CHAPTER 2

Job Order Costing

ASSIGNMENT CLASSIFICATION TABLE

Study Objectives	Questions	Brief Exercises	Do It!	Exercises	A Problems	B Problems
1. Explain the characteristics and purposes of cost accounting.	1, 2, 3, 4					
2. Describe the flow of costs in a job order costing system.	5, 6, 7, 8	1, 2, 3, 4	1	1, 2, 3, 4, 6, 7, 8, 9, 11	1A, 2A, 3A, 5A	1B, 2B, 3B, 5B
3. Explain the nature and importance of a job cost sheet.	9, 10, 11, 12	5	2	1, 2, 3, 6, 7, 8, 10, 12	1A, 2A, 3A, 5A	1B, 2B, 3B, 5B
4. Indicate how the predetermined overhead rate is determined and used.	13, 14, 15	6, 7	2	2, 3, 5, 6, 7, 8, 11, 12, 13	1A, 2A, 3A, 4A, 5A	1B, 2B, 3B, 4B, 5B
5. Prepare entries for jobs completed and sold.	16	8	3	2, 3, 4, 6, 7, 8, 9, 10, 11	1A, 2A, 3A, 5A	1B, 2B, 3B, 5B
6. Distinguish between under- and overapplied manufacturing overhead.	17, 18	9	4	5, 12, 13	1A, 2A, 4A, 5A	1B, 2B, 4B, 5B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Prepare entries in a job order cost system and job cost sheets.	Simple	30-40
2A	Prepare entries in a job order cost system and partial income statement.	Moderate	30-40
3A	Prepare entries in a job order cost system and cost of goods manufactured schedule.	Simple	30-40
4A	Compute predetermined overhead rates, apply overhead, and calculate under- or overapplied overhead.	Simple	20-30
5A	Analyze manufacturing accounts and determine missing amounts.	Complex	30-40
1B	Prepare entries in a job order cost system and job cost sheets.	Simple	30-40
2B	Prepare entries in a job order cost system and partial income statement.	Moderate	30-40
3B	Prepare entries in a job order cost system and cost of goods manufactured schedule.	Simple	30-40
4B	Compute predetermined overhead rates, apply overhead, and calculate under- or overapplied overhead.	Simple	20-30
5B	Analyze manufacturing accounts and determine missing amounts.	Complex	30-40

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Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Explain the characteristics and purposes of cost accounting.		Q2-1 Q2-3 Q2-2 Q2-4				
2. Describe the flow of costs in a job order costing system.	Q2-5 Q2-7 Q2-8	Q2-6 BE2-1	BE2-2 E2-3 E2-11 BE2-3 E2-6 P2-1A BE2-4 E2-7 P2-3A DI2-1 E2-8 P2-1B E2-1 E2-9 P2-3B E2-2	E2-4 P2-2A P2-5A P2-2B P2-5B		
3. Explain the nature and importance of a job cost sheet.	Q2-11 Q2-12	Q2-9 Q2-10	BE2-5 E2-6 P2-1A DI2-2 E2-7 P2-3A E2-1 E2-8 P2-1B E2-2 E2-10 P2-3B E2-3 E2-12	P2-2A P2-5A P2-2B P2-5B		
4. Indicate how the predetermined overhead rate is determined and used.	Q2-15	Q2-13 Q2-14	BE2-6 E2-7 P2-3A BE2-7 E2-8 P2-4A DI2-2 E2-11 P2-1B E2-2 E2-12 P2-3B E2-3 E2-13 P2-4B E2-6 P2-1A	E2-5 P2-2A P2-5A P2-2B P2-5B		
5. Prepare entries for jobs completed and sold.		Q2-16	BE2-8 E2-7 P2-1A DI2-3 E2-8 P2-3A E2-2 E2-9 P2-1B E2-3 E2-10 P2-3B E2-6 E2-11	E2-4 P2-5B P2-2A P2-5A P2-2B		
6. Distinguish between under- and overapplied manufacturing overhead.		Q2-17 Q2-18 BE2-9	E2-12 P2-4A E2-13 P2-1B P2-1A P2-4B	DI2-4 P2-5A E2-5 P2-2B P2-2A P2-5B		
Broadening Your Perspective		Communication Real-World Focus Exploring the Web		Managerial Analysis		All About You Decision Making Across the Organization Ethics Case

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STUDY OBJECTIVES

1. **EXPLAIN THE CHARACTERISTICS AND PURPOSES OF COST ACCOUNTING.**

2. **DESCRIBE THE FLOW OF COSTS IN A JOB ORDER COST ACCOUNTING SYSTEM.**

3. **EXPLAIN THE NATURE AND IMPORTANCE OF A JOB COST SHEET.**

4. **INDICATE HOW THE PREDETERMINED OVERHEAD RATE IS DETERMINED AND USED.**

5. **PREPARE ENTRIES FOR JOBS COMPLETED AND SOLD.**

6. **DISTINGUISH BETWEEN UNDER- AND OVERAPPLIED MANUFACTURING OVERHEAD.**

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CHAPTER REVIEW

Cost Accounting Systems

1. (S.O. 1) **Cost accounting** involves the measuring, recording, and reporting of product costs. From the data accumulated, both the total cost and unit cost of each product is determined**.**

2. A **cost accounting system** consists of accounts for the various manufacturing costs. These accounts are fully integrated into the general ledger of a company. An important feature of a cost accounting system is the use of a perpetual inventory system. Such a system provides information immediately on the cost of a product. The two basic types of cost accounting systems are (a) a job order cost system and (b) a process cost system.

3. Under a **job order cost system,** costs are assigned to each job or to each batch of goods.

4. A **process cost system** is used when a large volume of similar products are manufactured. Process costing accumulates product-related costs for a period of time instead of assigning costs to specific products or job orders.

Job Order Cost Flow

5. (S.O. 2) The **flow of costs** in job order cost accounting parallels the physical flow of the materials as they are converted into finished goods. There are two major steps in the flow of costs: (a) accumulating the manufacturing costs incurred and (b) assigning the accumulated costs to the work done.

6. No effort is made when costs are incurred to associate the costs with specific jobs.

7. The **assignment of manufacturing costs** involves entries to Work in Process Inventory, Finished Goods Inventory, and Cost of Goods Sold.

8. The cost of raw materials purchased are debited to **Raw Materials Inventory** when materials are received.

9. **Factory labor costs** are debited to **Factory Labor** when they are incurred. The cost of factory labor consists of (1) gross earnings of factory workers, (2) employer payroll taxes on the earnings, and (3) fringe benefits incurred by the employer.

10. Manufacturing overhead costs are recognized daily as incurred and periodically through adjusting entries. The costs are debited to **Manufacturing Overhead.**

Assigning Manufacturing Costs to Work in Process

11. (S.O. 3) The assignment of manufacturing overhead costs to work in process involves debits to Work in Process Inventory and credits to Raw Materials Inventory, Factory Labor, and Manufacturing Overhead.

Job Cost Sheet

12. A **job cost sheet** is a form used to record the costs chargeable to a specific job and to determine the total and unit cost of the completed job. A separate job cost sheet is kept for each job. A **subsidiary ledger** consists of individual records for each individual item. The Work in Process account is referred to as a **control account** because it summarizes the detailed data regarding specific jobs contained in the job cost sheets. Each entry to Work in Process Inventory must be accompanied by a corresponding posting to one or more job cost sheets.

13. Raw materials costs are assigned when the materials are issued by the storeroom. Work in Process Inventory is debited for direct materials used, Manufacturing Overhead is debited for indirect materials used, and Raw Materials Inventory is credited.

14. Factory labor costs are assigned to jobs on the basis of time tickets prepared when the work is performed. Work in Process Inventory is debited for direct labor costs, Manufacturing Overhead is debited for indirect labor costs, and Factory Labor is credited.

Manufacturing Overhead Costs

15. (S.O. 4) Manufacturing overhead relates to production operations as a whole and therefore cannot be assigned to specific jobs on the basis of actual costs incurred. Instead, manufacturing overhead is assigned to work in process and to specific jobs on an estimated basis through the use of a predetermined overhead rate.

16. The **predetermined overhead rate** is based on the relationship between estimated annual overhead costs and expected annual operating activity. This relationship is expressed in terms of a common activity base such as direct labor costs, direct labor hours, or machine hours.
    a. The formula for the predetermined overhead rate is:

Estimated Annual Overhead Costs	÷	Expected Annual Operating Activity	=	Predetermined Overhead Rate

    b. The use of a predetermined overhead rate enables the company to determine the approximate total cost of each job when the job is completed.
    c. In recent years, more companies are using **machine hours** as the activity base due to increased reliance on automation in manufacturing operations.

17. At the end of each month, the balance in Work in Process Inventory should equal the sum of the costs shown on the job cost sheets for unfinished jobs.

Assigning Costs to Finished Goods

18. (S.O. 5) When a job is completed, the total cost is debited to Finished Goods Inventory and credited to Work in Process Inventory. Finished Goods Inventory is a control account that controls individual finished goods records in a finished goods subsidiary ledger.

19. **Cost of goods sold** is recognized when the sale occurs by a debit to Cost of Goods Sold and a credit to Finished Goods Inventory (along with a debit to Accounts Receivable or Cash and a credit to Sales).

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20. At the end of a period, financial statements are prepared that present aggregate data on all jobs manufactured and sold.
    a. The cost of goods manufactured schedule has one new feature: in determining total manufacturing costs, **manufacturing overhead applied** is used instead of actual overhead costs.
    b. The cost of goods manufactured schedule is prepared directly from the Work in Process Inventory account.

Under- or Overapplied Manufacturing Overhead

21. (S.O. 6) Manufacturing overhead may be under- or overapplied. When Manufacturing Overhead has a **debit balance,** overhead is said to be underapplied. **Underapplied overhead** means that the overhead assigned to work in process is less than the overhead incurred. When manufacturing overhead has a credit balance, overhead is overapplied. **Overapplied overhead** means that the overhead assigned to work in process is greater than the overhead incurred.

22. At the **end of the year,** any balance in Manufacturing Overhead is eliminated through an adjusting entry, usually to Cost of Goods Sold.
    a. Underapplied overhead is debited to Cost of Goods Sold.
    b. Overapplied overhead is credited to Cost of Goods Sold.

LECTURE OUTLINE

A. Cost Accounting Systems.

1. Cost accounting involves the measuring, recording, and reporting of product costs. From the data accumulated, companies determine both the total cost and the unit cost of each product.

2. A cost accounting system consists of accounts for the various manufacturing costs. These accounts are fully integrated into the general ledger of a company. An important feature of a cost accounting system is the use of a perpetual inventory system that provides immediate, up-to-date information on the cost of a product.

3. There are two basic types of cost accounting systems:

TEACHING TIP

ILLUSTRATION 2-1 identifies the two basic types of cost accounting systems and their characteristics.

   a. A job order system, where the company assigns costs to each job or to each batch of goods, and

   b. A process cost system, used when a company manufactures a large volume of similar products.

MANAGEMENT INSIGHT

Many companies suffer from poor cost accounting and sometimes make products they should not be selling. The managers of a diversified company thought they were making money, but a consulting firm found that the company had seriously underestimated costs.

What type of costs do you think the company had been underestimating?

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Answer: It is most likely that the company failed to estimate and track overhead. In a highly diversified company, overhead associated with the diesel locomotive jobs may have been "lost" in the total overhead pool for the entire company.

B. Job Order Cost Flow.

1. The flow of costs (direct materials, direct labor, and manufacturing overhead) in job order cost accounting parallels the physical flow of the materials as they are converted into finished goods.

TEACHING TIP

ILLUSTRATION 2-2 provides an overview of the cost flows through the general ledger accounts in a job order cost system. Emphasize the two steps of (1) accumulating manufacturing costs incurred, and then (2) assigning accumulated costs to products.

2. There are two major steps in the flow of costs:

   a. Accumulating the manufacturing costs incurred; these costs are accumulated in three accounts: Raw Materials Inventory, Factory Labor, and Manufacturing Overhead, and

   b. Assigning the accumulated costs to Work in Process Inventory and eventually to Finished Goods Inventory and Cost of Goods Sold.

3. Three entries are made to accumulate the manufacturing costs incurred.

TEACHING TIP

ILLUSTRATION 2-3 provides an example of the journal entries required to accumulate the cost of raw materials, factory labor, and actual manufacturing overhead.

a. When the company receives the raw materials it has purchased, it debits the costs of the materials to Raw Materials Inventory. Raw Materials Inventory is a control account. The subsidiary ledger consists of individual records for each item of raw materials.

b. The cost of factory labor consists of gross earnings of factory workers, employer payroll taxes, and fringe benefits (sick pay, pensions, and vacation pay) incurred by the employer. Companies debit labor costs to Factory Labor as they incur those costs. Factory labor is assigned to work in process and manufacturing overhead at the end of the period.

c. A company may record overhead costs periodically through adjusting entries by debiting Manufacturing Overhead. Manufacturing Overhead is a control account and the subsidiary ledger consists of individual accounts for each type of cost (factory utilities, factory repairs, etc.).

C. Assigning Manufacturing Costs to Work in Process.

1. A job cost sheet is a form used to record the costs chargeable to a specific job and to determine the total and unit costs of the completed job. The job cost sheets constitute the subsidiary ledger for the Work in Process Inventory account.

2. Each entry to Work in Process Inventory must be accompanied by a corresponding posting to one or more job cost sheets.

3. Three entries are made in assigning the manufacturing costs to work in process.

TEACHING TIP

ILLUSTRATION 2-4 provides an example of the journal entries required to assign direct materials, direct labor, and manufacturing overhead to Work in Process Inventory. Emphasize that actual overhead costs are not assigned but rather overhead is applied using a predetermined overhead rate.

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