 and 30,000 for the period. What is the manufacturing overhead cost allocation rate using actual direct labour hours as the cost allocation base?

- A) \$46.67
- B) \$272.00
- C) \$75.00
- D) \$226.67
- E) \$56.00

Answer: E

Explanation: E) $1,400,000/25,000 = 56.00$

Diff: 1 Type: MC

Skill: Apply

Objective: LO 4-4

47) A company currently has 30 full-time employees. Actual time for each employee was as follows:

billable time for clients	2,000 hours
vacation time	200 hours
professional development	175 hours
nonbillable time	0 hours
sick leave	125 hours

Consumer demand for the company's services is at 100 percent of time available. Each employee receives a salary of \$75,000 per year.

What is the total actual indirect cost allocation rate if management believes that clients should be charged for the employees' benefits?

- A) \$10.00
- B) \$6.67
- C) \$30.00
- D) \$6.00
- E) \$37.50

Answer: D

Explanation: D) $(200 + 175 + 125)/(2,000 + 200 + 175 + 125) \times 75,000 = \$15,000$

$\$15,000/2,500 = \6.00 per hour

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

48) John wants to identify the total cost for computing the corporate tax return he prepared for his client. Labour is the only direct cost at \$50 per hour. Indirect costs are \$60 per labour hour. What is the total direct cost, indirect cost, and job cost, respectively, if 15 hours are spent preparing the tax return?

- A) \$700, \$850, \$1,550
- B) \$750, \$800, \$1,550
- C) \$750, \$900, \$1,650
- D) \$800, \$640, \$1,440
- E) \$800, \$900, \$1,440

Answer: C

Explanation: C) Direct cost	15 hours × \$50.00 =	\$750
Indirect cost	15 hours × \$60.00 =	<u>900</u>
		<u>\$1,650</u>

Diff: 1 Type: MC

Skill: Apply

Objective: LO 4-4

49) Last week Job # WPP 298 was charged: DM of \$4,606; DL of \$1,579; and, MOH of \$3,960 based on machine hours. The materials requisition record for this week showed an additional purchase of 10 brackets at a unit cost of \$16; the direct labour costs were the same as the first week; and, the total machine hours for both weeks are now 140 hours at \$45 per machine hour. Calculate the revised total job cost. (direct materials + direct labour + manufacturing overhead).

- A) \$10,145
- B) \$11,884
- C) \$12,645
- D) \$18,184
- E) \$14,224

Answer: E

Explanation: E) Direct materials =	\$4,606 + (10 × \$16) =	\$4,766
Direct labour =	1,579 × 2 =	3,158
Manufacturing OVH =	140 × \$45 =	<u>6,300</u>
		<u>\$14,224</u>

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

50) Camden Company gathered the following information for the year ended December 31:

Direct labour cost incurred for the year	\$240,000
Manufacturing overhead costs	\$180,000
Beginning finished goods inventory	\$200,000
Work-in-process inventory, Dec. 31	\$55,000
Finished goods inventory, Dec. 31	\$67,500
Cost of goods sold	\$141,000
Estimated direct labour hours	300,000

Clyde Company uses a job costing system. What is the indirect cost allocation rate for the year be using direct labour hours as the allocation base?

- A) \$1.11 per direct labour hour
- B) \$0.90 per direct labour hour
- C) \$1.20 per direct labour hour
- D) \$0.60 per direct labour hour
- E) \$0.47 per direct labour hour

Answer: D

Explanation: D) $\$180,000/300,000 = \0.60

Diff: 1 Type: MC

Skill: Apply

Objective: LO 4-4

51) ZamTech Moldings allocates manufacturing overhead to jobs based on machine hours. The company has the following estimated costs for the upcoming year:

Direct materials used	\$25,000
Direct labour costs	\$62,000
Salary of factory supervisor	\$41,000
Advertising expense	\$33,000
Heating and lighting costs for factory	\$21,000
Depreciation on factory equipment	\$9,000
Sales commissions	\$8,000

The company estimates that 1,800 direct labour hours will be worked in the upcoming year, while 2,000 machine hours will be used during the year. The predetermined indirect allocation rate per machine hour is closest to

- A) \$56
- B) \$36
- C) \$100
- D) \$15
- E) \$40

Answer: B

Explanation: B) $\$41,000 + 21,000 + 9,000 = \$71,000/2000 = \$36$

Diff: 1 Type: MC

Skill: Analyze

Objective: LO 4-4

52) Copley Enterprises manufactures digital video equipment. For each unit \$1,475 of direct material is used and there is \$1,500 of direct manufacturing labour at \$30 per hour. Manufacturing overhead is applied at \$35 per direct manufacturing labour hour. Calculate the cost of each unit.

- A) \$2,975
- B) \$4,025
- C) \$1,750
- D) \$3,150
- E) \$4,725

Answer: E

Explanation: E) $\$1,475 + \$1,500 + ((\$1,500/30 \text{ hours}) * 35 \text{ hours}) = \$4,725$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-4

53) Beacon Company does residential real estate appraisals. There are 40 professionals on its staff. Each professional is allotted the following number of hours per year:

Budgeted billable time for clients	1,800 hours
Budgeted vacation time	180 hours
Budgeted professional development	100 hours
Budgeted nonbillable time due to lack of demand	0 hours
Budgeted sick leave	120 hours

The company receives more jobs than it can handle and therefore rejects most out of town work. The budgeted salary for each professional is \$44,000 per year with fringe benefits of \$11,000.

During the previous year, the actual salaries were \$46,500, plus fringe benefits of \$11,500.

Required:

- a. What was the total budgeted direct cost rate if the company believes that clients should be charged directly for its employees' salaries and benefits?
- b. What was the budgeted direct cost rate if the company wants to charge clients for employee vacation, sick leave, and professional development as an indirect cost?

Answer:

- a. Total budgeted direct cost rate = $(\$44,000 + \$11,000)/1,800 = \$30.56$ per hour
- b. Total budgeted direct cost rate = $\$44,000/1,800 = \24.45 per hour

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-4

54) Landscape Architects provides landscape consulting services to clients that range from small businesses to large corporations. The budgeted rate charged to customers for consulting per hour is \$100. The budgeted overhead for customer-support costs per hour is \$45 and the budgeted other direct-cost pool rate is \$25 per hour. The budgeted hourly rates charged to jobs are \$30 for the architect and \$15 for the assistants.

Jobs #200 and #201 for Sheridan College incurred 90 and 240 hours-respectively. Each job included one licensed architect and two assistants. The architect worked 12 hours on Job #200 and 60 hours on Job #201. Required:

- a. Identify the cost objects.
- b. Determine the costs of each job using budgeted overhead rates.

Answer:

- a. There are two cost objects, Job #200, and Job #201.

b.	<u>Job #200</u>	<u>Job #201</u>
Direct costs @ \$25 × 90, 240	\$2,250	\$6,000
Architects @ \$30 × 12, 60	360	1,800
Assistants @ \$15 × 78, 180	1,170	2,700
Customer support @ \$45 × 90, 240	4,050	10,800

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-4

55) A wholesale automobile company that buys and resells cars has the following data for June:

		<u>Actual</u>
	Units bought	2,600
	Units sold	2,500
<u>Cost</u>	<u>Assignment</u>	<u>Actual \$</u>
Total cost of sales	# of units sold	30,000,000
Buyers' expenses	# of units bought	162,000
Cleaning of sold units	Cleaning dept.	150,000
Customer relations	Sales support	244,000
Rent on showroom	# of units bought	20,000
Sales staff commissions	# of units sold	300,000
Utilities	Sales support	3,500

Required:

- Compute the costing rates for each cost driver using actual costing.
- Calculate the total cost assigned to the each vehicle sold.

Answer:

- Costing rates Actual

Units sold cost	$\$30,300,000/2,500$
	$= \$12,120$
Buying cost	$\$182,000/2,600$
	$= \$70$
Cleaning cost	$\$150,000/2,500$
	$= \$60$
Sales support cost	$\$247,500/2,500$
	$= \$99$

b. Actual = $\$12,120 + \$70 + \$60 + \$99 = \$12,349$

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-4

56) General Hospital uses a job-costing system for all patients. In March the Critical Care and Special Care facilities had cost allocation bases of 4,000 nursing days and 3,000 nursing days, respectively. The nursing care charges for each department for the month were \$2,106,000 and \$1,500,000, respectively. The General Care area had costs of \$2,700,000 and 7,500 nursing days for the month.

Patient Jim Hansen spent 5 days in Critical Care, 4 days in Special Care and 21 days in General Care during March.

Required:

- a. Determine the cost allocation rate for each department.
- b. What are the total charges to Mr. Hansen if he was in the facility the entire month of March?

Answer:

- a. Overhead rate Critical Care = $\$2,106,000/4,000$ nursing days = \$526.50 per day.

Overhead rate Special Care = $\$1,500,000/3,000$ nursing days = \$500 per day

Overhead rate General Care = $\$2,700,000/7,500$ nursing days = \$360 per day

- b. Mr. Hansen:

Critical care $\$526.50 \times 5$ days = \$2,632.50

Special care $\$500.00 \times 4$ days = 2,000.00

General care $\$360.00 \times 21$ days = 7,560.00

overhead charges \$12,192.50

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-4

58) Cowley County Hospital uses a job-costing system for all patients who have surgery. In March, the Pre-Operating Room (PRE-OP) and Operating Room (OR) had budgeted allocation bases of 4,000 nursing hours and 2,000 nursing hours, respectively. The budgeted nursing overhead costs for each department for the month were \$168,000 and \$132,000, respectively. The hospital floor for surgery patients had budgeted overhead costs of \$1,200,000 and 15,000 nursing hours for the month. For patient Fred Adams, actual hours incurred were eight and four hours, respectively, in the PRE-OP and OR rooms. He was in the hospital for 4 days (96 hours). Other costs related to Adams were:

	PRE-OP	OR	In-room
	<u>Costs</u>	<u>Costs</u>	<u>Costs</u>
Patient medicine	\$200	\$500	\$2,400
Direct nursing time	\$1,000	\$2,000	\$3,000

The hospital uses a budgeted overhead rate for applying overhead to patient stays.

Required:

What is the total cost of the stay of patient Fred Adams?

Answer: Nursing overhead rate PRE-OP = $\$168,000/4,000$ hrs.
= \$42 per hr.

Nursing overhead rate OR = $\$132,000/2,000$ hrs.
= \$66 per hr.

Overhead rate for surgery floor = $\$1,200,000/15,000$ hrs.
= \$80 per hr.

Patient Fred Adams:

	<u>PRE-OP</u>	<u>OR</u>	<u>In-room</u>	<u>Totals</u>
Patient medicine	\$200	\$500	\$2,400	\$3,100
Direct nursing time	1,000	2,000	3,000	6,000
Nursing overhead:				
PRE-OP ($\$42 \times 8$)	336		336	
OR ($\$66 \times 4$)		264	264	
In-room ($\$80 \times 96$)	0	0	7,680	7,680
Total	<u>\$1,536</u>	<u>\$2,764</u>	<u>\$13,080</u>	<u>\$17,380</u>

Diff: 3 Type: ES

Skill: Apply

Objective: LO 4-4

59) A local attorney employs ten full-time professionals. The budgeted compensation per employee is \$75,000. The maximum billable hours for each client are 200. Clients always receive their full amount of time. All professional labour costs are included in a single direct cost category and are traced to jobs on a per-hour basis. Any other costs are included in a single indirect cost pool, allocated according to professional labour-hours. Budgeted indirect costs for the year are \$1,000,000 and the firm had 20 clients.

Required:

- a. What is the direct labour budgeted cost rate per hour?
- b. What is the indirect cost pool budgeted cost rate per hour?

Answer:

a. Total direct cost = $\$75,000 \times 10 = \$750,000$

$$\text{Total hours} = 200 \times 20 = 4,000$$

$$\text{Direct cost rate per unit} = \$750,000/4,000 = \$187.50 \text{ per hour}$$

b. Indirect cost rate per unit = $1,000,000/4,000 = \$250.00$ per hour

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-4

60) A local attorney employs ten full-time professionals. The budgeted compensation per employee is \$80,000. The maximum billable hours for each client are 400. Clients always receive their full amount of time. All professional labour costs are included in a single direct cost category and are traced to jobs on a per-hour basis. Any other costs are included in a single indirect cost pool, allocated according to professional labour-hours. Budgeted indirect costs for the year are \$400,000 and the firm had 20 clients.

Required:

- a. What is the direct labour budgeted cost rate per hour?
- b. What is the indirect cost pool budgeted cost rate per hour?

Answer:

a. Total direct cost = $\$80,000 \times 10 = \$800,000$

$$\text{Total hours} = 400 \times 20 = 8,000$$

$$\text{Direct cost rate per unit} = \$800,000/8,000 = \$100.00 \text{ per hour}$$

b. Indirect cost rate per unit = $\$400,000/8,000 = \50.00 per hour

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-4

61) A local engineering firm is bidding on a design project for a new client. The total budgeted direct labour costs for the firm are \$800,000. The total budgeted indirect costs are \$1,200,000. It is estimated that there are 16,000 billable hours in total.

Required:

- What is the budgeted direct labour cost rate?
- What is the budgeted indirect cost allocation rate assuming direct labour cost is the cost allocation base?
- What should be the engineering firm bid on the project if the direct labour hours are estimated at 500 hours?

Answer:

- $\$800,000/16,000 = \$50/\text{hour}$
- $\$1,200,000/\$800,000 = 150\%$ of direct labour cost
- $(500 \text{ hours} \times \$50 = \$25,000) + (\$25,000 \times 1.5) = \$62,500$

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-4

62) Fox Manufacturing is a small textile manufacturer using machine-hours for the single indirect cost allocation rate to allocate indirect manufacturing costs to the various jobs contracted during the year. The following estimates are provided for the coming year for the company and for the Maize High School Science Olympiad job.

	<u>Company</u>	<u>Maize High School Job</u>
Direct materials	\$150,000	\$1,500
Direct manufacturing labour	\$65,000	\$490
Manufacturing overhead costs	\$40,000	
Machine-hours	5,000 mh	45 mh

Required:

- For Fox Manufacturing, determine the annual manufacturing indirect cost allocation rate.
- Determine the amount of manufacturing overhead costs allocated to the Maize High School job.
- Determine the estimated total manufacturing costs for the Maize High School job.

Answer:

- Manufacturing indirect cost allocation rate = $\$40,000/5,000 \text{ mh} = \8.00 per mh
- $\$360 \text{ estimated manufacturing overhead costs} = 45 \text{ mh} \times \8.00 per mh

- | | |
|-------------------------------------|----------------|
| Direct materials | \$1,500 |
| Direct manufacturing labour | 490 |
| Manufacturing overhead costs | <u>360</u> |
| Estimated total manufacturing costs | <u>\$2,350</u> |

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-4

63) Maddow Manufacturing is a small textile manufacturer using machine-hours for the single indirect cost rate to allocate manufacturing overhead costs to the various jobs contracted during the year. The following estimates are provided for the coming year for the company and for the Patterson High School Science Olympiad Jacket job.

	<u>Company</u>	<u>Patterson High School Job</u>
Direct materials	\$75,000	\$2,500
Direct manufacturing labor	\$45,000	\$450
Manufacturing overhead costs	\$20,000	
Machine-hours	2,000 mh	12 mh

Required:

- For Maddow Manufacturing, determine the annual manufacturing overhead cost-allocation rate.
- Determine the amount of manufacturing overhead costs allocated to the Patterson High School job.
- Determine the estimated total manufacturing costs for the Patterson High School job.

Answer:

- Manufacturing overhead cost-allocation rate = \$10.00 per mh
= \$20,000/2,000 mh
- \$120 estimated manufacturing overhead costs = 12 mh × \$10.00 per mh
- | | |
|-------------------------------------|----------------|
| Direct materials | \$2,500 |
| Direct manufacturing labor | 450 |
| Manufacturing overhead costs | <u>120</u> |
| Estimated total manufacturing costs | <u>\$3,070</u> |

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-4

64) Hill Manufacturing uses departmental cost driver rates to apply manufacturing overhead costs to products. Manufacturing overhead costs are applied on the basis of machine hours in the Machining Department and on the basis of direct labour hours in the Assembly Department. The following estimates were provided at the beginning of the current year:

	<u>Machining</u>	<u>Assembly</u>
Direct labour hours	10,000 dlh	90,000 dlh
Machine hours	100,000 mh	5,000 mh
Direct labour cost	\$80,000	\$720,000
Manufacturing overhead costs	\$250,000	\$360,000

The accounting records of the company show the following data for Job #846:

	<u>Machining</u>	<u>Assembly</u>
Direct labour hours	50 dlh	120 dlh
Machine hours	170 mh	10 mh
Direct material cost	\$2,700	\$1,600
Direct labour cost	\$400	\$900

Required:

- Compute the manufacturing indirect cost allocation rate for each department.
- Compute the total cost of Job #846.
- Provide possible reasons why Hill Manufacturing uses two different cost allocation rates.

Answer:

- Machining Department cost-allocation rate: $\$2.50/\text{mh} = \$250,000/100,000 \text{ mh}$
 Assembly Department cost-allocation rate: $\$4.00/\text{dlh} = \$360,000/90,000 \text{ dlh}$
- Total cost of Job #846 is $\$6,505 = \text{Direct materials } \$4,300 + \text{Direct labour } \$1,300 + \text{Manufacturing overhead costs } \$905 (\text{Machining } \$425 + \text{Assembly } \$480)$.
- Ideally, the cost-allocation base should reflect the factors that cause manufacturing overhead costs to increase. Apparently, Hill regards the use of machines as the principal cause of manufacturing overhead costs (such as amortization and repairs) in the Machining Department. In contrast, Hill regards direct labour-hours as the principal cause of manufacturing overhead costs (such as indirect labour) in the Assembly Department.

Diff: 3 Type: ES

Skill: Apply

Objective: LO 4-4

65) Valley Manufacturing uses departmental cost driver rates to apply manufacturing overhead costs to products. Manufacturing overhead costs are applied on the basis of machine hours in the Machining Department and on the basis of direct labour hours in the Assembly Department. The following estimates were provided at the beginning of the current year:

	<u>Machining</u>	<u>Assembly</u>
Direct labour hours	15,000 dlh	60,000 dlh
Machine hours	120,000 mh	4,000 mh
Direct labour cost	\$450,000	\$1,200,000
Manufacturing overhead costs	\$360,000	\$120,000

The accounting records of the company show the following data for Job #922:

	<u>Machining</u>	<u>Assembly</u>
Direct labour hours	50 dlh	120 dlh
Machine hours	170 mh	10 mh
Direct material cost	\$3,900	\$1,800
Direct labour cost	\$1,650	\$2,280

Required:

- Compute the manufacturing indirect cost allocation rate for each department.
- Compute the total cost of Job #922.
- Provide possible reasons why Valley Manufacturing uses predetermined rather than actual indirect manufacturing cost overhead rates.

Answer:

- Machining Department cost-allocation rate: $\$3.00/\text{mh} = \$360,000/120,000 \text{ mh}$
 Assembly Department cost-allocation rate: $\$2.00/\text{dlh} = \$120,000/60,000 \text{ dlh}$
- Total cost of Job #922 is $\$10,380 = \text{Direct materials } \$5,700 + \text{Direct labour } \$3,930 + \text{Manufacturing overhead costs } \$750 (\text{Machining } \$510 + \text{Assembly } \$240)$.
- Managers want to know manufacturing costs (and other costs, such as marketing costs) for ongoing uses, including pricing jobs, monitoring and managing costs, evaluating the success of the job, learning about what worked and what didn't, bidding on new jobs, and preparing interim financial statements. Because of the need for immediate access to job costs, few companies wait to allocate overhead costs until year-end when the actual manufacturing overhead is finally known. Instead, a *predetermined or budgeted indirect-cost rate* is calculated for each cost pool at the beginning of a fiscal year, and overhead costs are allocated to jobs as work progresses.

Diff: 3 Type: ES

Skill: Apply

Objective: LO 4-4

66) Jordan Company has two departments, X and Y. Overhead is applied based on budgeted direct labour cost in Department X, and budgeted machine hours in Department Y. The following additional information is available.

<u>Budgeted Amounts</u>	<u>Department X</u>	<u>Department Y</u>
Direct labour cost	\$180,000	\$165,000
Factory overhead	\$225,000	\$180,000
Machine hours	51,000 mh	40,000 mh
<u>Actual data for Job #10</u>	<u>Department X</u>	<u>Department Y</u>
Direct materials requisitioned	\$10,000	\$16,000
Direct labour cost	\$11,000	\$14,000
Machine hours	5,000 mh	3,000 mh

Required:

- Compute the budgeted factory indirect cost allocation rate for Department X.
- Compute the budgeted factory indirect cost allocation rate for Department Y.
- What is the total overhead cost of Job 10?
- If Job 10 consists of 50 units of product, what is the unit cost of this job?

Answer:

- $\$225,000/\$180,000 = 125\%$
- $\$180,000/40,000 \text{ hrs.} = \4.50 per hour
- $(\$11,000 \times 125 \text{ percent}) + (\$4.50 \times 3,000 \text{ hrs.}) = \$27,250$
- $\$10,000 + \$16,000 + \$11,000 + \$14,000 + \$27,250 = \$78,250$
 $\$78,250/50 \text{ units} = \$1,565 \text{ per unit}$

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-4

67) Sanders Company has two departments, X and Y. Overhead is applied based on budgeted direct labour cost in Department X, and budgeted machine hours in Department Y. The following additional information is available.

<u>Budgeted Amounts</u>	<u>Department X</u>	<u>Department Y</u>
Direct labour cost	\$160,000	\$205,000
Factory overhead	\$208,000	\$240,000
Machine hours	41,000 mh	60,000 mh
<u>Actual data for Job #11</u>	<u>Department X</u>	<u>Department Y</u>
Direct materials requisitioned	\$12,000	\$18,000
Direct labour cost	\$17,000	\$15,000
Machine hours	3,500 mh	5,200 mh

Required:

- Compute the budgeted factory indirect cost allocation rate for Department X.
- Compute the budgeted factory indirect cost allocation rate for Department Y.
- What is the total overhead cost of Job 11?
- If Job 11 consists of 40 units of product, what is the unit cost of this job?

Answer:

- $\$160,000/\$208,000 = 130\%$
- $\$240,000/60,000 \text{ hrs.} = \4.00 per hour
- $(\$17,000 \times 130 \text{ percent}) + (\$4.00 \times 5,200 \text{ hrs.}) = \$42,900$
- $\$12,000 + \$17,000 + \$18,000 + \$15,000 + \$42,900 = \$104,900$
 $\$104,900/40 \text{ units} = \$2,622.50 \text{ per unit}$

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-4

68) Sambell Manufacturing uses a predetermined manufacturing overhead rate to allocate overhead to individual jobs. At the beginning of the year, the company expected to incur the following:

Manufacturing overhead costs	\$240,000
Direct labour cost	600,000
Machine hours	25,000

At the end of the year, the company had actually incurred the following:

Direct labour cost	\$920,000
Depreciation on manufacturing plant and equipment	250,000
Property taxes on plant	35,000
Sales salaries	12,000
Delivery drivers wages	8,000
Plant janitors wages	10,000
Machine hours	25,500 hours

Required:

1. Compute Sambell's indirect cost allocation rate based on labour cost.
2. Compute Sambell's indirect cost allocation rate based on machine hours.
3. How much overhead was allocated during the year if the allocation base was direct labour cost?
4. How much manufacturing overhead was incurred during the year?

Answer:

1. Estimated manufacturing overhead \$240,000
 Divided by expected direct labour cost \$600,000
 = predetermined overhead rate 40% of direct labour cost

2. Estimated manufacturing overhead \$240,000
 Divided by expected machine hours 25,000
 = predetermined overhead rate \$9.60 per machine hour

3. Actual direct labour cost \$920,000
 Multiplied by predetermined overhead rate $\times 0.40$
 = Manufacturing overhead allocated \$368,000

4. Actual manufacturing overhead = 250,000 + 35,000 + 10,000 = \$295,000

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-4

69) Northern Manufacturing uses a predetermined manufacturing overhead rate to allocate overhead to individual jobs. At the beginning of the year, the company expected to incur the following:

Manufacturing overhead costs	\$320,000
Direct labour cost	640,000
Machine hours	20,000

At the end of the year, the company had actually incurred the following:

Direct labour cost	\$920,000
Depreciation on manufacturing plant and equipment	290,000
Property taxes on plant	55,000
Sales salaries	12,000
Delivery drivers wages	8,000
Plant janitors wages	40,000
Machine hours	20,500 hours

Required:

1. Compute Northern's indirect cost allocation rate based on labour cost.
2. Compute Northern's indirect cost allocation rate based on machine hours.
3. How much overhead was allocated during the year if the allocation base was machine hours?
4. How much manufacturing overhead was incurred during the year?

Answer:

1. Estimated manufacturing overhead \$320,000
Divided by expected direct labour cost \$640,000
= allocation rate 50% of direct labour cost

2. Estimated manufacturing overhead \$320,000
Divided by expected machine hours 20,000
= allocation rate \$16.00 per machine hour

3. Actual machine hours 20,500
Multiplied by predetermined overhead rate $\times \$16$
= Manufacturing overhead allocated \$328,000

4. Actual manufacturing overhead = 290,000 + 55,000 + 40,000 = \$385,000

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-4

70) An accounting firm provides tax consulting for estates and trusts. Their job costing system has a single direct cost category (professional labour) and a single indirect cost pool (research support). The indirect cost pool contains all the costs except direct personnel costs. All budgeted indirect costs are allocated to individual jobs using actual professional labour hours.

Required:

- a. Discuss the reasons a consulting firm might use normal costing in its job system rather than actual costing.
- b. What might be some ways for the firm to change from a one pool allocation concept?

Answer:

- a. Budget rates are normally used because the actual costs of performing the work will not usually be available until sometime after a job is completed. Decisions about billing a client for services rendered generally must be made immediately after the job is completed. Also, actual costs may reflect short-run changes in the environment which may distort the billing process. Budgeted costs are not affected by weekly or monthly fluctuations and therefore offer a stable comparison and assignment of costs throughout the accounting cycle.
- b. Having separate professional labour hour rates assists in assigning the personnel costs to jobs closest to their real values. This helps to maintain different costs for jobs which have the same number of hours but a different mix of professionals doing the job. Seldom is there only one cause and effect relationship between a job and the tasks performed on the job; therefore, it may also be a good idea to develop multiple indirect cost assignments (i.e., one for staff support and others for such items as computer support or general administrative support).

Diff: 3 Type: ES

Skill: Understand

Objective: LO 4-4

71) Explain how a budgeted indirect cost allocation rate is determined.

Answer: Manufacturing overhead cost allocation rates are determined by dividing the budgeted cost of the resources committed to the manufacturing overhead activity by the budgeted capacity made available by the resources committed to the activity.

Diff: 2 Type: ES

Skill: Understand

Objective: LO 4-4

72) What is the difference between an actual cost system and a normal cost system?

Answer: An actual cost system is one that traces direct costs to a cost object by using the actual direct-cost rates times the actual quantities of direct-cost inputs, and allocates indirect costs based on the actual indirect cost rates times the actual quantities of the cost-allocation bases. A normal cost system is one that traces direct costs to a cost object by using the actual direct-cost rates times the actual quantities of direct-cost inputs, and allocates indirect costs based on the budgeted indirect cost rates times the actual quantities of the cost-allocation bases. Both systems trace direct costs to jobs the same way. An actual cost system traces indirect costs to jobs using actual indirect cost rates, but a normal cost system uses budgeted indirect cost rates to trace indirect costs to jobs.

Diff: 2 Type: ES

Skill: Understand

Objective: LO 4-4

73) In a job-costing system, explain why it is necessary to apply indirect costs to production through the use of a budgeted indirect-cost rate.

Answer: First, actual manufacturing overhead costs are not known until the end of year. To price and invoice jobs in a timely manner, annual manufacturing overhead costs need to be estimated and allocated to specific jobs during the accounting period. Secondly, manufacturing overhead costs are usually not incurred evenly throughout the year. The use of a manufacturing overhead cost allocation rate evenly distributes manufacturing overhead costs over the entire year.

Diff: 2 Type: ES

Skill: Understand

Objective: LO 4-4

For each item below indicate the source documents that would most likely authorize the journal entry in a job-costing system.

- A) materials requisition record
- B) job-cost record
- C) sales invoice
- D) labour time card
- E) purchase invoice
- F) labour time card

74) direct materials purchased

Diff: 1 Type: MA

Skill: Understand

Objective: LO 4-4

75) direct materials used

Diff: 1 Type: MA

Skill: Understand

Objective: LO 4-4

76) direct manufacturing labour

Diff: 1 Type: MA

Skill: Understand

Objective: LO 4-4

77) indirect manufacturing labour

Diff: 1 Type: MA

Skill: Understand

Objective: LO 4-4

78) finished goods control

Diff: 1 Type: MA

Skill: Understand

Objective: LO 4-4

79) cost of goods sold

Diff: 1 Type: MA

Skill: Understand

Objective: LO 4-4

Answers: 74) E 75) A 76) F 77) D 78) B 79) C

4.5 Analyze the flow of costs from direct and indirect cost pools to inventory accounts, including adjustments for over- and underallocated costs.

1) The Work-in-Process Control account tracks job costs from the time jobs are started until they are completed.

Answer: TRUE

Explanation:

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-5

2) Underallocated indirect costs cannot occur when normal costing is used.

Answer: FALSE

Explanation: In normal costing there will almost always be a variance between the amount allocated using a budgeted rate and the actual indirect costs incurred.

Diff: 2 Type: TF Page Ref: 130

Skill: Remember

Objective: LO 4-5

3) Proration is the equalization of the overhead allocation rates between finished goods inventory and work-in-process inventory.

Answer: FALSE

Explanation: Proration also included cost of goods sold.

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-5

4) Instead of proration, a company could choose to simply write-off the balance of any underallocated overhead to cost of goods sold providing the amount is immaterial.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-5

5) The balance in the manufacturing overhead allocated account, is carried over to the balance sheet for the subsequent year, to properly track all costs for job costing.

Answer: FALSE

Explanation: This temporary accounts is written-off at year end.

Diff: 2 Type: TF

Skill: Remember

Objective: LO 4-5

6) The actual costs of all individual overhead categories are recorded in the manufacturing overhead control account as credit entries.

Answer: FALSE

Explanation: As debit entries.

Diff: 1 Type: TF

Skill: Remember

Objective: LO 4-5

7) The manufacturing overhead control account and the manufacturing overhead allocated account both have zero balances at the end of each year after all adjustments are recorded.

Answer: TRUE

Diff: 2 Type: TF

Skill: Remember

Objective: LO 4-5

8) The general ledger account that combines the separate job cost records is called the _____ account.

A) Cost of Goods Sold

B) Finished Goods Control

C) Manufacturing Overhead Allocated

D) Manufacturing Overhead Control

E) Work-in-Process Control

Answer: E

Diff: 1 Type: MC

Skill: Remember

Objective: LO 4-5

9) XYZ Company uses a normal job costing system. The direct labour rate is \$27 per hour; and, the budgeted indirect cost allocation rate is \$20 and uses direct labour hours as the cost allocation base.

Direct labour hours	1,000
Direct materials cost	\$12,000
Marketing costs	\$17,000
Non-manufacturing overhead	\$9,000

What amount should be added to Work-in-Process control?

A) \$12,000

B) \$47,000

C) \$59,000

D) \$76,000

E) \$85,000

Answer: C

Explanation: C) The marketing and administration costs are not included. The direct costs are \$12,000 for materials, and $(1,000 \times \$47)$ \$47,000 for direct labour and overhead, therefore total of \$59,000.

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-5

10) In normal costing the manufacturing overhead control and manufacturing overhead allocated accounts in the general ledger respectively, refer to

A) the record of actual overhead costs, and the record of overhead allocated to specific jobs using budgeted rates \times actual base units.

B) the record of total budgeted overhead costs and the record of actual overhead allocated to date.

C) the record of actual overhead costs, and the record of overhead allocated to specific jobs using actual rates \times budgeted base units.

D) the record of total budgeted overhead costs, and the record of overhead allocated to specific jobs using budgeted rates \times actual base units.

E) the record of actual overhead costs, and the record of overhead allocated to specific jobs using budgeted rates \times budgeted base units.

Answer: A

Diff: 2 Type: MC

Skill: Remember

Objective: LO 4-5

11) To allocate or spread the under/overallocated overhead between ending Inventory, Cost of Goods Sold, and the Work-in-Process control accounts is called the

A) adjusted allocation-rate approach.

B) proration approach.

C) flexible budget approach.

D) allocation variance approach.

E) inventory adjustment approach.

Answer: B

Diff: 1 Type: MC

Skill: Remember

Objective: LO 4-5

12) When using the proration approach the final balance in the Manufacturing Overhead Control account can be closed to which account(s) at year-end?

A) Work-in-Process Control

B) Income Summary

C) Finished Goods Inventory

D) Cost of Goods Sold

E) Work-in-Process Control, Finished Goods Inventory or Cost of Goods Sold would normally be used.

Answer: E

Diff: 1 Type: MC

Skill: Understand

Objective: LO 4-5

- 13) The Manufacturing Overhead Control account is debited for
- A) the actual costs in all the individual overhead categories (such as indirect materials and electric power).
 - B) the amount of the under applied overhead.
 - C) the budgeted costs in all the individual overhead categories (such as indirect materials and electric power).
 - D) the budgeted amount of indirect manufacturing overhead costs.
 - E) the overhead allocated to Work-in-Process inventory.

Answer: A

Diff: 2 Type: MC

Skill: Understand

Objective: LO 4-5

- 14) Which method(s) for dealing with under/over allocated overhead provides the most accurate inventory and cost of goods sold account balances when the amount is material?

- A) proration approach
- B) adjusted allocation-rate approach
- C) immediate write-off to cost of goods sold
- D) either proration or adjusted allocation-rate approach
- E) either the proration approach or the immediate write-off to cost of goods sold

Answer: D

Diff: 2 Type: MC

Skill: Remember

Objective: LO 4-5

- 15) Which method for dealing with under/over allocated overhead provides the most accurate individual job cost records?

- A) proration approach
- B) adjusted allocation-rate approach
- C) immediate write-off to cost of goods sold
- D) either proration or adjusted allocation-rate approach would give same result
- E) either the proration approach or the immediate write-off to cost of goods sold

Answer: B

Diff: 2 Type: MC

Skill: Remember

Objective: LO 4-5

16) What is the appropriate journal entry if \$100,000 of materials were purchased on account for the month of August?

A)

Materials Control	100,000	
Accounts Payable Control		100,000

B)

Work-in-Process Control	100,000	
Accounts Payable Control		100,000

C)

Manufacturing Overhead Control	100,000	
Accounts Payable Control		100,000

D)

Manufacturing Overhead Allocated	100,000	
Accounts Payable Control		100,000

E)

Materials Control	100,000	
Work-in-Process Control		100,000

Answer: A

Diff: 1 Type: MC

Skill: Apply

Objective: LO 4-5

17) What is the appropriate journal entry if direct materials of \$50,000 and indirect materials of \$3,000 are sent to the manufacturing plant floor?

A)

Work-in-Process Control	50,000	
Materials Control		50,000

B)

Work-in-Process Control	53,000	
Materials Control		53,000

C)

Manufacturing Overhead Control	3,000	
Materials Control	50,000	
Work-in-Process Control		53,000

D)

Work-in-Process Control	50,000	
Manufacturing Overhead Control	3,000	
Materials Control		53,000

E)

Work-in-Process Control	50,000	
Manufacturing Overhead Allocated	3,000	
Materials Control		53,000

Answer: D

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-5

18) Manufacturing overhead costs incurred for the month are:

Utilities	\$15,000
Depreciation on equipment	\$25,000
Repairs	\$10,000

Which is the correct journal entry assuming utilities and repairs were on account?

A)

Manufacturing Overhead Allocated	50,000
Accounts Payable Control	25,000
Accumulated Depreciation Control	25,000

B)

Work-in-Process Control	50,000
Accounts Payable Control	50,000

C)

Manufacturing Overhead Control	50,000
Work-in-Process Control	50,000

D)

Accumulated Depreciation Control	25,000
Accounts Payable Control	25,000
Manufacturing Overhead Control	50,000

E)

Manufacturing Overhead Control	50,000
Accounts Payable Control	25,000
Accumulated Depreciation Control	25,000

Answer: E

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-5

Answer the following question(s) using the information below.

Sunny Company manufactures pipes and applies manufacturing overhead costs to production at a budgeted indirect cost allocation rate of \$15 per direct labour hour. The following data are obtained from the accounting records for June in the current year:

Direct materials	\$280,000
Direct labour (7,000 hours @ \$11/hour)	\$77,000
Indirect labour	\$20,000
Plant facility rent	\$60,000
Depreciation on plant machinery and equipment	\$30,000
Sales commissions	\$40,000
Administrative expenses	\$50,000

19) The actual amount of manufacturing overhead costs incurred in June totals

- A) \$557,000.
- B) \$200,000.
- C) \$110,000.
- D) \$80,000.
- E) \$105,000.

Answer: C

Explanation: C) $\$20,000 + \$60,000 + \$30,000 = \$110,000$

Diff: 1 Type: MC

Skill: Apply

Objective: LO 4-5

20) The amount of manufacturing overhead allocated to all jobs during June totals

- A) \$77,000.
- B) \$105,000.
- C) \$110,000.
- D) \$200,000.
- E) \$557,000.

Answer: B

Explanation: B) $7,000 \times \$15 \text{ per dlh} = \$105,000$

Diff: 1 Type: MC

Skill: Apply

Objective: LO 4-5

21) For June, manufacturing overhead was

A) overallocated by \$90,000.

B) underallocated by \$5,000.

C) neither underallocated or overallocated.

D) underallocated by \$33,000.

E) overallocated by \$5,000.

Answer: B

Explanation: B) Underallocated: Allocated only \$105,000 ($7,000 \times \15 per dlh) of the \$110,000 actual overhead

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-5

Use the information below to answer the following question(s).

Because the Abernathy Company used a budgeted indirect cost allocation rate for its manufacturing operations, the amount allocated (\$200,000) was different from the actual amount incurred (\$225,000). These were the respective ending balances in the Manufacturing Overhead Allocated and Manufacturing Overhead control accounts.

Before disposition of under/overallocated overhead, the following information was available:

	Account Balance	Overhead Allocated Included
Direct materials	\$60,000	\$nil
WIP	\$190,000	\$10,000
Finished goods	\$250,000	\$20,000
Cost of goods sold	\$560,000	\$170,000

22) What is the journal entry Abernathy Company should use to write-off the difference between allocated and actual overhead directly to cost of goods sold?

A)

Cost of Goods Sold	25,000
Manufacturing Overhead Allocated	200,000
Manufacturing Overhead Control	225,000

B)

Cost of Goods Sold	25,000
Manufacturing Overhead Allocated	25,000

C)

Manufacturing Overhead Allocated	25,000
Cost of Goods Sold	25,000

D)

Manufacturing Overhead Control	25,000
Cost of Goods Sold	25,000

E)

Cost of Goods Sold	25,000
Manufacturing Overhead Control	200,000
Manufacturing Overhead Allocated	225,000

Answer: A

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-5

23) What is the journal entry Abernathy Company should use to write-off the difference between allocated and actual overhead using the proration approach based on overhead allocated?

A)

Work-in-Process Control	4,750	
Finished Goods Control	6,250	
Cost of Goods Sold	14,000	
Manufacturing Overhead Allocated	200,000	
Manufacturing Overhead Control		225,000

B)

Manufacturing Overhead Allocated	25,000	
Work-in-Process Control		4,750
Finished Goods Control		6,250
Cost of Goods Sold		14,000

C)

Manufacturing Overhead Control	25,000	
Work-in-Process Control		1,250
Finished Goods Control		2,500
Cost of Goods Sold		21,250

D)

Work-in-Process Control	1,250	
Finished Goods Control	2,500	
Cost of Goods Sold	21,250	
Manufacturing Overhead Allocated	200,000	
Manufacturing Overhead Control		225,000

E)

Work-in-Process Control	1,250	
Finished Goods Control	2,500	
Cost of Goods Sold	21,250	
Manufacturing Overhead Control	200,000	
Manufacturing Overhead Allocated		225,000

Answer: D

Explanation: D)

Work-in-process	\$10,000	5%	×	\$25,000 =	\$1,250
Finished goods	20,000	10%	×	25,000 =	2,500
Cost of goods sold	<u>170,000</u>	<u>85%</u>	×	25,000 =	<u>21,250</u>
	<u>\$200,000</u>	<u>100%</u>			<u>\$25,000</u>

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-5

Use the information below to answer the following question(s).

Because the Beckworth Company used a budgeted indirect cost allocation rate for its manufacturing operations, the amount allocated (\$190,000) was different from the actual amount incurred (\$175,000). These were the respective ending balances in the Manufacturing Overhead Allocated and Manufacturing Overhead control accounts.

Before disposition of under/overallocated overhead, the following information was available:

	Account Balance	Overhead Allocated Included
Direct materials	\$50,000	\$nil
WIP	\$165,000	\$12,000
Finished goods	\$219,000	\$27,000
Cost of goods sold	\$492,000	\$163,000

24) What is the journal entry Beckworth Company should use to write-off the difference between allocated and actual overhead directly to cost of goods sold?

A)

Cost of Goods Sold	15,000
Manufacturing Overhead Control	175,000
Manufacturing Overhead Allocated	190,000

B)

Cost of Goods Sold	15,000
Manufacturing Overhead Allocated	15,000

C)

Manufacturing Overhead Allocated	15,000
Cost of Goods Sold	15,000

D)

Manufacturing Overhead Control	15,000
Cost of Goods Sold	15,000

E)

Manufacturing Overhead Allocated	190,000
Cost of Goods Sold	15,000
Manufacturing Overhead Control	175,000

Answer: E

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-5

25) What is the journal entry Beckworth Company should use to write-off the difference between allocated and actual overhead using the proration approach based on overhead allocated?

A)

Work-in-Process Control	885
Finished Goods Control	2,010
Cost of Goods Sold	12,105
Manufacturing Overhead Control	175,000
Manufacturing Overhead Allocated	190,000

B)

Manufacturing Overhead Allocated	190,000
Manufacturing Overhead Control	175,000
Work-in-Process Control	885
Finished Goods Control	2,010
Cost of Goods Sold	12,105

C)

Manufacturing Overhead Allocated	190,000
Manufacturing Overhead Control	175,000
Work-in-Process Control	2,825
Finished Goods Control	3,750
Cost of Goods Sold	8,425

D)

Work-in-Process Control	2,825
Finished Goods Control	3,750
Cost of Goods Sold	8,425
Manufacturing Overhead Control	175,000
Manufacturing Overhead Allocated	190,000

E)

Cost of Goods Sold	15,000
Manufacturing Overhead Control	175,000
Manufacturing Overhead Allocated	190,000

Answer: B

Explanation: B)

Work-in-process	\$12,000	5.9%	×	\$15,000 =	\$885
Finished goods	27,000	13.4%	×	15,000 =	2,010
Cost of goods sold	<u>163,000</u>	<u>80.7%</u>	×	15,000 =	<u>12,105</u>
	<u>\$200,000</u>	<u>100.0%</u>			<u>\$15,000</u>

Diff: 2 Type: MC

Skill: Apply

Objective: LO 4-5

26) Correct the following journal entry, and explain your changes.

Manufacturing overhead control	32,000	
Work-in-process-control		32,000

To record the cost of machinery repair labour.

Answer: It is correct to charge the machinery repair to manufacturing overhead, therefore the debit is correct. The credit should be to an account such as salaries payable control if the repair was completed by our own staff or accounts payable if the repair was sub-contracted to an outside firm.

Diff: 1 Type: ES

Skill: Apply

Objective: LO 4-5

27) Job-cost records for Boucher Company contained the following data:

<u>Job No.</u>	<u>Date Started</u>	<u>Date Finished</u>	<u>Date Sold</u>	<u>Total Cost of Job at June 30</u>
220	May 18	June 12	June 20	\$6,000
221	May 20	June 19	June 21	4,000
222	June 7	July 5	July 12	7,000
223	June 10	June 28	July 1	6,500
224	June 19	July 16	July 25	8,000

Required:

- Compute WIP inventory at June 30.
- Compute finished goods inventory at June 30.
- Compute cost of goods sold for June.

Answer:

- $\$7,000 + \$8,000 = \$15,000$
- $\$6,500$
- $\$6,000 + \$4,000 = \$10,000$

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-5

28) Moira Company has just finished its first year of operations and must decide which method to use for adjusting cost of goods sold. The company used a budgeted indirect-cost rate for its manufacturing operations. The amount that was allocated (\$435,000) to cost of goods sold was different from the actual amount incurred (\$425,000). These were the respective ending balances in the Manufacturing Overhead Allocated and Manufacturing Overhead control accounts.

Ending balances in the relevant accounts were:

Work-in-Process	\$40,000
Finished Goods	80,000
Cost of Goods Sold	680,000

Required:

- Prepare a journal entry to write off the difference between allocated and actual overhead directly to Cost of Goods Sold. Be sure your journal entry closes the related overhead accounts.
- Prepare a journal entry that prorates the write-off of the difference between allocated and actual overhead using ending account balances. Be sure your journal entry closes the related overhead accounts.

Answer:

a.

Manufacturing Overhead Allocated	435,000	
Cost of Goods Sold		10,000
Manufacturing Overhead Control		425,000

b.

Work-in-process	\$40,000	5 % × \$10,000 = \$500
Finished goods	80,000	10 × \$10,000 = 1,000
Cost of goods sold	<u>680,000</u>	<u>85</u> × \$10,000 = <u>8,500</u>
Total	<u>\$800,000</u>	<u>100 %</u> <u>\$10,000</u>

Manufacturing Overhead Allocated	435,000	
Work-in-Process		500
Finished Goods		1,000
Cost of Goods Sold		8,500
Manufacturing Overhead Control		425,000

Diff: 3 Type: ES

Skill: Apply

Objective: LO 4-5

29) A manufacturing company has actual overhead of \$570,000, budgeted overhead of \$620,000, and budgeted 18,000 direct labour hours. Management believes that direct labour hours are the best allocation base to use for allocation of overhead. Actual direct labour hours were 20,000 hours.

Assuming that the company used normal costing methods for allocation, and has the following account balances in its general ledger, what are the adjustments for each account using the proration method based on the amount of manufacturing overhead included in each account balance before proration?

Account	Manuf OVH		
<u>Balance</u>	<u>Included</u>	<u>Adjustment</u>	
Work-in-process control	\$62,000	\$12,400	_____
Finished Goods	\$91,000	\$16,380	_____
Cost of Goods Sold	\$1,500,000	\$330,000	_____
Answer:		Manuf OVH	
	<u>Balance</u>	<u>Allocated</u>	<u>Adjustment</u>
Work-in-process control	\$62,000	\$12,400	\$1,728
Finished Goods	\$91,000	\$16,380	2,283
Cost of Goods Sold	\$1,500,000	\$330,000	45,989
Total		<u>\$358,780</u>	<u>\$50,000</u>

Calculations

$$\$12,400 / \$358,780 = 3.5\%$$

$$\$16,380 / \$358,780 = 4.6\%$$

$$\$330,000 / \$358,780 = 92.17\%$$

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-5

30) The Dougherty Furniture Company manufactures tables. In March, the two production departments had budgeted allocation bases of 4,000 machine hours in Department 100 and 8,000 direct manufacturing labour hours in Department 200. The budgeted manufacturing overheads for the month were \$57,500 and \$62,500, respectively. For Job A, the actual costs incurred in the two departments were as follows:

	<u>Department 100</u>	<u>Department 200</u>
Direct materials purchased on account	\$110,000	\$177,500
Direct materials used	32,500	13,500
Direct manufacturing labour	52,500	53,500
Indirect manufacturing labour	11,000	9,000
Indirect materials used	7,500	4,750
Lease on equipment	16,250	3,750
Utilities	1,000	1,250

Job A incurred 800 machine hours in Department 100 and 300 manufacturing labour hours in Department 200. The company uses a budgeted indirect cost allocation rate for applying overhead to production.

Required:

- a. Determine the budgeted manufacturing indirect cost allocation rate for each department.
- b. Prepare the necessary journal entries to summarize the March transactions for Department 100.
- c. What is the total cost of Job A?

Answer:

a.

Manufacturing overhead rate Department 100 = $\$57,500/4,000$ hours
 = $\$14.375$ per machine-hour

Manufacturing overhead rate Department 200 = $\$62,500/8,000$ hours
 = $\$7.8125$ per labour-hour

b.

Materials Control Department 100	110,000	
Accounts Payable Control		110,000
Work-in-Process Control Department 100	32,500	
Manufacturing Overhead Control Department 100	7,500	
Materials Control Department 100		40,000
Work-in-Process Control Department 100	52,500	
Manufacturing Overhead Control Department 100	11,000	
Wages Payable Control		63,500
Manufacturing Overhead Control Department 100	17,250	
Leaseholds Payable Control		16,250
Utilities Payable Control		1,000
Work-in-Process Control Dept. 100 ($\$14.375 \times 800$ hrs)	11,500	
Manufacturing Overhead Allocated		11,500

c.

Job A:

Direct materials Dept. 100	\$32,500
Direct materials Dept. 200	13,500
Direct manufacturing labour Dept. 100	52,500
Direct manufacturing labour Dept. 200	53,500
Manufacturing overhead Dept. 100 ($\$14.375 \times 800$)	11,500
Manufacturing overhead Dept. 200 ($\$7.8125 \times 300$)	<u>2,344</u>
Total	<u>\$165,844</u>

Diff: 3 Type: ES

Skill: Apply

Objective: LO 4-5

31) LeBlanc Company has the following balances as of the year ended December 31, 2015.

Direct Materials Inventory	\$15,000 Dr.
WIP Inventory	34,500 Dr.
Finished Goods Inventory	49,500 Dr.
Cost of Goods Sold	74,500 Dr.

Additional information is as follows:

Cost of direct materials purchased during 2015	\$41,000
Cost of direct materials requisitioned in 2015	47,000
Cost of goods completed during 2015	102,000
Factory overhead applied (120% of direct labour)	48,000
Underapplied factory overhead	4,000

Required:

- Compute beginning direct materials inventory.
- Compute beginning WIP inventory.
- Compute beginning finished goods inventory.
- Compute actual factory overhead incurred.

Answer:

- $\$47,000 - \$41,000 + \$15,000 = \$21,000$
- $\$48,000 / 120\% = \$40,000$ direct labour cost incurred
 $\$102,000 - \$47,000 - \$40,000 - \$48,000 + \$34,500 = \$1,500$
- $\$74,500 - \$102,000 + \$49,500 = \$22,000$
- $\$48,000 + \$4,000 = \$52,000$

Diff: 3 Type: ES

Skill: Analyze

Objective: LO 4-5

32) LaFleur Company has the following balances as of the year ended December 31, 2015.

Direct Materials Inventory	\$16,000 Dr.
WIP Inventory	35,500 Dr.
Finished Goods Inventory	47,500 Dr.
Cost of Goods Sold	81,500 Dr.

Additional information is as follows:

Cost of direct materials purchased during 2015	\$42,000
Cost of direct materials requisitioned in 2015	48,000
Cost of goods completed during 2015	125,000
Factory overhead applied (120% of direct labour)	60,000
Overapplied factory overhead	4,000

Required:

- Compute beginning direct materials inventory.
- Compute beginning WIP inventory.
- Compute beginning finished goods inventory.
- Compute actual factory overhead incurred.

Answer:

- $\$48,000 - \$42,000 + \$16,000 = \$22,000$
- $\$60,000 / 120\% = \$50,000$ direct labour cost incurred
 $\$125,000 - \$48,000 - \$50,000 - \$60,000 + \$35,500 = \$2,500$
- $\$81,500 - \$125,000 + \$47,500 = \$4,000$
- $\$60,000 - \$4,000 = \$56,000$

Diff: 3 Type: ES

Skill: Analyze

Objective: LO 4-5

33) Schulz Corporation applies overhead based upon machine-hours. Budgeted factory overhead was \$266,400 and budgeted machine-hours were 18,500. Actual factory overhead was \$287,920 and actual machine-hours were 19,050. Before disposition of under/overallocated overhead, the following information was available:

	Account <u>Balance</u>	Overhead <u>Allocated</u>
Direct materials	\$60,000	\$nil
WIP	\$190,000	\$66,500
Finished goods	\$250,000	\$75,000
Cost of goods sold	\$560,000	\$184,800

Required:

- a. Determine the budgeted factory overhead rate per machine-hour.
- b. Compute the over/underallocated overhead.
- c. Prepare the journal entry to dispose of the variance using the write-off to cost of goods sold approach. The corporation uses Manufacturing Overhead Allocated and Manufacturing Overhead control accounts.
- d. Prepare the journal entry to dispose of the variance using the proration approach.
- e. Identify three value chain categories and provide an example for each on how Klink Corporation could reduce its indirect costs.

Answer:

a. $\$266,400/18,500 \text{ hrs.} = \14.40 per hour

b. $\$14.40 \times 19,050 \text{ hours} = \$274,320 - \$287,920 = \$13,600 \text{ underallocated overhead}$

c. Manufacturing Overhead Allocated	274,320	
Cost of Goods Sold	13,600	
Manufacturing Overhead Control		287,920

d. $\$66,500 + \$75,000 + 184,800 = \$326,300$

Cost of Goods Sold:

$\$184,800/\$326,300 = 0.566; 0.566 \times \$13,600 = \$7,697.60$

WIP:

$\$66,500/\$326,300 = 0.204; 0.204 \times \$13,600 = \$2,774.40$

Finished Goods:

$\$75,000/\$326,300 = 0.23; 0.23 \times \$13,600 = \$3,128.00$

Cost of Goods Sold	7,697.60	
WIP Inventory	2,774.40	
Finished Goods Inventory	3,128.00	
Manufacturing Overhead Allocated	274,320.00	
Manufacturing Overhead Control		287,920.00

e. One example is to reduce indirect labour costs with improved information systems in the production value chain category. Students will offer many other creative solutions.

Diff: 3 Type: ES

Skill: Apply

Objective: LO 1-2 and LO 4 - 5

34) Klink Corporation applies overhead based upon machine-hours. Budgeted factory overhead was \$295,400 and budgeted machine-hours were 21,100. Actual factory overhead was \$319,800 and actual machine-hours were 18,090. Before disposition of under/overallocated overhead, the following information was available:

	Account <u>Balance</u>	Overhead <u>Allocated</u>
Direct materials	\$50,000	\$nil
WIP	\$160,000	\$49,500
Finished goods	\$220,000	\$70,000
Cost of goods sold	\$510,000	\$173,900

Required:

- a. Determine the budgeted factory overhead rate per machine-hour.
- b. Compute the over/underallocated overhead.
- c. Prepare the journal entry to dispose of the variance using the write-off to cost of goods sold approach. The corporation uses Manufacturing Overhead Allocated and Manufacturing Overhead control accounts.
- d. Prepare the journal entry to dispose of the variance using the proration approach.
- e. Identify three value chain categories and provide an example for each on how Klink Corporation could reduce its indirect costs.

Answer:

a. $\$295,400/21,100 \text{ hrs.} = \14.00 per hour

b. $\$14.00 \times 18,090 \text{ hours} = \$253,260 - 319,800 = 66,540 \text{ underallocated overhead}$

c.	Manufacturing Overhead Allocated	253,260
	Cost of Goods Sold	66,540
	Manufacturing Overhead Control	319,800

d. $\$49,500 + \$70,000 + \$173,900 = \$293,400$

Cost of Goods Sold:

$\$173,900/\$293,400 = 0.5927$; $0.5927 \times \$66,540 = \$39,438$

WIP:

$\$49,500/\$293,400 = 0.1687$; $0.1687 \times \$66,540 = \$11,226$

Finished Goods:

$\$70,000/\$293,400 = 0.2386$; $0.2386 \times \$66,540 = \$15,876$

Cost of Goods Sold	39,438	
WIP Inventory	11,226	
Finished Goods Inventory	15,876	
Manufacturing Overhead Allocated	253,260	
Manufacturing Overhead Control		319,800

e. One example is to reduce indirect labour costs with improved information systems in the production value chain category. Students will offer many other creative solutions.

Diff: 3 Type: ES

Skill: Apply

Objective: LO 1-2 and LO 4 - 5

35) JamJee Enterprises uses a job costing system. Record the following transactions in JamJee Enterprise's general journal for the current month:

- a. Purchased raw materials on account, \$49,000.
- b. Requisitioned \$25,200 of direct materials and \$3,400 of indirect materials for use in production.
- c. Factory payroll incurred, \$54,000; 70% direct labour, 30% indirect labour.
- d. Recorded depreciation expense factory equipment \$9,200, and other manufacturing overhead of \$26,870 (credit accounts payable).
- e. Allocated manufacturing overhead costs based on 120% of direct labour cost.
- f. Cost of completed production for the current month, \$95,800.
- g. Cost of finished goods sold, \$79,000; selling price, \$115,000 (all sales on account).

Answer:

General Journal			
Date	Accounts	Debit	Credit
a.	Raw Materials Inventory	49,000	
	Accounts Payable		49,000
b.	Work in Process Inventory	25,200	
	Manufacturing Overhead	3,400	
	Raw Materials Inventory		28,600
c.	Work-in-Process Inventory	37,800	
	Manufacturing Overhead	16,200	
	Wages Payable		54,000
d.	Manufacturing Overhead	36,070	
	Accumulated Depreciation — Factory Equipment		9,200
	Accounts Payable		26,870
e.	Work in Process Inventory	45,360	
	Manufacturing Overhead Allocated		45,360
	<i>(Direct labour cost from c) × Allocation % based on direct labour cost)</i>		
f.	Finished Goods Inventory	95,800	
	Work-in-Process Inventory		95,800
g.	Accounts Receivable	115,000	
	Sales Revenue		115,000
	Cost of Goods Sold	79,000	
	Finished Goods Inventory		79,000

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-5

36) Indell Corporation uses a job costing system. Record the following transactions in Indell Corporation's general journal for the current month:

- a. Purchased raw materials on account, \$24,000.
- b. Requisitioned \$36,900 of direct materials and \$7,200 of indirect materials for use in production.
- c. Factory payroll incurred, \$68,000; 70% direct labour, 30% indirect labour.
- d. Recorded depreciation expense factory equipment \$11,500, and other manufacturing overhead of \$31,570 (credit accounts payable).
- e. Allocated manufacturing overhead costs based on 120% of direct labour cost.
- f. Cost of completed production for the current month, \$103,000.
- g. Cost of finished goods sold, \$81,000; selling price, \$125,000 (all sales on account).

Answer:

General Journal			
Date	Accounts	Debit	Credit
a.	Raw Materials Inventory	24,000	
	Accounts Payable		24,000
b.	Work in Process Inventory	36,900	
	Manufacturing Overhead	7,200	
	Raw Materials Inventory		44,100
c.	Work-in-Process Inventory	47,600	
	Manufacturing Overhead	20,400	
	Wages Payable		68,000
d.	Manufacturing Overhead	43,070	
	Accumulated Depreciation — Factory Equipment		11,500
	Accounts Payable		31,570
e.	Work in Process Inventory	57,120	
	Manufacturing Overhead Allocated		57,120
	<i>(Direct labour cost from c) × Allocation % based on direct labour cost)</i>		
f.	Finished Goods Inventory	103,000	
	Work-in-Process Inventory		103,000
g.	Accounts Receivable	125,000	
	Sales Revenue		125,000
	Cost of Goods Sold	81,000	
	Finished Goods Inventory		81,000

Diff: 2 Type: ES

Skill: Apply

Objective: LO 4-5

37) What are three possible ways to dispose of underallocated or overallocated overhead costs at the end of a fiscal year? Briefly comment on the theoretical correctness or incorrectness of each method.

Answer: One way to dispose of underallocated or overallocated overhead costs at the end of a fiscal year would be to prorate the underallocated or overallocated overhead costs to the work-in-process control account, the finished goods control account, and to the cost of goods sold account based on the relative amounts of overhead in each account. This is a theoretically correct method since it is reasonable to believe that the underallocated or overallocated overhead costs should attach themselves to the goods as they are produced. A second way to dispose of the underallocated or overallocated overhead costs at the end of a fiscal year would be to adjust the allocation rate based on the actual amounts and reallocate the overhead to completed jobs. This is also a theoretically correct method. A third way is to clear all underallocated or overallocated overhead to the cost of goods sold account. This is not theoretically valid but it is practical if the amount of underallocated or overallocated overhead is not material.

Diff: 2 Type: ES

Skill: Understand

Objective: LO 4-5

38) Why does the Manufacturing Overhead Control account (debit) need to equal the Manufacturing Control account (credit)? What will be the effect of having an end of year remaining balance, debit or credit, on the evaluation of profitability?

Answer: A balance in the account indicates that overhead has been over- or underallocated. Either situation means that the cost object has not been correctly estimated during the period. Evaluation of profitability will be incorrect if the amount is material.

Diff: 3 Type: ES

Skill: Understand

Objective: LO 4-5

39) What is the purpose of subsidiary ledgers? How does a subsidiary ledger relate to the control account in the general ledger?

Answer: The purpose of subsidiary ledgers is to provide underlying detail of the categories of items found in the corresponding control account. The balance of the individual accounts in the subsidiary ledger equals the balance in the corresponding control account in the general ledger.

Diff: 2 Type: ES

Skill: Understand

Objective: LO 4-5