CHAPTER 4--Job Order Costing

LEARNING OBJECTIVES

LO 1	How do job order and process costing systems as well as their related valuation methods differ?
LO 2	What constitutes a "job" from an accounting standpoint?
LO 3	What purposes are served by the primary documents used in a job order costing system?
LO 4	What journal entries are used to accumulate costs in a job order costing system?
LO 5	How do technological changes impact the gathering and use of information in job Order costing systems?
LO 6	How are standard costs used in a job order costing system?
LO 7	How does information from a job order costing system support management decision making?
LO 8	How is spoilage treated in a job-order costing system?

QUESTION GRID

True/False

	Difficulty Level			Learning Objectives							
	Easy	Moderate	Difficult	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8
1	x			x							
2	x			x							
3	x			x							
4	x			x							
5	x			x							
6	x			x							
7	x			x							
8	x			x							
9	x			x							
10	x			x							
11	x			x							
12	x			x							
13		x		x							
14	x			x							
15		x		x							
16		x		x							
17		x		x							
18		x		x							
19	x				x						
20	x						x				
21		x					x				
22		x					x				
23		x					x				
24	x						x				
25	x						x				
26	x						x				

	Difficulty Level			Learning Objectives							
	Easy	Moderate	Difficult	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8
27	x								x		
28	x						x				
29	x						x				
30	x						x				
31		x							x		
32		x									x
33		x									x
34		x									x
35		x									x
36		x									x
37		x									x
38		x									x

Completion

	Difficulty Level			Learning Objectives							
	Easy	Moderate	Difficult	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8
1	x			x							
2	x			x							
3	x			x							
4	x			x							
5	x			x							
6	x			x							
7		x		x							
8	x						x				
9	x						x				
10	x						x				
11	x						x				
12	x						x				
13	x						x				
14	x						x				
15	x						x				
16	x								x		
17	x										x
18	x										x
19	x								x		
20	x								x		

Multiple Choice

	Difficulty Level			Learning Objectives							
	Easy	Moderate	Difficult	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8
1		x		x							
2	x			x							
3	x			x							
4	x			x							
5	x			x							
6	x			x							
7	x			x							
8	x			x							
9	x						x				

	Difficulty Level			Learning Objectives							
	Easy	Moderate	Difficult	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8
10	x			x							
11	x						x				
12	x						x				
13	x						x				
14	x						x				
15	x						x				
16	x					x					
17	x					x					
18	x					x					
19	x					x					
20	x					x					
21	x					x					
22	x					x					
23	x					x					
24	x						x				
25	x						x				
26	x						x				
27	x						x				
28	x						x				
29	x						x				
30	x						x				
31	x						x				
32	x						x				
33	x						x				
34	x						x				
35	x						x				
36	x						x				
37	x								x		
38	x							x			
39	x										
40	x								x		
41	x			x							
42		x		x							
43		x		x							
44	x									x	
45	x			x							
46			x	x							
47			x						x		
48	x										x
49	x										x
50		x									x
51		x									x
52		x									x
53	x										x
54	x										x
55	x										x
56	x										x
57	x										x

	Difficulty Level			Learning Objectives							
	Easy	Moderate	Difficult	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8
58		x									x
59		x					x				
60	x						x				
61	x						x				
62	x						x				
63			x				x				
64	x						x				
65		x					x				
66	x						x				
67		x					x				
68		x					x				
69		x					x				
70		x					x				
71			x				x				
72		x					x				
73	x						x				
74	x						x				
75		x					x				
76		x					x				
77	x						x				
78	x						x				
79	x						x				
80	x						x				
81	x						x				
82	x						x				
83	x						x				
84		x					x				
85		x							x		
86		x							x		
87			x						x		

Short-Answer

	Difficulty Level			Learning Objectives							
	Easy	Moderate	Difficult	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8
1		x		x							
2		x		x							
3		x			x						
4		x				x					
5		x				x					
6		x							x		
7		x									x

Problem

	Difficulty Level			Learning Objectives							
	Easy	Moderate	Difficult	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8
1	x						x				
2		x					x				
3		x					x				
4		x					x				
5	x						x				
6	x						x				
7		x					x				
8	x						x				
9	x						x				
10		x					x				
11		x									x

TRUE/FALSE

1. A company that produces sugar will use a job order costing system to track production costs.

   ANS: F DIF: Easy OBJ: 4-1

2. A company that produces sugar will use a process costing system to track production costs.

   ANS: T DIF: Easy OBJ: 4-1

3. A company that manufactures custom bridal gowns will use a job order costing system to track production costs

   ANS: T DIF: Easy OBJ: 4-1

4. A company that manufactures custom bridal gowns will use a process costing system to track costs.

   ANS: F DIF: Easy OBJ: 4-1

5. A company that manufactures small quantities of identifiable products will use a job order costing system

   ANS: T DIF: Easy OBJ: 4-1

6. A company that manufactures small quantities of identifiable products will use a process costing system

   ANS: F DIF: Easy OBJ: 4-1

7. A company that manufactures large quantities of homogenous goods will use a process costing system.

   ANS: T DIF: Easy OBJ: 4-1

8. In an actual job order costing system, factory overhead is assigned to a job on a periodic basis.

   ANS: T DIF: Easy OBJ: 4-1

9. A company that manufactures large quantities of homogenous goods will use a job order costing system.

   ANS: F DIF: Easy OBJ: 4-1

10. Cost flows and physical flows of units are identical.

    ANS: F DIF: Easy OBJ: 4-1

11. In an actual job-order costing system, factory overhead is assigned to a job continuously during the production process.

    ANS: F DIF: Easy OBJ: 4-1

12. In a normal job order costing system, actual factory overhead is applied at the end of the period

ANS: F DIF: Easy OBJ: 4-1

13. In a normal job order costing system, factory overhead is applied using actual rates times actual input

ANS: F DIF: Moderate OBJ: 4-1

14. In a normal job order costing system, factory overhead is applied using predetermined rates times actual input.

ANS: T DIF: Easy OBJ: 4-1

15. In a normal job order costing system, factory overhead is applied using predetermined rates times standard input

ANS: F DIF: Moderate OBJ: 4-1

16. In a standard job order costing system, factory overhead is applied using predetermined rates times standard input.

ANS: T DIF: Moderate OBJ: 4-1

17. In a standard job order costing system, factory overhead is applied using actual rates times standard input.

ANS: F DIF: Moderate OBJ: 4-1

18. In a standard job order costing system, factory overhead is applied using predetermined rates times actual input.

ANS: F DIF: Moderate OBJ: 4-1

19. In a job order costing system, costs are accumulated for each individual job

ANS: T DIF: Easy OBJ: 4-2

20. When raw materials are placed into production, the materials inventory account is debited

ANS: F DIF: Easy OBJ: 4-4

21. When manufacturing overhead is charged to a job, the work in process account is debited.

ANS: T DIF: Moderate OBJ: 4-4

22. When manufacturing overhead is charged to a job, the manufacturing overhead account is debited.

ANS: F DIF: Moderate OBJ: 4-4

23. When manufacturing overhead is charged to a job, the work in process account is credited.

ANS: F DIF: Moderate OBJ: 4-4

24. When indirect labor is applied to a job in process, the manufacturing overhead account is debited.

ANS: F DIF: Easy OBJ: 4-4

25. When indirect labor is recorded for a job in process, the work in process account is debited.

ANS: F DIF: Easy OBJ: 4-4

26. Standards can be computed for materials, labor, and overhead.

ANS: T DIF: Easy OBJ: 4-4

27. Standards can be used in a job order costing system if the products manufactured are similar in nature.

ANS: T DIF: Easy OBJ: 4-6

28. Overapplied factory overhead that is material in amount is closed to cost of good sold at year end.

ANS: F DIF: Easy OBJ: 4-4

29. Overapplied factory overhead that is immaterial in amount is closed to cost of good sold at year end.

ANS: T DIF: Easy OBJ: 4-4

30. Overapplied overhead that is material in amount is allocated between Finished Goods Inventory, Work in Process, and Cost of Goods Sold at year end

ANS: T DIF: Easy OBJ: 4-4

31. Standards can be used in a job order costing system if the products manufactured are varied in nature.

ANS: F DIF: Moderate OBJ: 4-6

32. If a normal loss is anticipated on a specific job, the overhead application rate should include an amount for the cost of defective units less disposal value.

ANS: T DIF: Moderate OBJ: 4-8

33. If a normal loss is anticipated on all jobs, the overhead application rate should include an amount for the cost of defective units less disposal value.

ANS: F DIF: Moderate OBJ: 4-8

34. Normal spoilage is considered a period cost

ANS: F DIF: Easy OBJ: 4-8

35. Abnormal spoilage is considered a period cost

ANS: T DIF: Easy OBJ: 4-8

36. The journal entry to record normal spoilage specifically identified with a particular job includes a debit to Work in Process

    ANS: F DIF: Moderate OBJ: 4-8

37. The journal entry to record normal spoilage specifically identified with a particular job includes a credit to Work in Process

    ANS: T DIF: Moderate OBJ: 4-8

38. Spoilage occurring on specific jobs should be considered in computing predetermined factory overhead rates

    ANS: F DIF: Moderate OBJ: 4-8

COMPLETION

1. A company that manufactures sugar will use a _____ costing system to track production costs

   ANS: process

   DIF: Easy OBJ: 4-1

2. A company that manufactures custom bridal gowns will use a _____ costing system to track production costs

   ANS: job-order

   DIF: Easy OBJ: 4-1

3. A company that manufactures large quantities of homogeneous goods will normally use a _____ costing system.

   ANS: process

   DIF: Easy OBJ: 4-1

4. A company that manufactures small quantities of identifiable products will use a _____ costing system.

   ANS: job order

   DIF: Easy OBJ: 4-1

5. Three methods of job-cost valuation are normal, standard, and _____.

   ANS: actual

   DIF: Easy OBJ: 4-1

6. In a normal job order costing system, factory overhead is applied using _____ rates times _____ input.

   ANS: predetermined;actual

   DIF: Easy OBJ: 4-1

7. In a standard job order costing system, factory overhead is applied using _____ rates times _____ input.

   ANS: predetermined;standard

   DIF: Moderate OBJ: 4-1

8. When a job is begun, the first document in the job order process is the _____.

   ANS: materials requisition

   DIF: Easy OBJ: 4-4

9. When raw materials are placed into production, the _____ account is debited

   ANS: Work in process

   DIF: Easy OBJ: 4-4

10. When indirect materials are added to a job, the _____ account is debited.

    ANS: manufacturing overhead

    DIF: Easy OBJ: 4-4

11. When manufacturing overhead is applied to a job in process, the _____ is debited

    ANS: work in process

    DIF: Easy OBJ: 4-4

12. When manufacturing overhead is applied to a job in process, the _____ account is credited.

    ANS: manufacturing overhead

    DIF: Moderate OBJ: 4-4

13. The document that contains all information about the costs of a specific job is a _____.

    ANS: job order cost sheet

    DIF: Easy OBJ: 4-4

14. When indirect labor is recorded for a job in process, _____ is debited.

ANS: manufacturing overhead

DIF: Easy OBJ: 4-4

15. When production is completed on a job, finished goods are transferred to the _____ account.

ANS: Finished Goods Inventory

DIF: Easy OBJ: 4-4

16. The difference between a standard and an actual quantity, price, or rate is a(n)_____.

ANS: variance

DIF: Easy OBJ: 4-6

17. If a substandard product can be reworked, it is known as a _____.

ANS: defect

DIF: Easy OBJ: 4-8

18. If a substandard product cannot be reworked, it is known as _____.

ANS: spoilage

DIF: Easy OBJ: 4-8

19. Underapplied factory overhead that is immaterial in amount is closed to _____ at year end.

ANS: Cost of Goods Sold

DIF: Easy OBJ: 4-6

20. Underapplied factory overhead that is material in amount is closed to _____, _____, and _____ at year end.

ANS: Work in Process, Finished Goods Inventory,Cost of Goods Sold

DIF: Easy OBJ: 4-6

MULTIPLE CHOICE

1. Which of the following organizations would be **most likely** to use a job order costing system?
   a. the loan department of a bank
   b. the check clearing department of a bank
   c. a manufacturer of processed cheese food
   d. a manufacturer of video cassette tapes

   ANS: A DIF: Moderate OBJ: 4-1

2. When job order costing is used, the primary focal point of cost accumulation is the
   a. department.
   b. supervisor.
   c. item.
   d. job.

   ANS: D DIF: Easy OBJ: 4-1

3. In a job order costing system,
   a. standards cannot be used.
   b. an average cost per unit within a job cannot be computed.
   c. costs are accumulated by departments and averaged among all jobs.
   d. overhead is typically assigned to jobs on the basis of some cost driver.

   ANS: D DIF: Easy OBJ: 4-1

4. What is the best cost accumulation procedure to use when many batches, each differing as to product specifications, are produced?
   a. job order
   b. process
   c. actual
   d. standard

   ANS: A DIF: Easy OBJ: 4-1

5. Which of the following could **not** be used in job order costing?
   a. standards
   b. an average cost per unit for all jobs
   c. normal costing
   d. overhead allocation based on the job's direct labor hours

   ANS: B DIF: Easy OBJ: 4-1

6. Which of the following costing methods of valuation are acceptable in a job order costing system?

	Actual Material Cost	Standard Material Cost	Actual Labor Cost	Predetermined Overhead Cost
a.	yes	yes	no	yes
b.	yes	no	yes	no
c.	no	yes	yes	yes
d.	yes	yes	yes	yes

ANS: D DIF: Easy OBJ: 4-1

7. Which of the following costing systems allows management to quickly recognize materials, labor, and overhead variances and take measures to correct them?

	Actual Cost System	Normal Cost System
a.	yes	yes
b.	yes	no
c.	no	yes
d.	no	no

ANS: D DIF: Easy OBJ: 4-1

8. In a normal cost system, a debit to Work in Process Inventory would **not** be made for
   a. actual overhead.
   b. applied overhead.
   c. actual direct material.
   d. actual direct labor.

ANS: A DIF: Easy OBJ: 4-1

9. Which of the following are drawbacks to applying actual overhead to production?
   a. A delay occurs in assigning costs to jobs or products.
   b. Fluctuations in quantities produced during a period could cause varying per-unit charges for fixed overhead.
   c. Seasonality of overhead costs may cause distortions in job or product costs.
   d. all answers are correct.

ANS: D DIF: Easy OBJ: 4-4

10. Job order costing and process costing have which of the following characteristics?

	Job Order Costing	Process Costing
a.	homogeneous products and large quantities	heterogeneous products and small quantities
b.	homogeneous products and small quantities	heterogeneous products and large quantities
c.	heterogeneous products and large quantities	homogeneous products and small quantities
d.	heterogeneous products and small quantities	homogeneous products and large quantities

ANS: D DIF: Easy OBJ: 4-1

11. A credit to Work in Process Inventory represents
    a. work still in process.
    b. raw material put into production.
    c. the application of overhead to production.
    d. the transfer of completed items to Finished Goods Inventory.

ANS: D DIF: Easy OBJ: 4-4

12. In a job order costing system, the dollar amount of the entry that debits Finished Goods Inventory and credits Work in Process Inventory is the sum of the costs charged to all jobs
    a. started in process during the period.
    b. in process during the period.
    c. completed and sold during the period.
    d. completed during the period.

ANS: D DIF: Easy OBJ: 4-4

13. Total manufacturing costs for the year plus beginning Work in Process Inventory cost equals
    a. cost of goods manufactured in the year.
    b. ending Work in Process Inventory.
    c. total manufacturing costs to account for.
    d. cost of goods available for sale.

ANS: C DIF: Easy OBJ: 4-4

14. Which of the following would be **least** likely to be supported by subsidiary accounts or ledgers in a company that employs a job order costing system?
    a. Work in Process Inventory
    b. Raw Material Inventory
    c. Accounts Payable
    d. Supplies Inventory

ANS: D DIF: Easy OBJ: 4-4

15. A journal entry includes a debit to Work in Process Inventory and a credit to Raw Material Inventory. The explanation for this would be that
    a. indirect material was placed into production.
    b. raw material was purchased on account.
    c. direct material was placed into production.
    d. direct labor was used for production.

    ANS: C DIF: Easy OBJ: 4-4

16. The source document that records the amount of raw material that has been requested by production is the
    a. job order cost sheet.
    b. bill of lading.
    c. interoffice memo.
    d. material requisition.

    ANS: D DIF: Easy OBJ: 4-3

17. A material requisition form should show all of the following information **except**
    a. job number.
    b. quantity required.
    c. unit cost.
    d. purchase order number.

    ANS: D DIF: Easy OBJ: 4-3

18. Which of the following statements about job order cost sheets is **true**?
    a. All job order cost sheets serve as the general ledger control account for Work in Process Inventory.
    b. Job order cost sheets can serve as subsidiary ledger information for both Work in Process Inventory and Finished Goods Inventory.
    c. If material requisition forms are used, job order cost sheets do not need to be maintained.
    d. Job order cost sheets show costs for direct material and direct labor, but not for manufacturing overhead since it is an applied amount.

    ANS: B DIF: Easy OBJ: 4-3

19. The primary accounting document in a job order costing system is a(n)
    a. bill of materials.
    b. job order cost sheet.
    c. employee time sheet.
    d. materials requisition.

    ANS: B DIF: Easy OBJ: 4-3

20. The cost sheets for incomplete jobs at the end of the period comprise the subsidiary ledger for
    a. Finished Goods Inventory.
    b. Raw Material Inventory.
    c. Work in Process Inventory.
    d. Supplies Inventory.

    ANS: C DIF: Easy OBJ: 4-3

21. The _____ provides management with a historical summation of total costs for a given product.
    a. job order cost sheet
    b. employee time sheet
    c. material requisition form
    d. bill of lading

    ANS: A DIF: Easy OBJ: 4-3

22. The source document that records the amount of time an employee worked on a job and his/her pay rate is the
    a. job order cost sheet.
    b. employee time sheet.
    c. interoffice memo.
    d. labor requisition form.

    ANS: B DIF: Easy OBJ: 4-3

23. Which of the following journal entries records the accrual of the cost of indirect labor used in production?
    a. debit Work in Process Inventory, credit Wages Payable
    b. debit Work in Process Inventory, credit Manufacturing Overhead
    c. debit Manufacturing Overhead, credit Work in Process Inventory
    d. debit Manufacturing Overhead, credit Wages Payable

    ANS: D DIF: Easy OBJ: 4-4

24. In job order costing, payroll taxes paid by the employer for factory employees are commonly accounted for as
    a. direct labor cost.
    b. manufacturing overhead cost.
    c. indirect labor cost.
    d. administrative cost.

    ANS: B DIF: Easy OBJ: 4-4

25. The logical explanation for an entry that includes a debit to Manufacturing Overhead control and a credit to Prepaid Insurance is
    a. the insurance company sent the company a refund of its policy premium.
    b. overhead for insurance was applied to production.
    c. insurance for production equipment expired.
    d. insurance was paid on production equipment.

    ANS: C DIF: Easy OBJ: 4-4

26. The journal entry to apply overhead to production includes a credit to Manufacturing Overhead control and a debit to
    a. Finished Goods Inventory.
    b. Work in Process Inventory.
    c. Cost of Goods Sold.
    d. Raw Material Inventory.

    ANS: B DIF: Easy OBJ: 4-4

27. Production overhead does **not** include the costs of
    a. factory depreciation and supplies.
    b. factory employees' cafeteria departments.
    c. production line labor.
    d. the maintenance department for the factory.

    ANS: C DIF: Easy OBJ: 4-4

28. In a job order costing system, the use of indirect material would usually be reflected in the general ledger as an increase in
    a. stores control.
    b. work in process control.
    c. manufacturing overhead applied.
    d. manufacturing overhead control.

    ANS: D DIF: Easy OBJ: 4-4

29. A credit to the Manufacturing Overhead control account represents the
    a. actual cost of overhead incurred.
    b. actual cost of overhead paid this period.
    c. amount of overhead applied to production.
    d. amount of indirect material and labor used during the period.

    ANS: C DIF: Easy OBJ: 4-4

30. The journal entry to record the incurrence and payment of overhead costs for factory insurance requires a debit to
    a. Cash and a credit to Manufacturing Overhead.
    b. Manufacturing Overhead and a credit to Accounts Payable.
    c. Manufacturing Overhead and a credit to Cash.
    d. Work in Process Inventory and a credit to Cash.

    ANS: C DIF: Easy OBJ: 4-4

31. Overhead is applied to jobs in a job order costing system
    a. at the end of a period.
    b. as jobs are completed.
    c. at the end of a period or as jobs are completed, whichever is earlier.
    d. at the end of a period or as jobs are completed, whichever is later.

    ANS: C DIF: Easy OBJ: 4-4

32. In a job order costing system, the subsidiary ledger for Finished Goods Inventory is comprised of
    a. all job order cost sheets.
    b. job order cost sheets for all uncompleted jobs.
    c. job order cost sheets for all completed jobs not yet sold.
    d. job order cost sheets for all ordered, uncompleted, and completed jobs.

    ANS: C DIF: Easy OBJ: 4-4

33. Underapplied overhead resulting from unanticipated and immaterial price increases for overhead items should be written off by
    a. decreasing Cost of Goods Sold.
    b. increasing Cost of Goods Sold.
    c. decreasing Cost of Goods Sold, Work in Process Inventory, and Finished Goods Inventory.
    d. increasing Cost of Goods Sold, Work in Process Inventory, and Finished Goods Inventory.

    ANS: B DIF: Easy OBJ: 4-4

34. Overapplied overhead would result if
    a. the plant were operated at less than normal capacity.
    b. overhead costs incurred were less than costs charged to production.
    c. overhead costs incurred were unreasonably small in relation to units produced.
    d. overhead costs incurred were greater than costs charged to production.

    ANS: B DIF: Easy OBJ: 4-4

35. Debits to Cost of Goods Sold typically represent the
    a. transfer of completed items to Finished Goods Inventory.
    b. costs of items sold.
    c. selling price of items sold.
    d. the cost of goods manufactured.

    ANS: B DIF: Easy OBJ: 4-4

36. In a perpetual inventory system, a transaction that requires two journal entries (or one compound entry) is needed when
    a. raw materials are purchased on account.
    b. goods are sold for either cash or on account.
    c. goods are finished and transferred out of Work in Process Inventory.
    d. overhead is applied to Work in Process Inventory.

    ANS: B DIF: Easy OBJ: 4-4

37. Which of the following statements is **false**?
    a. While the use of standard costing is acceptable for job order costing systems, actual cost records should still be maintained.
    b. It is normally more time-consuming for a company to use standard costs in a job order costing system.
    c. Standards can be used in a job order costing system, if the company usually produces items that are similar in nature.
    d. Standard costs may be used for material, labor, or both material and labor in a job order costing environment.

    ANS: B DIF: Easy OBJ: 4-6

38. The trend in job order costing is to
    a. eliminate the data entry function for the accounting system.
    b. automate the data collection and data entry functions.
    c. use accounting software to change the focal point of the job order system.
    d. create an Intranet to share information between competitors.

    ANS: B DIF: Easy OBJ: 4-5

39. As data input functions are automated, Intranet data becomes more
    a. complicated to access.
    b. manufacturing, but not accounting, oriented.
    c. real-time accessible.
    d. expensive to install, but easier to use.

    ANS: C DIF: Easy OBJ: 4-5

40. The use of standard material or labor costs in job order costing
    a. is similar to the use of predetermined overhead rates in a normal costing system.
    b. will keep actual costs of jobs from fluctuating due to changes in component costs.
    c. is appropriate for any company making a units to customer specification.
    d. all answers are correct.

    ANS: A DIF: Easy OBJ: 4-6

41. After the completion of production, standard and actual costs are compared to determine the _____ of the production process.
    a. effectiveness
    b. complexity
    c. homogeneity
    d. efficiency

    ANS: D DIF: Easy OBJ: 4-1

42. A company producing which of the following would be **most** likely to use a price standard for material?
    a. furniture
    b. NFL-logo jackets
    c. picture frames
    d. none of the above

    ANS: B DIF: Moderate OBJ: 4-1

43. A company producing which of the following would be **most** likely to use a time standard for labor?
    a. mattresses
    b. picture frames
    c. floral arrangements
    d. stained-glass windows

    ANS: A DIF: Moderate OBJ: 4-1

44. A service organization would be most likely to use a predetermined overhead rate based on
    a. machine hours.
    b. standard material cost.
    c. direct labor.
    d. number of complaints.

    ANS: C DIF: Easy OBJ: 4-7

45. Knowing specific job costs enables managers to effectively perform which of the following tasks?
    a. estimate costs of future jobs.
    b. establish realistic job selling prices.
    c. evaluate job performance.
    d. all answers are correct.

    ANS: D DIF: Easy OBJ: 4-1

46. A job order costing system is likely to provide better

    (1) inventory valuations for financial statements.
    (2) control over inventory.
    (3) information about ability to accept additional production work.

	(1)	(2)	(3)
a.	yes	no	no
b.	no	yes	yes
c.	no	no	no
d.	yes	yes	yes

    ANS: D DIF: Difficult OBJ: 4-1

47. In a production environment that manufactures goods to customer specifications, a job order costing system
    a. can be used only if standard costs are used for materials and labor.
    b. will provide reasonable product cost information only when all jobs utilize approximately the same quantities of material and labor.
    c. may be maintained using either actual or predetermined overhead rates.
    d. emphasizes that large customers create the most costs even though they also provide the most revenues.

    ANS: C DIF: Difficult OBJ: 4-6

48. A unit that is rejected at a quality control inspection point, but that can be reworked and sold, is referred to as a
    a. spoiled unit.
    b. scrap unit.
    c. abnormal unit.
    d. defective unit.

    ANS: D DIF: Easy OBJ: 4-8

49. The cost of abnormal losses (net of disposal costs) should be written off as

	Product cost	Period cost
a.	yes	no
b.	yes	yes
c.	no	yes
d.	no	no

    ANS: C DIF: Easy OBJ: 4-8

50. In a job order costing system, the net cost of normal spoilage is equal to
    a. estimated disposal value plus the cost of spoiled work.
    b. the cost of spoiled work minus estimated spoilage cost.
    c. the units of spoiled work times the predetermined overhead rate.
    d. the cost of spoiled work minus the estimated disposal value.

    ANS: D DIF: Moderate OBJ: 4-8

51. If abnormal spoilage occurs in a job order costing system, has a material dollar value, and is related to a specific job, the recovery value of the spoiled goods should be

	debited to	credited to
a.	a scrap inventory account	the specific job in process
b.	the specific job in process	overhead
c.	a loss account	the specific job in process
d.	factory overhead	sales

    ANS: A DIF: Moderate OBJ: 4-8

52. In a job order costing system, the net cost of normal spoilage is equal to
    a. estimated disposal value plus the cost of spoiled work.
    b. the cost of spoiled work minus estimated spoilage cost.
    c. the units of spoiled work times the predetermined overhead rate.
    d. the cost of spoiled work minus the estimated disposal value.

    ANS: D DIF: Moderate OBJ: 4-8

53. Shrinkage should be treated as
    a. defective units.
    b. spoiled units.
    c. miscellaneous expense.
    d. a reduction of overhead.

    ANS: B DIF: Easy OBJ: 4-8

54. Spoiled units are
    a. units that cannot be economically reworked to bring them up to standard.
    b. units that can be economically reworked to bring them up to standard.
    c. the same as defective units.
    d. considered abnormal losses.

    ANS: A DIF: Easy OBJ: 4-8

55. Abnormal spoilage is
    a. spoilage that is forecasted or planned.
    b. spoilage that is in excess of planned.
    c. accounted for as a product cost.
    d. debited to Cost of Goods Sold.

    ANS: B DIF: Easy OBJ: 4-8

56. Normal spoilage is defined as unacceptable production that
    a. arises because of a special job or process.
    b. occurs in on-going operations.
    c. is caused specifically by human error.
    d. is in excess of that which is expected.

    ANS: B DIF: Easy OBJ: 4-8

57. Which of the following would fall within the range of tolerance for a production cycle?

	Abnormal loss	Normal loss
a.	yes	yes
b.	yes	no
c.	no	no
d.	no	yes

    ANS: D DIF: Easy OBJ: 4-8

58. The net cost of normal spoilage in a job order costing system in which spoilage is common to all jobs should be
    a. assigned directly to the jobs that caused the spoilage.
    b. charged to manufacturing overhead during the period of the spoilage.
    c. charged to a loss account during the period of the spoilage.
    d. allocated only to jobs that are completed during the period.

    ANS: B DIF: Moderate OBJ: 4-8

59. Cajun Company. uses a job order costing system. During April 20X6, the following costs appeared in the Work in Process Inventory account:

Beginning balance	$ 24,000
Direct material used	70,000
Direct labor incurred	60,000
Applied overhead	48,000
Cost of goods manufactured	185,000

    Cajun Company applies overhead on the basis of direct labor cost. There was only one job left in Work in Process at the end of April which contained $5,600 of overhead. What amount of direct material was included in this job?
    a. $4,400
    b. $4,480
    c. $6,920
    d. $8,000

    ANS: A

Total Costs Incurred		202,000
Less: Cost of Goods Manufactured		(185,000)
Costs remaining in WIP		17,000
Overhead	5,600	
Direct Labor (5,600/.80)	7,000	(12,600)
Direct Materials		4,400

    DIF: Moderate OBJ: 4-4

60. Quest Co. is a print shop that produces jobs to customer specifications. During January 20X6, Job #3051 was worked on and the following information is available:

Direct material used	$2,500
Direct labor hours worked	15
Machine time used	6
Direct labor rate per hour	$7
Overhead application rate per hour of machine time	$18

What was the total cost of Job #3051 for January?
a. $2,713
b. $2,770
c. $2,812
d. $3,052

ANS: A

Direct Materials	$	2,500
Direct Labor (15 hours * $7/hour)		105
Factory Overhead (6 hrs machine time *		
* $18/mach hr)		108
	$	2,713

DIF: Easy OBJ: 4-4

Alpha Company

Alpha Co. uses a job order costing system. At the beginning of January, the company had two jobs in process with the following costs:

	Direct Material	Direct Labor	Overhead
Job #456	$3,400	$510	$255
Job #461	1,100	289	?

Alpha pays its workers $8.50 per hour and applies overhead on a direct labor hour basis.

61. Refer to Alpha Company. What is the overhead application rate per direct labor hour?
a. $ 0.50
b. $ 2.00
c. $ 4.25
d. $30.00

ANS: C

Direct Labor Hours: $510/$8.50	60 hrs	
Overhead Application Rate:		
$255 / 60 hrs	$	4.25

DIF: Easy OBJ: 4-4

62. Refer to Alpha Company. How much overhead was included in the cost of Job #461 at the beginning of January?
    a. $ 144.50
    b. $ 153.00
    c. $2,200.00
    d. $2,456.50

    ANS: A

Direct Labor Hours: $289/$8.50	34 hrs	
Overhead Application Rate:		
$255 / 60 hrs	$	4.25
34 hrs * $4.25/hr	$	144.50

    DIF: Easy OBJ: 4-4

63. Refer to Alpha Company. During January, Alpha's employees worked on Job #649. At the end of the month, $714 of overhead had been applied to this job. Total Work in Process at the end of the month was $6,800 and all other jobs had a total cost of $3,981. What amount of direct material is included in Job #649?
    a. $ 677.00
    b. $1,391.00
    c. $2,142.00
    d. $4,658.00

    ANS: A

Direct Materials--Job 649			
Total Work in Process		$	6,800
Other Work in Process			(3,981)
Costs remaining in WIP			2,819
Overhead	714		
Direct Labor (OH x 2) $714 * 2	1,428		(2,142)
Direct Materials		$	677

    DIF: Difficult OBJ: 4-4

64. Brown Corporation manufactures products on a job order basis. The job cost sheet for Job #656 shows the following for March:

Direct material	$5,000
Direct labor (100 hours @ $7.25)	$725
Machine hours incurred	40
Predetermined overhead rate per machine hour	$26

At the end of March, what total cost appears on the job cost sheet for Job #656?
a. $5,725
b. $5,765
c. $6,765
d. $8,325

ANS: C

Direct Materials	$	5,000
Direct Labor (15 hours * $7/hour)		725
Factory Overhead (26 hrs machine time * * $40/mach hr)		1,040
	$	6,765

DIF: Easy OBJ: 4-4

65. Products at Redd Manufacturing are sent through two production departments: Fabricating and Finishing. Overhead is applied to products in the Fabricating Department based on 150 percent of direct labor cost and $18 per machine hour in Finishing. The following information is available about Job #297:

	Fabricating	Finishing
Direct material	$1,590	$580
Direct labor cost	?	48
Direct labor hours	22	6
Machine hours	5	15
Overhead applied	429	?

What is the total cost of Job #297?
a. $2,647
b. $3,005
c. $3,093
d. $3,203

ANS: D

Direct Labor Fabricating $429/1.50 = $286
Applied Overhead Finishing 15 hrs * $18 = $270

	Fabricating	Finishing	
Direct material	$ 1,590	$ 580	
Direct labor cost	**286**	48	
Overhead applied	429	**270**	
Total Costs	2,305	898	**$ 3,203**

DIF: Moderate OBJ: 4-4

66. Virginia Company applies overhead to jobs at the rate of 40 percent of direct labor cost. Direct material of $1,250 and direct labor of $1,400 were expended on Job #145 during June. On May 31, the balance of Job #145 was $2,800. The balance on June 30 is:
    a. $3,210.
    b. $4,760.
    c. $5,450.
    d. $6,010.

    ANS: D

Beginning WIP	$	2,800
Direct Materials		1,250
Direct Labor		1,400
Factory Overhead ($1400 * 40%)		560
Ending WIP	$	6,010

    DIF: Easy OBJ: 4-4

Jackson Company.

Jackson Company uses a job order costing system and the following information is available from its records. The company has three jobs in process: #6, #9, and #13.

Raw material used	$120,000
Direct labor per hour	$8.50
Overhead applied based on direct labor cost	120%

Direct material was requisitioned as follows for each job respectively: 30 percent, 25 percent, and 25 percent; the balance of the requisitions was considered indirect. Direct labor hours per job are 2,500; 3,100; and 4,200; respectively. Indirect labor is $33,000. Other actual overhead costs totaled $36,000.

67. Refer to Jackson Company. What is the prime cost of Job #6?
    a. $42,250
    b. $57,250
    c. $73,250
    d. $82,750

    ANS: B

Direct Materials (120,000 * 30%)	$	36,000
Direct Labor (2500 * $8.50)		21,250
Total Prime Costs	$	57,250

    DIF: Moderate OBJ: 4-4

68. Refer to Jackson Company. What is the total amount of overhead applied to Job #9?
    a. $18,250
    b. $26,350
    c. $30,000
    d. $31,620

    ANS: D

Direct Labor Hours	Direct Labor Rate	OH Application Rate	Total
3100	$8.50	120%	$31,620

    DIF: Moderate OBJ: 4-4

69. Refer to Jackson Company. What is the total amount of actual overhead?
    a. $36,000
    b. $69,000
    c. $93,000
    d. $99,960

    ANS: C

Indirect Materials ($120,000 * 20%)	$	24,000
Indirect Labor		33,000
Other Overhead Costs		36,000
Total Prime Costs	$	93,000

    DIF: Moderate OBJ: 4-4

70. Refer to Jackson Company. How much overhead is applied to Work in Process?
    a. $ 69,000
    b. $ 99,960
    c. $132,960
    d. $144,000

    ANS: B

Direct Labor Hours	6	2500		
	9	3100		
	13	4200		9,800
Direct Labor Rate			$	8.50
Overhead Application Rate				120%
Total Overhead Applied			$	99,960

    DIF: Moderate OBJ: 4-4

71. Refer to Jackson Company. If Job #13 is completed and transferred, what is the balance in Work in Process Inventory at the end of the period if overhead is applied at the end of the period?
    a. $ 96,700
    b. $ 99,020
    c. $139,540
    d. $170,720

    ANS: D

Step 1: Determine Total Cost of Job 13		
DM: $120,000 * .25	$ 30,000	
DL: 4,200 * 8.50	35,700	
FOH: 35,700 * 120%	42,840	108,540
Step 2: Compute Total Cost of Job 6		
DM: $120,000 * .30	$ 36,000	
DL: 2,500 * 8.50	21,250	
FOH: 21,250 * 120%	25,500	82,750
Step 2: Compute Total Cost of Job 9		
DM: $120,000 * .25	$ 30,000	
DL: 3,100 * 8.50	26,350	
FOH: 26,350 * 120%	31,620	
		87,970
Total Costs of Jobs 6 and 9		**170,720**

    DIF: Difficult OBJ: 4-4

72. Refer to Jackson Company. Assume the balance in Work in Process Inventory was $18,500 on June 1 and $25,297 on June 30. The balance on June 30 represents one job that contains direct material of $11,250. How many direct labor hours have been worked on this job (rounded to the nearest hour)?
a. 751
b. 1,324
c. 1,653
d. 2,976

ANS: A

Step 1: Determine DL and FOH		
WIP at June 30:	$ 25,297	
Less DM in WIP	11,250	14,047
Step 2: Separate DL and FOH		
Let x = DL; 1.2x = FOH		
x + 1.2x = 14,047		
2.2x = 14,047		
x = $6,385		
Step 3: Compute DL Hours		
$6,385 ÷ 8.50	**751 hours**	

DIF: Moderate OBJ: 4-4

Beta Company

The following information pertains to Beta Company for September 20X4.

	Direct Material	Direct Labor	Overhead
Job #323	$3,200	$4,500	?
Job #325	?	5,000	?
Job #401	5,670	?	$5,550

Beta Company applies overhead for Job #323 at 140 percent of direct labor cost and at 150 percent of direct labor cost for Jobs #325 and #401. The total cost of Jobs #323 and #325 is identical.

73. Refer to Beta Co. What amount of overhead is applied to Job #323?
a. $4,800
b. $5,550
c. $6,300
d. $7,500

ANS: C

Direct Labor	Application Rate	Total Overhead
$4,500	140%	$6,300

DIF: Easy OBJ: 4-4

74. Refer to Beta Co. What amount of overhead is applied to Job #325?
    a. $8,325
    b. $7,500
    c. $7,000
    d. $5,000

    ANS: B

Direct Labor	Application Rate	Total Overhead
$5,000	150%	$7,500

    DIF: Easy OBJ: 4-4

75. Refer to Beta Co. What is the amount of direct materials for Job #325?
    a. $1,950
    b. $1,500
    c. $3,700
    d. $7,500

    ANS: B

Step 1: Determine OH for Jobs 323 and 325				
	323	$	6,300	
	325		7,500	
Step 2: Compute Total Cost of Job 323	DM	$	3,200	
	DL		4,500	
	FOH		6,300	14,000
Step 3: Compute Direct Materials for Job 325				
(14,000 - (5,000 + 7,500)				**$ 1,500**

    DIF: Moderate OBJ: 4-4

76. Refer to Beta Co. Assume that Jobs #323 and #401 are incomplete at the end of September. What is the balance in Work in Process Inventory at that time?
    a. $18,920
    b. $22,620
    c. $28,920
    d. $30,120

    ANS: C

Step 1: Determine DL for Job 401			
$5,550 ÷ 150%			3,700
Step 2: Compute Total Cost of Job 401	DM	$ 5,670	
	DL	3,700	
	FOH	5,550	14,920
Step 2: Compute Total Cost of Job 323	DM	$ 3,200	
	DL	4,500	
	FOH	6,300	14,000
Total Costs of Jobs 323 and 401			**28,920**

    DIF: Moderate OBJ: 4-4

Camden Company

Camden Company has two departments (Processing and Packaging) and uses a job order costing system. Baker applies overhead in Processing based on machine hours and on direct labor cost in Packaging. The following information is available for July:

	Processing	Packaging
Machine hours	2,500	1,000
Direct labor cost	$44,500	$23,000
Applied overhead	$55,000	$51,750

77. Refer to Camden Company. What is the overhead application rate per machine hour for Processing?
    a. $ 0.81
    b. $ 1.24
    c. $17.80
    d. $22.00

    ANS: D

Total Applied Overhead	Machine Hours	Rate per Hour
$55,000	2,500	$22.00

    DIF: Easy OBJ: 4-4

78. Refer to Camden Co. What is the overhead application rate for Packaging?
    a. $ 0.44
    b. $ 2.25
    c. $23.00
    d. $51.75

    ANS: B

Total Applied Overhead	Total Direct Labor	Rate per Hour
$51,750	$23,000	$2.25

    DIF: Easy OBJ: 4-4

Tiger Company

Tiger Company has a job order costing system and an overhead application rate of 120 percent of direct labor cost. Job #63 is charged with direct material of $12,000 and overhead of $7,200. Job #64 has direct material of $2,000 and direct labor of $9,000.

79. Refer to Tiger Co. What amount of direct labor cost has been charged to Job #63?
    a. $ 6,000
    b. $ 7,200
    c. $ 8,640
    d. $14,400

    ANS: A

Total Applied Overhead	Overhead Application Rate	Direct Labor Charged
$7,200	120%	$6,000

    DIF: Easy OBJ: 4-4

80. Refer to Tiger Company. What is the total cost of Job #64?
    a. $10,800
    b. $11,000
    c. $21,800
    d. $30,200

    ANS: C

Direct Materials	2,000
Direct Labor	9,000
Factory Overhead ($9,000 * 120%)	10,800
Total Cost of Job 64	21,800

    DIF: Easy OBJ: 4-4

Bradley Company

Bradley Company uses a job order costing system. Assume that Job #504 is the only one in process. The following information is available:

Budgeted direct labor hours	65,000	Budgeted machine hours	9,000
Budgeted overhead	$350,000	Direct material	$110,500
Direct labor cost	$70,000		

81. Refer to Bradley Company. What is the overhead application rate if Bradley uses a predetermined overhead application rate based on direct labor hours (rounded to the nearest whole dollar)?
    a. $ 0.20
    b. $ 5.00
    c. $ 5.38
    d. $38.89

    ANS: C

Budgeted Overhead	Budgeted Direct Labor Hours	Overhead Application Rate
$350,000	65,000	$5.38

    DIF: Easy OBJ: 4-4

82. Refer to Bradley Company. What is the total cost of Job #504 assuming that overhead is applied at the rate of 135% of direct labor cost (rounded to the nearest whole dollar)?
    a. $192,650
    b. $268,250
    c. $275,000
    d. $329,675

    ANS: C

Direct Materials	110,500
Direct Labor	70,000
Factory Overhead ($70,000 * 135%)	94,500
Total Cost of Job #504	275,000

    DIF: Easy OBJ: 4-4

83. At the end of the last fiscal year, Roberts Company had the following account balances:

Overapplied overhead	$ 6,000
Cost of Goods Sold	$980,000
Work in Process Inventory	$ 38,000
Finished Goods Inventory	$ 82,000

If the most common treatment of assigning overapplied overhead were used, the final balance in Cost of Goods Sold is:
a. $974,000.
b. $974,660.
c. $985,340.
d. $986,000.

ANS: A

Unadjusted COGS	less: Overapplied OH	Adjusted COGS
$980,000	$6,000	$974,000

DIF: Easy OBJ: 4-4

84. Strong Products has no Work in Process or Finished Goods inventories at the close of business on December 31, 20X4. The balances of Strong Products' accounts as of December 31, 20X4, are as follows:

Cost of goods sold--unadjusted	$2,040,000
Selling & administrative expenses	900,000
Sales	3,600,000
Manufacturing overhead control	700,000
Manufacturing overhead applied	648,000

Pretax income for 20X4 is:
a. $608,000.
b. $660,000.
c. $712,000.
d. undeterminable from the information given.

ANS: A

Sales		$ 3,600,000
Cost of Goods Sold	2,040,000	
Factory Overhead Underapplied (700,000-648,000)	52,000	(2,092,000)
Selling, General and Administrative Expenses		(900,000)
Pretax Income		$ 608,000

DIF: Moderate OBJ: 4-4

Wilson Manufacturing Company

Wilson Manufacturing Company produces beach chairs. Chair frames are all the same size, but can be made from plastic, wood, or aluminum. Regardless of frame choice, the same sailcloth is used for the seat on all chairs. Wilson has set a standard for sailcloth of $9.90 per square yard and each chair requires 1 square yard of material. Wilson produced 500 plastic chairs, 100 wooden chairs, and 250 aluminum chairs during June. The total cost for 1,000 square yards of sailcloth during the month was $10,000. At the end of the month, 50 square yards of sailcloth remained in inventory.

85. Refer to Wilson Manufacturing Company. The unfavorable material price variance for sailcloth purchases for the month was
    a. $ 100.
    b. $ 495.
    c. $1,090.
    d. $1,585.

    ANS: A

$10,000 ÷ 1,000	$10.00 per yard
$(9.90 - 10.00) * 1,000 yards	**$100**

    DIF: Moderate OBJ: 4-6

86. Refer to Wilson Manufacturing Company. Assuming that there was no sailcloth in inventory at the beginning of June, the unfavorable material quantity variance for the month was
    a. $ 495.
    b. $ 500.
    c. $ 990.
    d. $1,000.

    ANS: C

850 chairs * 1 yard per chair	850 yards	
Actual usage (1,000 - 50)	950 yards	
Unfavorable usage variance	100 yards	
	9.90/yard	
		$ 990

    DIF: Moderate OBJ: 4-6

87. Refer to Wilson Manufacturing Company. Wilson could set a standard cost for which of the following?

	Frame cost	Predetermined OH rate	Labor rate
a.	yes	yes	yes
b.	no	no	no
c.	yes	no	no
d.	no	yes	yes

    ANS: D DIF: Difficult OBJ: 4-6

SHORT ANSWER

1. Compare and contrast job order and process costing systems.

   ANS:
   Job order costing is characterized by the production of small quantities of heterogeneous distinct or unique items. Items are produced according to customer specifications and, at a minimum, direct material and direct labor costs can be traced to specific jobs. Process costing is characterized by the production of large quantities of homogeneous (alike or similar in nature) items. Specific items cannot be identified with specific costs during the production process.

   DIF: Moderate OBJ: 4-1

2. Discuss actual costing, normal costing, and standard costing.

   ANS:
   Actual costing, normal costing, or standard costing may be used in either a job order costing or process costing system. Actual costing assigns the actual cost of all direct material, direct labor, and overhead to the units produced. Normal costing uses actual direct material and direct labor cost and a predetermined overhead application rate to cost products. Standard costing establishes "norms" for direct material and direct labor quantities and/or costs and uses a predetermined (standard) overhead rate for the application of overhead to determine product cost.

   DIF: Moderate OBJ: 4-1

3. What is a "job" as defined in a job order costing system?

   ANS:
   A job is a single unit or a group of like items that is produced to customer specifications. A job is separately identifiable from other jobs. Each job is treated as a cost object, and costs (typically actual direct material, actual direct labor, and overhead applied using a predetermined rate) are attached to each job as it flows through the production process.

   DIF: Moderate OBJ: 4-2

4. What information should be contained in a subsidiary ledger for Work in Process Inventory in a job order costing system?

   ANS:
   The Work in Process Inventory subsidiary ledger should contain information on all incomplete jobs. This information will include the amount of direct material and direct labor costs in production, as well as the amount of overhead applied to each job. The subsidiary ledger for Work in Process Inventory is composed of all job cost sheets for uncompleted jobs and substantiates the balance in the general ledger Work in Process Inventory control account.

   DIF: Moderate OBJ: 4-3

5. Discuss the basic forms used in a job order costing system.

   ANS:
   The forms used in a job order costing system include (1) a job order cost sheet which records all the financial and significant production data (actual or standard, and possibly budgeted) relating to a particular job; (2) a material requisition form which records the costs and quantities of material that has been requisitioned for a particular job; and (3) an employee time sheet which records the jobs worked on by an employee and the amount of time spent on each job.

   DIF: Moderate OBJ: 4-3

6. Can standard costing be used in job order costing? If so, what conditions must exist? If not, explain why.

   ANS:
   Yes. Firms that use job order costing can also base their costs on standards. Each job must be fairly similar to each other job. Standards may be used for the prices of material and labor if the jobs use basically the same kind of material and labor. If jobs are homogeneous enough, standards can also be used for materials and labor quantities. Some companies may choose to only use price standards, others only quantity standards, and others may use both price and quantity standards.

   DIF: Moderate OBJ: 4-6

7. Discuss the accounting treatment of spoilage in a job order costing system.

   ANS:
   If the spoilage is common to all jobs, is normal, and can be estimated, the net cost is applied to production using a predetermined overhead rate that was set by including the spoilage estimate in estimated overhead. If spoilage pertains to a particular job and is normal, the disposal value of the spoiled goods should be removed from that particular job. If the spoilage is abnormal, the net cost should be charged to a loss account and credited to the particular Work in Process job that created the spoilage.

   DIF: Moderate OBJ: 4-8

PROBLEM

1. Prepare the necessary journal entries from the following information for Anderson Company, which uses a perpetual inventory system.

   a. Purchased raw material on account, $56,700.
   b. Requisitioned raw material for production as follows: direct material-80 percent of purchases; indirect material-15 percent of purchases.
   c. Direct labor wages of $33,100 are accrued as are indirect labor wages of $12,500.
   d. Overhead incurred and paid for is $66,900.
   e. Overhead is applied to production based on 110 percent of direct labor cost.
   f. Goods costing $97,600 were completed during the period.
   g. Goods costing $51,320 were sold on account for $77,600.

   ANS:

a.	Raw Material Inventory	56,700	
	Accounts Payable		56,700
b.	Work in Process Inventory	45,360	
	Manufacturing Overhead	8,505	
	Raw Material Inventory		53,865
c.	Work in Process Inventory	33,100	
	Manufacturing Overhead	12,500	
	Wages Payable		45,600
d.	Manufacturing Overhead	66,900	
	Cash		66,900
e.	Work in Process Inventory	36,410	
	Manufacturing Overhead		36,410
f.	Finished Goods Inventory	97,600	
	Work in Process Inventory		97,600
g.	Cost of Goods Sold	51,320	
	Finished Goods Inventory		51,320
	Accounts Receivable	77,600	
	Sales		77,600

   DIF: Easy OBJ: 4-4

2. Richards Company employs a job order costing system. Only three jobs-Job #205, Job #206, and Job #207-were worked on during January and February. Job #205 was completed February 10; the other two jobs were still in production on February 28, the end of the company's operating year. Job cost sheets on the three jobs follow:

	Job Cost Sheet		
	Job #205	Job #206	Job #207
January costs incurred:			
Direct material	$16,500	$ 9,300	$ —
Direct labor	13,000	7,000	—
Manufacturing overhead	20,800	11,200	—
February costs incurred:			
Direct materials	—	8,200	21,300
Direct labor	4,000	6,000	10,000
Manufacturing overhead	?	?	?

The following additional information is available:

a. Manufacturing overhead is assigned to jobs on the basis of direct labor cost.

b. Balances in the inventory accounts at January 31 were as follows:

Raw Material	$40,000
Work in Process	?
Finished Goods	85,000

Required:

a. Prepare T-accounts for Raw Material, Work in Process Inventory, Finished Goods Inventory, and Manufacturing Overhead Control. Enter the January 31 inventory balances given previously; in the case of Work in Process Inventory, compute the January 31 balance and enter it into the Work in Process Inventory T-account.

b. Prepare journal entries for **February** as follows:

1. Prepare an entry to record the issue of materials into production and post the entry to appropriate T-accounts. (In the case of direct material, it is not necessary to make a separate entry for each job.) Indirect materials used during February totaled $4,000.

2. Prepare an entry to record the incurrence of labor cost and post the entry to appropriate T-accounts. (In the case of direct labor, it is not necessary to make a separate entry for each job.) Indirect labor cost totaled $8,000 for February.

3. Prepare an entry to record the incurrence of $19,000 in various actual manufacturing overhead costs for February (credit Accounts Payable).

c. What apparent predetermined overhead rate does the company use to assign overhead cost to jobs? Using this rate, prepare a journal entry to record the application of overhead cost to jobs for February (it is not necessary to make a separate entry for each job). Post this entry to appropriate T-accounts.

d. As stated earlier, Job #205 was completed during February. Prepare a journal entry to show the transfer of this job off of the production line and into the finished good warehouse. Post the entry to appropriate T-accounts.

e. Determine the balance at February 28 in the Work in Process inventory account. How much of this balance consists of the cost of Job #206? Job #207?

ANS:
a.

Raw Materials Inventory	
BB 40,000	
	31,500

Work in Process Inventory	
BB 77,800	
29,500	60,700
20,000	
32,000	
98,600	

Finished Goods Inventory	
BB 85,000	
60,700	

Manufacturing Overhead Control	
4,000	
8,000	32,000
19,000	

b.

1.	Work in Process Inventory	29,500	
	Manufacturing Overhead Control	4,000	
	Raw Materials Inventory		33,500
2.	Work in Process Inventory	20,000	
	Manufacturing Overhead Control	8,000	
	Payroll		28,000
3.	Manufacturing Overhead Control	19,000	
	Accounts Payable		19,000

c. 160%/DL COST × $20,000 = $32,000

Work in Process Inventory	32,000	
Manufacturing Overhead Control		32,000

d.	Finished Goods Inventory	60,700	
	Work in Process Inventory		60,700

e.	WIP INV	98,600	
	Job 206 = $51,300	Job 207 = $47,300	

	JOB #205	JOB #206	JOB #207
Beg WIP	$50,300	$27,500	-
Direct Mat	0	8,200	$21,300
Direct Labor	4,000	6,000	10,000
Factory Overhead	6,400	9,600	16,000
	$60,700	$51,300	$47,300

DIF: Moderate OBJ: 4-4

3. The Pittman Company manufactures special purpose machines to order. On January 1, there were two jobs in process, #705 and #706. The following costs were applied to these jobs in the prior year:

	Job No. 705	Job No. 706
Direct material	$ 5,000	$ 8,000
Direct labor	4,000	3,000
Overhead	4,400	3,300
Total	$13,400	$14,300

During January, the following transactions took place:

* Raw material costing $40,000 was purchased on account.
* Jobs #707, #708, and #709 were started and the following costs were applied to them:

	JOB 707	JOB 708	JOB 709
Direct materials	$3,000	$10,000	$7,000
Direct labor	5,000	6,000	4,000

* Job #705 and Job #706 were completed after incurring additional direct labor costs of $2,000 and $4,000, respectively
* Wages paid to production employees during January totaled $25,000.
* Depreciation for the month of January totaled $10,000.
* Utilities bills in the amount of $10,000 were paid for operations during December.
* Utilities bills totaling $12,000 were received for January operations.
* Supplies costing $2,000 were used.
* Miscellaneous overhead expenses totaled $24,000 for January.

Actual overhead is applied to individual jobs at the end of each month using a rate based on actual direct labor costs.

Required:

a. Determine the January overhead rate.

b. Determine the cost of each job.

c. Prepare a statement of cost of goods manufactured.

ANS:

a. MOH $4,000 + $10,000 + $12,000 + $2,000 + $24,000 = $52,000 / $21,000 dl cost = $2.4762/dl cost

b.

	JOB #705	JOB #706	JOB #707	JOB #708	JOB #709		
DM	-	-	$ 3,000	$10,000	$ 1,000	=	$ 20,000
DL	$ 2,000	$ 4,000	5,000	6,000	4,000	=	21,000
MOH	4,952	9,905	12,381	14,857	9,905	=	52,000
Beg WIP	13,400	14,300	-	-	-	=	27,700
	$20,352	$28,205	$20,381	$30,857	$20,905		$120,700

c.	Beg WIP	$27,700
	+ DM	20,000
	+ DL	21,000
	+ MOH	52,000
	- End WIP	72,143
		$48,557

DIF: Moderate OBJ: 4-4

4. The Western Corporation, began operations on October 1. It employs a job order costing system. Overhead is charged at a normal rate of $2.50 per direct labor hour. The actual operations for the month of October are summarized as follows:

   a. Purchases of raw material, 25,000 pieces @ $1.20/piece.

   b. Material and labor costs charged to production:

Job No.	Units	Material	Direct labor cost	Direct labor hours
101	10,000	$4,000	$6,000	3,000
102	8,800	3,600	5,400	2,700
103	16,000	7,000	9,000	4,500
104	8,000	3,200	4,800	2,400
105	20,000	8,000	3,600	1,800

   c. Actual overhead costs incurred:

Variable	$18,500
Fixed	15,000

   d. Completed jobs: 101, 102, 103, and 104

   e. Sales-$105,000. All units produced on Jobs 101, 102, and 103 were sold.

   Required: Compute the following balances on October 31:

   a. Material inventory

   b. Work in process inventory

   c. Finished goods inventory

   d. Cost of goods sold

   e. Under- or overapplied overhead

   ANS:

   a. $30,000 - ($4,000 + $3,600 + $7,000 + $3,200 + $8,000) = $4,200

   b. Job #105 $8,000 + $3,600 + ($1,800 × 2.50) = $16,100

   c. Job #104 $3,200 + $4,800 + ($2,400 × 2.50) = $14,000

   d.

Job #	101	$4,000 + $6,000 + ($3,000 × 2.50) =	$17,500
	102	$3,600 + $5,400 + ($2,700 × 2.50) =	15,750
	103	$7,000 + $9,000 + ($4,500 × 2.50) =	27,250
			$60,500

   e.

Applied 14,400 × $2.50 =	$36,000
Actual	33,500
Overapplied	$ 2,500

   DIF: Moderate OBJ: 4-4

Steel Company.

Steel Company uses a job order costing system and develops its predetermined overhead rate based on machine hours. The company has two jobs in process at the end of the cycle, Jobs #177 and #179.

Budgeted overhead	$100,300
Budgeted machine hours	85,000
Raw material	$ 63,000
Labor cost	$ 50,000

5. Refer to Steel Company. What amount of overhead is charged to Jobs #177 and #179? Machine hours are split between Jobs #177 and #179-65 percent and 35 percent, respectively. Actual machine hours equal budgeted machine hours.

   ANS:
   OH Applied = MH Cost × POHR
   Job #177: 85,000 MH × 65%= 55,250 × $1.18 = $65,195
   Job #179: 85,000 MH × 35%= 29,750 × $1.18 = $35,105

   DIF: Easy OBJ: 4-4

6. Refer to Steel Company. Fifty-four percent of raw material belongs to Job 17 and 38 percent belongs to Job 179, and the balance is considered indirect material. What amount of raw material used was allocated to overhead as indirect material?

   ANS:
   54% + 38% = 92%; this means that 8% is indirect or $5,040
   (.08 × $63,000).

   DIF: Easy OBJ: 4-4

7. Refer to Steel Co. Labor cost was split 25 percent and 70 percent, respectively, between Jobs #177 and #179 for direct labor. The remainder was indirect labor cost. What are the total costs of Jobs #177 and #179?

   ANS:

	Job #177	Job #179
DM	$ 34,020	$23,940
DL	12,500	35,000
MOH	65,195	35,105
	$111,715	$94,045

   DIF: Moderate OBJ: 4-4

8. Sanderson Company manufactures custom-built conveyor systems for factory and commercial operations. Erin Smith is the cost accountant for Sanderson and she is in the process of educating a new employee, Heather Fontenot about the job order costing system that Sanderson uses. (The system is based on normal costs; overhead is applied based on direct labor cost and rounded to the next whole dollar.) Lisa gathers the following job order cost records for July:

Job No.	Direct Materials	Direct Labor	Applied OH	Total Cost
667	$ 5,901	$1,730	$ 1,990	$ 9,621
669	18,312	1,810	2,082	22,204
670	406	500	575	1,481
671	51,405	9,500	10,925	71,830
672	9,615	550	633	10,798

To explain the missing job number, Erin informed Heather that Job #668 had been completed in June. She also told her that Job #667 was the only job in process at the beginning of July. At that time, the job had been assigned $4,300 for direct material and $900 for direct labor. At the end of July, Job #671 had not been completed; all others had. Erin asked Heather several questions to determine whether she understood the job order system.

Required: Help Heather answer the following questions:

a. What is the predetermined overhead rate used by ABC Company?

b. What was the total cost of beginning Work in Process inventory?

c. What was total prime cost incurred for the month of July?

d. What was cost of goods manufactured for July?

ANS:

a. Use any job started in July:

$$\text{Rate} = \frac{\text{MOH}}{\text{DL COST}} \qquad \text{JOB \$670} \qquad \frac{\$575}{\$500} = 115\%/\text{DL Cost}$$

b.

DM	$4,300	
DL	900	
FOH	1,035	($900 × 115%)
	$6,235	

c. Prime Cost =DM + DL

DM = $85,639 - 4,300 = $81,339
DL = 14,090 - 900 = 13,190
$94,529

d. COGM = $9,621 + 22,204 + 1,481 + 10,798 = $44,104

DIF: Easy OBJ: 4-4

9. Perry Company uses a job order costing system and has the following information for the first week of June:

   1. Direct labor and direct materials used:

Job No.	Direct Material	Direct Labor Hours
498	$1,500	116
506	960	16
507	415	18
508	345	42
509	652	24
511	308	10
512	835	30
Total	$5,015	256

   2. The direct labor wage rate is $4 per hour.

   3. The overhead rate is $5 per direct labor hour.

   4. Actual overhead costs for the week, $1,480.

   5. Jobs completed: Nos. 498, 506, and 509.

   6. The factory had no work in process at the beginning of the week.

Required:

a. Prepare a summary that will show the total cost assigned to each job.

b. Compute the amount of overhead over- or underapplied during the week.

c. Calculate the cost of the work in process at the end of the week.

ANS:

a.

Job No.	DM	DL	OH	Total
498	$1,500	$ 464	$ 580	$2,544
506	960	64	80	1,104
507	415	72	90	577
508	345	168	210	723
509	652	96	120	868
511	308	40	50	398
512	835	120	150	1,105
	$5,015	$1,024	$1,280	$7,319

b.

Actual MOH	$1,480
Applied MOH	1,280
Underapplied	$ 200

c.

JOB 507	$ 577
508	723
511	398
512	1,105
Ending WIP	$2,803

DIF: Easy OBJ: 4-4

10. You are asked to bring the following incomplete accounts of Andrepont Printing, Inc. up to date through January 31,20X5. Consider the data that appear in the T-accounts as well as additional information given in items (a) through (i).

Andrepont's job order costing system has two direct cost categories (direct material and direct manufacturing labor) and one indirect cost pool (manufacturing overhead, which is allocated using direct manufacturing labor costs).

Materials Inventory Control	
12/31/20X4	
Balance 15,000	

Wages Payable Control	
	1/31/20X5
	Balance 3,000

Work in Process Inventory Control	

Manufacturing Department Overhead Control	
January 20X5	
Charges 57,000	

Manufacturing Overhead Control	

Finished Goods Inventory Control	
12/31/20X4	
Balance 20,000	

Cost of Goods Sold	

Additional Information:

a. Manufacturing department overhead is allocated using a budgeted rate set every December. Management forecasts next year's overhead and next year's direct manufacturing labor costs. The budget for 20X5 is $400,000 of direct manufacturing labor and $600,000 of manufacturing overhead.
b. The only job unfinished on January 31, 20X5 is No. 419, on which direct manufacturing labor costs are $2,000 (125 direct manufacturing labor hours) and direct material costs are $8,000.
c. Total material placed into production during January is $90,000.
d. Cost of goods completed during January is $180,000.
e. Material inventory as of January 31, 20X5 is $20,000.
f. Finished goods inventory as of January 31, 20X5 is $15,000.
g. All plant workers earn the same wage rate. Direct manufacturing labor hours for January totals 2,500. Other labor and supervision totals $10,000.
h. The gross plant payroll on January paydays totals $52,000. Ignore withholdings. All personnel are paid on a weekly basis.
i. All "actual" manufacturing department overhead incurred during January has already been posted.

Required:

a. Material purchased during January
b. Cost of Goods Sold during January
c. Direct Manufacturing Labor Costs incurred during January
d. Manufacturing Overhead Allocated during January

e. Balance, Wages Payable Control, December 31, 20X4
f. Balance, Work in Process Inventory Control, January 31, 20X5
g. Balance, Work in Process Inventory Control, December 31, 20X4
h. Balance, Finished Goods Inventory Control, January 31, 20X5
i. Manufacturing Overhead underapplied or overapplied for January

ANS:

a. $15,000 + Purchases - $20,000 = $90,000. Purchases = $95,000

b. $20,000 + $180,000 - $15,000 = $185,000

c. DL = $\frac{\$2,000}{125}$ = \$16/HR × 2,500 HRS = \$40,000

d. $\frac{\$600,000}{\$400,000}$ = 150% DL cost × \$40,000 = \$60,000

e. BEGIN + \$50,000 - \$52,000 = \$3,000 BEGIN = \$5,000

f. \$2,000 + (\$2,000 × 150%) + \$8,000 = \$13,000

g. BEGIN + \$90,000 + \$40,000 + \$60,000 - \$180,000 = \$13,000 BEGIN = \$3,000

h. \$20,000 + \$180,000 - \$185,000 = END = \$15,000

i.

APPLIED	\$60,000
ACTUAL	57,000
	\$ 3,000 overapplied

DIF: Moderate OBJ: 4-4

11. Beauty Company manufactures picture frames of all sizes and shapes and uses a job order costing system. There is always some spoilage in each production run. The following costs relate to the current run:

Estimated overhead (exclusive of spoilage)	$160,000
Spoilage (estimated)	$ 25,000
Sales value of spoiled frames	$ 11,500
Labor hours	100,000

The actual cost of a spoiled picture frame is $7.00. During the year 170 frames are considered spoiled. Each spoiled frame can be sold for $4. The spoilage is considered a part of all jobs.

a. Labor hours are used to determine the predetermined overhead rate. What is the predetermined overhead rate per direct labor hour?
b. Prepare the journal entry needed to record the spoilage.
c. Prepare the journal entry if the spoilage relates only to Job #12 rather than being a part of all production runs.

ANS:

a. $160,000 + $25,000 - $11,500 = $173,500
$173,500/100,000 = $1.735 per DLH

b.	Disposal Value of Spoiled Work	680	
	Manufacturing Overhead	510	
	Work in Process Inventory		1,190
c.	Disposal Value of Spoiled Work	680	
	Work in Process Inventory-Job #12		680

DIF: Moderate OBJ: 4-8