

**Chapter 18—Activity-Based Costing, Customer Profitability, and Activity-Based Management**

**Practice Quiz**

1. The trend toward replacing manual labor with technology in the production process has resulted in all of the following except:
  - a. An increased focus on using equipment to assist laborers in performing tasks, as opposed to laborers scheduling and setting up equipment to perform most of the tasks.
  - b. A shift toward more support personnel and fewer production workers.
  - c. A significant increase in manufacturing overhead costs as a percentage of total production costs.
  - d. A shift away from direct labor being the primary driver of manufacturing overhead costs.
  
2. The two-stage activity-based costing model for a product manufacturing situation:
  - a. Assigns all direct costs directly to products
  - b. Assigns indirect resource costs to activity pools using resource cost drivers
  - c. Assigns activity cost pools to products using activity cost drivers
  - d. All of the above
  
3. Assume that Simko, Inc. has three activity pools which have the following costs: Machine Setups, \$40,000; Material Moves, \$35,000; and Machine Operations, \$18,000. The activity cost drivers (and driver quantity) for the three pools are, respectively, number of setups (200), number of material moves (350), and number of machine hours (360). Product ZA7 used the following quantity of activity drivers to produce 100 units of final product: 20 setups, 30 material moves, and 65 machine hours.

The total ABC cost and unit ABC cost assigned to Product ZA7 is:

  - a. \$93,000 total ABC cost & \$930 unit ABC cost
  - b. \$93,000 total ABC cost & \$93 unit ABC cost
  - c. \$10,250 total ABC cost & \$102.50 unit ABC cost
  - d. \$3,500 total ABC cost & \$350 unit ABC cost

4. Magglio Company produces two products, Bop and Mop in a small manufacturing plant which had total manufacturing overhead of \$52,000 in June and used 800 direct labor hours. The factory has two departments, Preparation, which incurred \$32,000 of manufacturing overhead, and Processing which incurred \$20,000 of manufacturing overhead. Preparation used 500 hours of direct labor and Processing used 200 machine hours. During June, 400 direct labor hours were used in making 100 units of Bop, and 400 were used in making 100 units of Mop.

If Magglio uses a plant wide rate based on direct labor hours to assign manufacturing costs to products, the total manufacturing overhead assigned to each unit of Mop and Bop in June were:

- a. \$26,000 for Bop and \$26,000 for Mop
  - b. \$260 for Bop and \$260 for Mop
  - c. \$35,000 for Bop and \$25,000 for Mop
  - d. \$130 for Bop and \$130 for Mop
5. Refer to the previous question. Assume that instead of using a plant wide overhead rate, Magglio used departmental rates based on direct labor hours for the Preparation Department and machine hours for the Processing Department. The departmental overhead rates for the Preparation and Processing Departments were:
- a. \$65 per direct labor hour for both Preparation and Processing
  - b. \$64 per direct labor hour Preparation, and \$100 per machine hour for Processing
  - c. \$100 per direct labor hour for Preparation, and \$64 per machine hour for Processing
  - d. \$74.29 per direct labor hour for Preparation, and \$74.29 per machine hour for Processing
6. Refer to the previous questions regarding Magglio Company. Assume that Bop used 225 direct labor hours and Mop used 275 direct labor hours in the Preparation Department. Also, assume that Bop used 120 machine hours and Mop used 80 machine hours in the Processing Department.

The overhead costs assigned to each unit of Bop and Mop were:

- a. \$301.80 for Bop and \$326.20 for Mop
- b. \$ 64.00 to Bop and \$100.00 to Mop
- c. \$256.00 to Mop and \$256.00 to Bop
- d. \$264.00 to Bop and \$256.00 to Mop

7. Refer to the previous questions regarding Magglio Company. Assume that Magglio used an ABC product costing system and that its total manufacturing overhead costs of \$52,000 were assigned to the following ABC cost pools:

Material inspections & preparation (\$20,000)	\$20 per pound of raw materials
Material moves (\$9,000)	\$45 per move
Machine setups (\$8,000)	\$400 per setup
Machine operations (\$15,000)	\$84.00 per machine hour

Bop and Mop used the following quantities of the four activity drivers:

	<u>Bop</u>	<u>Mop</u>
Pounds of raw materials	400	400
Material moves	50	30
Setups	10	8
Machine hours	120	80

The overheads costs assigned to each unit of Bop and Mop were:

- a. \$243.30 for Bop and \$192.70 for Mop
  - b. \$ 64.00 to Bop and \$100.00 to Mop
  - c. \$256.00 to Bop and \$264.00 to Mop
  - d. \$264.00 to Bop and \$256.00 to Mop
8. Which of the following is generally not true regarding ABC costing systems versus traditional cost systems?
- a. Traditional systems tend to over cost high-volume, low-complexity products
  - b. Traditional systems tend to under cost low-volume, high-complexity products
  - c. The ABC cost of a product or service is the sum of the costs of the activities used to make the product
  - d. A highly complex production environment will normally require an ABC system with 200 or more activity cost pools.

9. Western Products, Inc. sells products to 5 major customers in Utah designated as Customers a through e. The gross profit percentage is 48% for all customers. Sales-related activity data for the five customers for a recent month are as follows.

	<u>Gross Sales</u>	<u>Sales Visits</u>	<u>Phone Calls</u>	<u>Processing Hours</u>
Customer a	\$7,000	2	3	10
Customer b	6,000	3	4	8
Customer c	8,000	3	3	8
Customer d	10,000	8	9	24
Customer e	12,000	12	16	36

Western determined that its customer-related activity costs were \$125 per sales visit, \$50 per phone call, and \$60 per processing hour. To help evaluate the profitability of its customers, Western calculates the customer profitability as a percentage of sales after subtracting selling activity cost from gross profit for each customer. The customer profitability percentage (rounded to the nearest percent) for Western's customers is:

	<u>Customer a</u>	<u>Customer b</u>	<u>Customer c</u>	<u>Customer d</u>	<u>Customer e</u>
a.	28%	30%	35%	22%	18%
b.	32%	30%	33%	19%	11%
c.	34%	30%	35%	19%	11%
d.	48%	48%	48%	48%	48%

10. Which of the following statements regarding activity-based management is *true*?
- Activity-based management is concerned primarily with calculating the cost of products accurately
  - Activity-based-management focuses managerial attention on what is most important among the activities performed to create value for customers.
  - Activity-based management is not possible unless activity-based costing is also used for product costing
  - All of the above are true