Student name:\_\_\_\_\_\_\_\_\_\_

**TRUE/FALSE - Write 'T' if the statement is true and 'F' if the statement is false.  
1)** A cost driver is a factor, such as machine-hours, beds occupied, computer time, or flight-hours, that causes direct costs.

⊚ true  
 ⊚ false

**2)** Job-order costing systems often use allocation bases that do not reflect how jobs actually use overhead resources.

⊚ true  
 ⊚ false

**3)** An employee time ticket is an hour-by-hour summary of the employee’s activities throughout the day.

⊚ true  
 ⊚ false

**4)** The formula for computing the predetermined overhead rate is:  
 Predetermined overhead rate = Estimated total amount of the allocation base÷ Estimated total manufacturing overhead cost

⊚ true  
 ⊚ false

**5)** Generally speaking, when going through the process of computing a predetermined overhead rate, the estimated total manufacturing overhead cost is determined before estimating the amount of the allocation base.

⊚ true  
 ⊚ false

**6)** If a job is not completed at year end, then no manufacturing overhead cost would be applied to that job when a predetermined overhead rate is used.

⊚ true  
 ⊚ false

**7)** Actual overhead costs are not assigned to jobs in a job costing system.

⊚ true  
 ⊚ false

**8)** The amount of overhead applied to a particular job equals the actual amount of overhead caused by the job.

⊚ true  
 ⊚ false

**9)** If the overhead rate is computed annually based on the actual costs and activity for the year, the manufacturing overhead assigned to any particular job can be computed as soon as the job is completed.

⊚ true  
 ⊚ false

**10)** Job cost sheets contain entries for actual direct material, actual direct labor, and actual manufacturing overhead cost incurred in completing a job.

⊚ true  
 ⊚ false

**11)** In a job-order cost system, indirect labor is assigned to a job using information from the employee time ticket.

⊚ true  
 ⊚ false

**12)** If the allocation base in the predetermined overhead rate does not drive overhead costs, it will nevertheless provide reasonably accurate unit product costs because of the averaging process.

⊚ true  
 ⊚ false

**13)** A job cost sheet is used to record how much a customer pays for the job once the job is completed.

⊚ true  
 ⊚ false

**14)** In a job-order costing system, costs are traced to individual units of product. The sum total of such traced costs is called the unit product cost.

⊚ true  
 ⊚ false

**15)** The fact that one department may be labor intensive while another department is machine intensive explains in part why multiple predetermined overhead rates are often used in larger companies.

⊚ true  
 ⊚ false

**16)** A company will improve job cost accuracy by using multiple overhead rates even if it cannot identify more than one overhead cost driver.

⊚ true  
 ⊚ false

**17)** The appeal of using multiple departmental overhead rates is that they presumably provide a more accurate accounting of the costs caused by jobs.

⊚ true  
 ⊚ false

**18)** The costs attached to products that have not been sold are included in ending inventory on the balance sheet.

⊚ true  
 ⊚ false

**19)** In absorption costing, nonmanufacturing costs are assigned to units of product.

⊚ true  
 ⊚ false

**20)** An employee time ticket is used to record points that are earned by employees based on the hours they worked that can be used to pay for coffee, food in the cafeteria, and even in some cases for vacation travel.

⊚ true  
 ⊚ false

**21)** A bill of materials is a document that lists the type and quantity of each type of direct material needed to complete a unit of product.

⊚ true  
 ⊚ false

**22)** Most countries require some form of absorption costing for external reports.

⊚ true  
 ⊚ false

**MULTIPLE CHOICE - Choose the one alternative that best completes the statement or answers the question.  
23)** In a job-order costing system that is based on machine-hours, which of the following formulas is correct?

A) Predetermined overhead rate = Actual manufacturing overhead ÷ Actual machine-hours   
 B) Predetermined overhead rate = Actual manufacturing overhead ÷ Estimated machine-hours  
 C) Predetermined overhead rate = Estimated manufacturing overhead ÷ Estimated machine-hours  
 D) Predetermined overhead rate = Estimated manufacturing overhead ÷ Actual machine-hours

**24)** Which of the following is the correct formula to compute the predetermined overhead rate?

A) Predetermined overhead rate = Estimated total units in the allocation base ÷ Estimated total manufacturing overhead costs   
 B) Predetermined overhead rate = Estimated total manufacturing overhead costs ÷ Estimated total units in the allocation base  
 C) Predetermined overhead rate = Actual total manufacturing overhead costs ÷ Estimated total units in the allocation base  
 D) Predetermined overhead rate = Estimated total manufacturing overhead costs ÷ Actual total units in the allocation base.

**25)** Assigning manufacturing overhead to a specific job is complicated by all of the below except:

A) Manufacturing overhead is an indirect cost that is either impossible or difficult to trace to a particular job.   
 B) Manufacturing overhead is incurred only to support some jobs.  
 C) Manufacturing overhead consists of both variable and fixed costs.  
 D) The average cost of actual fixed manufacturing overhead expenses will vary depending on how many units are produced in a period.

**26)** Which of the following statements about using a plantwide overhead rate based on direct labor is correct?

A) Using a plantwide overhead rate based on direct labor-hours will ensure that direct labor costs are correctly traced to jobs.   
 B) Using a plantwide overhead rate based on direct labor costs will ensure that direct labor costs will be correctly traced to jobs.  
 C) It is often overly simplistic and incorrect to assume that direct labor-hours is a company’s only manufacturing overhead cost driver.  
 D) The labor theory of value ensures that using a plantwide overhead rate based on direct labor will do a reasonably good job of assigning overhead costs to jobs.

**27)** Which of the following would usually be found on a job cost sheet under a normal cost system?

|  |  |  |
| --- | --- | --- |
|  | **Actual direct material cost** | **Actual manufacturing overhead cost** |
| **A)** | Yes | Yes |
| **B)** | Yes | No |
| **C)** | No | Yes |
| **D)** | No | No |

A) Choice A   
 B) Choice B  
 C) Choice C  
 D) Choice D

**28)** Which of the following statements is not correct concerning multiple overhead rate systems?

A) A multiple overhead rate system is more complex than a system based on a single plantwide overhead rate.   
 B) A multiple overhead rate system is usually more accurate than a system based on a single plantwide overhead rate.  
 C) A company may choose to create a separate overhead rate for each of its production departments.  
 D) In departments that are relatively labor-intensive, their overhead costs should be applied to jobs based on machine-hours rather than on direct labor-hours.

**29)** Johansen Corporation uses a predetermined overhead rate based on direct labor-hours to apply manufacturing overhead to jobs. The Corporation has provided the following estimated costs for the next year:

|  |  |
| --- | --- |
| **Direct materials** | $ 6,000 |
| **Direct labor** | $ 20,000 |
| **Rent on factory building** | $ 15,000 |
| **Sales salaries** | $ 25,000 |
| **Depreciation on factory equipment** | $ 8,000 |
| **Indirect labor** | $ 12,000 |
| **Production supervisor's salary** | $ 15,000 |

Jameson estimates that 20,000 direct labor-hours will be worked during the year. The predetermined overhead rate per hour will be:

A) $2.50 per direct labor-hour   
 B) $2.79 per direct labor-hour  
 C) $3.00 per direct labor-hour  
 D) $4.00 per direct labor-hour

**30)** The Silver Corporation uses a predetermined overhead rate to apply manufacturing overhead to jobs. The predetermined overhead rate is based on labor cost in Department A and on machine-hours in Department B. At the beginning of the year, the Corporation made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Department A** | **Department B** |
| **Direct labor cost** | $ 60,000 | $ 40,000 |
| **Manufacturing overhead** | $ 90,000 | $ 45,000 |
| **Direct labor-hours** | 6,000 | 9,000 |
| **Machine-hours** | 2,000 | 15,000 |

What predetermined overhead rates would be used in Department A and Department B, respectively?

A) 67% and $3.00   
 B) 150% and $5.00  
 C) 150% and $3.00  
 D) 67% and $5.00

**31)** Purves Corporation is using a predetermined overhead rate that was based on estimated total fixed manufacturing overhead of $121,000 and 10,000 direct labor-hours for the period. The company incurred actual total fixed manufacturing overhead of $113,000 and 10,900 total direct labor-hours during the period. The predetermined overhead rate is closest to:

A) $10.37   
 B) $12.10   
 C) $11.10   
 D) $11.30

**32)** Reamer Corporation uses a predetermined overhead rate based on machine-hours to apply manufacturing overhead to jobs. The Corporation has provided the following estimated costs for next year:

|  |  |
| --- | --- |
| **Direct materials** | $ 1,000 |
| **Direct labor** | $ 3,000 |
| **Sales commissions** | $ 4,000 |
| **Salary of production supervisor** | $ 2,000 |
| **Indirect materials** | $ 400 |
| **Advertising expense** | $ 800 |
| **Rent on factory equipment** | $ 1,000 |

Reamer estimates that 500 direct labor-hours and 1,000 machine-hours will be worked during the year. The predetermined overhead rate per hour will be:

A) $6.80 per machine-hour   
 B) $6.00 per machine-hour  
 C) $3.00 per machine-hour  
 D) $3.40 per machine-hour

**33)** Baj Corporation uses a predetermined overhead rate base on machine-hours that it recalculates at the beginning of each year. The company considers all of its manufacturing overhead costs to be fixed and it has provided the following data for the most recent year.

|  |  |
| --- | --- |
| **Estimated total fixed manufacturing overhead from the beginning of the year** | $ 534,000 |
| **Estimated activity level from the beginning of the year** | 30,000 machine-hours |
| **Actual total fixed manufacturing overhead** | $ 487,000 |
| **Actual activity level** | 27,400 machine-hours |

The predetermined overhead rate per machine-hour would be closest to:

A) $17.80   
 B) $19.49  
 C) $16.23  
 D) $17.77

**34)** Giannitti Corporation bases its predetermined overhead rate on the estimated machine-hours for the upcoming year. Data for the upcoming year appear below:

|  |  |
| --- | --- |
| **Estimated machine-hours** | 72,500 |
| **Estimated variable manufacturing overhead** | $3.20 per machine-hour |
| **Estimated total fixed manufacturing overhead** | $838,700 |

The predetermined overhead rate for the recently completed year was closest to:

A) $9.60 per machine-hour   
 B) $6.77 per machine-hour  
 C) $14.77 per machine-hour  
 D) $8.64 per machine-hour

**35)** Giannitti Corporation bases its predetermined overhead rate on the estimated machine-hours for the upcoming year. Data for the upcoming year appear below:

|  |  |
| --- | --- |
| **Estimated machine-hours** | 36,000 |
| **Estimated variable manufacturing overhead** | $3.01 per machine-hour |
| **Estimated total fixed manufacturing overhead** | $1,058,040 |

The predetermined overhead rate for the recently completed year was closest to:

A) $29.39 per machine-hour   
 B) $32.40 per machine-hour  
 C) $32.81 per machine-hour  
 D) $3.01 per machine-hour

**36)** Gilchrist Corporation bases its predetermined overhead rate on the estimated machine-hours for the upcoming year. At the beginning of the most recently completed year, the Corporation estimated the machine-hours for the upcoming year at 60,700 machine-hours. The estimated variable manufacturing overhead was $4.34 per machine-hour and the estimated total fixed manufacturing overhead was $1,723,880. The predetermined overhead rate for the recently completed year was closest to:

A) $32.74 per machine-hour   
 B) $31.74 per machine-hour  
 C) $4.34 per machine-hour  
 D) $28.40 per machine-hour

**37)** Gilchrist Corporation bases its predetermined overhead rate on the estimated machine-hours for the upcoming year. At the beginning of the most recently completed year, the Corporation estimated the machine-hours for the upcoming year at 79,000 machine-hours. The estimated variable manufacturing overhead was $7.38 per machine-hour and the estimated total fixed manufacturing overhead was $2,347,090. The predetermined overhead rate for the recently completed year was closest to:

A) $37.09 per machine-hour   
 B) $36.07 per machine-hour   
 C) $7.38 per machine-hour   
 D) $29.71 per machine-hour

**38)** Dearden Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $144,000, variable manufacturing overhead of $2.00 per machine-hour, and 60,000 machine-hours. The predetermined overhead rate is closest to:

A) $2.40 per machine-hour   
 B) $6.40 per machine-hour   
 C) $4.40 per machine-hour   
 D) $2.00 per machine-hour

**39)** Longobardi Corporation bases its predetermined overhead rate on the estimated labor-hours for the upcoming year. At the beginning of the most recently completed year, the Corporation estimated the labor-hours for the upcoming year at 43,600 labor-hours. The estimated variable manufacturing overhead was $6.17 per labor-hour and the estimated total fixed manufacturing overhead was $1,245,216. The actual labor-hours for the year turned out to be 40,800 labor-hours. The predetermined overhead rate for the recently completed year was closest to:

A) $34.73 per labor-hour   
 B) $28.56 per labor-hour  
 C) $6.17 per labor-hour  
 D) $37.11 per labor-hour

**40)** Longobardi Corporation bases its predetermined overhead rate on the estimated labor-hours for the upcoming year. At the beginning of the most recently completed year, the Corporation estimated the labor-hours for the upcoming year at 46,000 labor-hours. The estimated variable manufacturing overhead was $6.25 per labor-hour and the estimated total fixed manufacturing overhead was $1,026,260. The actual labor-hours for the year turned out to be 41,200 labor-hours. The predetermined overhead rate for the recently completed year was closest to:

A) $28.56 per labor-hour   
 B) $22.31 per labor-hour   
 C) $6.25 per labor-hour   
 D) $31.16 per labor-hour

**41)** Valvano Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $440,000, variable manufacturing overhead of $2.20 per machine-hour, and 50,000 machine-hours. The estimated total manufacturing overhead is closest to:

A) $440,000   
 B) $110,000  
 C) $440,002  
 D) $550,000

**42)** Brothern Corporation bases its predetermined overhead rate on the estimated machine-hours for the upcoming year. Data for the most recently completed year appear below:

|  |  |
| --- | --- |
| **Estimates made at the beginning of the year:** |  |
| **Estimated machine-hours** | 49,400 |
| **Estimated variable manufacturing overhead** | $5.02 per machine-hour |
| **Estimated total fixed manufacturing overhead** | $1,445,444 |
| **Actual machine-hours for the year** | 47,400 |

The predetermined overhead rate for the recently completed year was closest to:

A) $34.08 per machine-hour   
 B) $34.28 per machine-hour  
 C) $5.02 per machine-hour  
 D) $29.26 per machine-hour

**43)** Brothern Corporation bases its predetermined overhead rate on the estimated machine-hours for the upcoming year. Data for the most recently completed year appear below:

|  |  |
| --- | --- |
| **Estimates made at the beginning of the year:** |  |
| **Estimated machine-hours** | 39,000 |
| **Estimated variable manufacturing overhead** | $6.76 per machine-hour |
| **Estimated total fixed manufacturing overhead** | $794,430 |
| **Actual machine-hours for the year** | 42,700 |

The predetermined overhead rate for the recently completed year was closest to:

A) $25.37 per machine-hour   
 B) $27.13 per machine-hour   
 C) $6.76 per machine-hour   
 D) $20.37 per machine-hour

**44)** Steele Corporation uses a predetermined overhead rate based on machine-hours to apply manufacturing overhead to jobs. Steele Corporation has provided the following estimated costs for next year:

|  |  |
| --- | --- |
| **Direct materials** | $20,000 |
| **Direct labor** | $60,000 |
| **Sales commissions** | $80,000 |
| **Salary of production supervisor** | $40,000 |
| **Indirect materials** | $ 8,000 |
| **Advertising expense** | $16,000 |
| **Rent on factory equipment** | $20,000 |

Steele estimates that 10,000 direct labor-hours and 16,000 machine-hours will be worked during the year. The predetermined overhead rate per hour will be:

A) $4.25   
 B) $8.00  
 C) $9.00  
 D) $10.25

**45)** Helland Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 30,000 |
| **Total fixed manufacturing overhead cost** | $189,000 |
| **Variable manufacturing overhead per direct labor-hour** | $2.50 |

The predetermined overhead rate is closest to:

A) $2.50 per direct labor-hour   
 B) $11.30 per direct labor-hour  
 C) $6.30 per direct labor-hour  
 D) $8.80 per direct labor-hour

**46)** Laflame Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 70,000 |
| **Total fixed manufacturing overhead cost** | $357,000 |
| **Variable manufacturing overhead per machine-hour** | $3.90 |

The estimated total manufacturing overhead is closest to:

A) $273,000   
 B) $630,000  
 C) $357,004  
 D) $357,000

**47)** Almaraz Corporation has two manufacturing departments--Forming and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Finishing** | **Total** |
| **Estimated total machine-hours (MHs)** | 7,000 | 3,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $40,600 | $8,100 | $48,700 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.30 | $ 2.80 |  |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. That predetermined manufacturing overhead rate is closest to:

A) $6.62   
 B) $4.87  
 C) $4.10   
 D) $7.10

**48)** Bernson Corporation is using a predetermined overhead rate that was based on estimated total fixed manufacturing overhead of $492,000 and 30,000 machine-hours for the period. The company incurred actual total fixed manufacturing overhead of $517,000 and 28,300 total machine-hours during the period. The amount of manufacturing overhead that would have been applied to all jobs during the period is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $464,120   
 B) $492,000  
 C) $487,703  
 D) $25,000

**49)** Beat Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 40,000 |
| **Total fixed manufacturing overhead cost** | $344,000 |
| **Variable manufacturing overhead per machine-hour** | $ 3.90 |

Recently, Job M759 was completed. It required 60 machine-hours. The amount of overhead applied to Job M759 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $750   
 B) $516  
 C) $984  
 D) $234

**50)** Mundorf Corporation has two manufacturing departments--Forming and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 9,000 | 1,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $52,200 | $2,400 | $54,600 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 2.00 | $ 2.10 |  |

During the most recent month, the company started and completed two jobs--Job B and Job H. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job B** | **Job H** |
| **Forming machine-hours** | 6,100 | 2,900 |
| **Assembly machine-hours** | 400 | 600 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job B is closest to:

A) $48,555   
 B) $35,490  
 C) $2,988  
 D) $45,567

**51)** Parido Corporation has two manufacturing departments--Casting and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Casting** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 8,000 | 2,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $44,000 | $4,200 | $48,200 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.90 | $ 3.00 |  |

During the most recent month, the company started and completed two jobs--Job A and Job H. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job H** |
| **Casting machine-hours** | 5,400 | 2,600 |
| **Assembly machine-hours** | 800 | 1,200 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job H is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $8,328   
 B) $26,372  
 C) $18,316  
 D) $18,044

**52)** Juanita Corporation uses a job-order costing system and applies overhead on the basis of direct labor cost. At the end of October, Juanita had one job still in process. The job cost sheet for this job contained the following information:

|  |  |
| --- | --- |
| **Direct materials** | $480 |
| **Direct labor** | $150 |
| **Manufacturing overhead applied** | $600 |

An additional $100 of labor was needed in November to complete this job. For this job, how much should Juanita have transferred to finished goods inventory in November when it was completed?

A) $1,330   
 B) $500  
 C) $1,230  
 D) $1,730

**53)** Carradine Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $105,000, variable manufacturing overhead of $3.00 per machine-hour, and 70,000 machine-hours. The company recently completed Job P233 which required 60 machine-hours. The amount of overhead applied to Job P233 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $90   
 B) $270   
 C) $450   
 D) $180

**54)** Fusaro Corporation uses a predetermined overhead rate base on machine-hours that it recalculates at the beginning of each year. The company has provided the following data for the most recent year.

|  |  |
| --- | --- |
| **Estimated total fixed manufacturing overhead from the beginning of the year** | $684,000 |
| **Estimated activity level from the beginning of the year** | 40,000 machine-hours |
| **Actual total fixed manufacturing overhead** | $616,000 |
| **Actual activity level** | 37,700 machine-hours |

The amount of manufacturing overhead that would have been applied to all jobs during the period is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $644,670   
 B) $684,000  
 C) $68,000  
 D) $580,580

**55)** Koelsch Corporation has two manufacturing departments--Molding and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Molding** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 1,000 | 9,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $4,000 | $25,200 | $29,200 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 2.00 | $ 3.00 |  |

During the most recent month, the company started and completed two jobs--Job F and Job K. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job F** | **Job K** |
| **Direct materials** | $12,300 | $8,400 |
| **Direct labor cost** | $18,200 | $6,800 |
| **Molding machine-hours** | 700 | 300 |
| **Customizing machine-hours** | 3,600 | 5,400 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours and uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job K is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $72,561   
 B) $79,817  
 C) $24,187  
 D) $48,374

**56)** Thach Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $665,000, variable manufacturing overhead of $3.00 per machine-hour, and 70,000 machine-hours. Recently, Job T321 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 30 |
| **Total machine-hours** | 90 |
| **Direct materials** | $ 630 |
| **Direct labor cost** | $2,880 |

The unit product cost for Job T321 is closest to:

A) $117.00   
 B) $58.50  
 C) $154.50  
 D) $51.50

**57)** Tancredi Corporation has two manufacturing departments--Machining and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 5,000 | 5,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $22,000 | $11,500 | $33,500 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.80 | $ 3.00 |  |

During the most recent month, the company started and completed two jobs--Job E and Job J. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job E** | **Job J** |
| **Direct materials** | $12,800 | $7,000 |
| **Direct labor cost** | $17,600 | $7,700 |
| **Machining machine-hours** | 3,400 | 1,600 |
| **Customizing machine-hours** | 2,000 | 3,000 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. If both jobs are sold during the month, the company's cost of goods sold for the month would be closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $102,600   
 B) $61,450  
 C) $41,150   
 D) $110,808

**58)** Session Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 70,000 |
| **Total fixed manufacturing overhead cost** | $511,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 2.10 |

Recently, Job K913 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 150 |
| **Direct materials** | $ 705 |
| **Direct labor cost** | $4,650 |

The total job cost for Job K913 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $6,060   
 B) $2,115  
 C) $6,765  
 D) $5,355

**59)** Pebbles Corporation has two manufacturing departments--Casting and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Casting** | **Finishing** | **Total** |
| **Estimated total machine-hours (MHs)** | 2,000 | 3,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $9,800 | $6,300 | $16,100 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 2.00 | $ 2.40 |  |

During the most recent month, the company started and completed two jobs--Job A and Job L. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job L** |
| **Direct materials** | $15,400 | $9,600 |
| **Direct labor cost** | $24,900 | $6,200 |
| **Casting machine-hours** | 1,400 | 600 |
| **Finishing machine-hours** | 1,200 | 1,800 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The total manufacturing cost assigned to Job L is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $9,600   
 B) $6,200  
 C) $28,904  
 D) $13,104

**60)** Stockmaster Corporation has two manufacturing departments--Forming and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 5,000 | 5,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $27,000 | $10,500 | $37,500 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.10 | $ 2.80 |  |

During the most recent month, the company started and completed two jobs--Job C and Job H. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job C** | **Job H** |
| **Direct materials** | $11,200 | $7,500 |
| **Direct labor cost** | $21,000 | $7,800 |
| **Forming machine-hours** | 3,400 | 1,600 |
| **Assembly machine-hours** | 2,000 | 3,000 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours and uses a markup of 40% on manufacturing cost to establish selling prices. The calculated selling price for Job C is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $96,989   
 B) $88,172  
 C) $25,192  
 D) $62,980

**61)** Atteberry Corporation has two manufacturing departments--Machining and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Finishing** | **Total** |
| **Estimated total machine-hours (MHs)** | 6,000 | 4,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $30,000 | $11,200 | $41,200 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 2.00 | $ 2.40 |  |

During the most recent month, the company started and completed two jobs--Job E and Job L. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job E** | **Job L** |
| **Direct materials** | $13,400 | $9,100 |
| **Direct labor cost** | $24,500 | $7,000 |
| **Machining machine-hours** | 4,100 | 1,900 |
| **Finishing machine-hours** | 1,600 | 2,400 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The total manufacturing cost assigned to Job E is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $24,500   
 B) $35,796  
 C) $13,400  
 D) $73,696

**62)** Coates Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $249,000, variable manufacturing overhead of $3.80 per machine-hour, and 30,000 machine-hours. The company has provided the following data concerning Job X784 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 50 |
| **Total machine-hours** | 250 |
| **Direct materials** | $ 470 |
| **Direct labor cost** | $5,500 |

If the company marks up its unit product costs by 30% then the selling price for a unit in Job X784 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $253.87   
 B) $233.87  
 C) $53.97  
 D) $155.22

**63)** Sutter Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 10,000 |
| **Total fixed manufacturing overhead cost** | $35,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.20 |

Recently, Job T369 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total machine-hours** | 40 |
| **Direct materials** | $ 750 |
| **Direct labor cost** | $1,560 |

If the company marks up its unit product costs by 20% then the selling price for a unit in Job T369 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $324.56   
 B) $304.56  
 C) $277.20  
 D) $50.76

**64)** Doakes Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 60,000 |
| **Total fixed manufacturing overhead cost** | $378,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 2.20 |

Recently, Job M843 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 60 |
| **Total direct labor-hours** | 120 |
| **Direct materials** | $ 630 |
| **Direct labor cost** | $2,400 |

The unit product cost for Job M843 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $33.75   
 B) $67.50  
 C) $27.50  
 D) $50.50

**65)** Placker Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $155,000, variable manufacturing overhead of $3.40 per machine-hour, and 50,000 machine-hours. Recently, Job A881 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Total machine-hours** | 100 |
| **Direct materials** | $ 645 |
| **Direct labor cost** | $2,300 |

The total job cost for Job A881 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $3,595   
 B) $2,945  
 C) $2,950  
 D) $1,295

**66)** Tomey Corporation has two production departments, Forming and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Finishing** |
| **Machine-hours** | 18,000 | 14,000 |
| **Direct labor-hours** | 2,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $99,000 | $70,400 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.70 |

During the current month the company started and finished Job T617. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T617:** | **Forming** | **Finishing** |
| Machine-hours | 90 | 20 |
| Direct labor-hours | 30 | 60 |
| Direct materials | $940 | $ 350 |
| Direct labor cost | $960 | $1,920 |

The total job cost for Job T617 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $5,604   
 B) $2,584  
 C) $684  
 D) $3,020

**67)** Molash Corporation has two manufacturing departments--Machining and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 2,000 | 3,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $9,400 | $8,100 | $17,500 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.80 | $ 2.40 |  |

During the most recent month, the company started and completed two jobs--Job B and Job L. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job B** | **Job L** |
| **Direct materials** | $14,400 | $7,100 |
| **Direct labor cost** | $23,500 | $6,700 |
| **Machining machine-hours** | 1,400 | 600 |
| **Assembly machine-hours** | 1,200 | 1,800 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job L is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $40,320   
 B) $41,933  
 C) $13,440  
 D) $26,880

**68)** Columbo Corporation has two production departments, Forming and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Finishing** |
| **Machine-hours** | 17,000 | 10,000 |
| **Direct labor-hours** | 1,000 | 9,000 |
| **Total fixed manufacturing overhead cost** | $110,500 | $78,300 |
| **Variable manufacturing overhead per machine-hour** | $ 1.60 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.30 |

During the current month the company started and finished Job A948. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job A948:** | **Forming** | **Finishing** |
| Machine-hours | 70 | 30 |
| Direct labor-hours | 10 | 50 |
| Direct materials | $650 | $ 330 |
| Direct labor cost | $380 | $1,900 |

If the company marks up its manufacturing costs by 40% then the selling price for Job A948 would be closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $6,197.80   
 B) $1,770.80  
 C) $4,427.00  
 D) $6,818.00

**69)** Lotz Corporation has two manufacturing departments--Casting and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Casting** | **Finishing** | **Total** |
| **Estimated total machine-hours (MHs)** | 2,000 | 8,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $10,200 | $19,200 | $29,400 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.20 | $ 2.20 |  |

During the most recent month, the company started and completed two jobs--Job F and Job K. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job F** | **Job K** |
| **Direct materials** | $14,400 | $7,100 |
| **Direct labor cost** | $22,500 | $6,600 |
| **Casting machine-hours** | 1,400 | 600 |
| **Finishing machine-hours** | 3,200 | 4,800 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job F is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $30,220   
 B) $90,660  
 C) $60,440  
 D) $96,100

**70)** Ashe Corporation has two manufacturing departments--Machining and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 1,000 | 4,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $4,700 | $9,200 | $13,900 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.10 | $ 2.60 |  |

During the most recent month, the company started and completed two jobs--Job B and Job K. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job B** | **Job K** |
| **Machining machine-hours** | 700 | 300 |
| **Customizing machine-hours** | 1,600 | 2,400 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job K is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $11,760   
 B) $1,740  
 C) $13,716  
 D) $13,500

**71)** Boward Corporation has two production departments, Milling and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Milling** | **Assembly** |
| **Machine-hours** | 18,000 | 12,000 |
| **Direct labor-hours** | 2,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $120,600 | $76,300 |
| **Variable manufacturing overhead per machine-hour** | $ 2.00 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.30 |

During the current month the company started and finished Job T818. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T818:** | **Milling** | **Assembly** |
| Machine-hours | 50 | 30 |
| Direct labor-hours | 10 | 40 |

The total amount of overhead applied in both departments to Job T818 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $1,651   
 B) $608  
 C) $435  
 D) $1,043

**72)** Malakan Corporation has two production departments, Machining and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Finishing** |
| **Machine-hours** | 18,000 | 11,000 |
| **Direct labor-hours** | 2,000 | 9,000 |
| **Total fixed manufacturing overhead cost** | $102,600 | $96,300 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.90 |

During the current month the company started and finished Job K368. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job K368:** | **Machining** | **Finishing** |
| Machine-hours | 80 | 30 |
| Direct labor-hours | 20 | 40 |

The amount of overhead applied in the Machining Department to Job K368 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $856.00   
 B) $168.00  
 C) $624.00  
 D) $140,400.00

**73)** Mahon Corporation has two production departments, Casting and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Casting** | **Customizing** |
| **Machine-hours** | 15,000 | 12,000 |
| **Direct labor-hours** | 4,800 | 6,000 |
| **Total fixed manufacturing overhead cost** | $105,000 | $62,400 |
| **Variable manufacturing overhead per machine-hour** | $ 2.30 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.50 |

During the current month the company started and finished Job T138. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T138:** | **Casting** | **Customizing** |
| **Machine-hours** | 70 | 60 |
| **Direct labor-hours** | 12 | 70 |

The amount of overhead applied in the Customizing Department to Job T138 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $1,164.00   
 B) $89,400.00  
 C) $1,043.00  
 D) $582.00

**74)** Mahon Corporation has two production departments, Casting and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Casting** | **Customizing** |
| **Machine-hours** | 18,000 | 14,000 |
| **Direct labor-hours** | 2,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $124,200 | $68,600 |
| **Variable manufacturing overhead per machine-hour** | $ 1.90 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.80 |

During the current month the company started and finished Job T138. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T138:** | **Casting** | **Customizing** |
| **Machine-hours** | 70 | 30 |
| **Direct labor-hours** | 10 | 60 |

The amount of overhead applied in the Customizing Department to Job T138 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $588.00   
 B) $95,200.00  
 C) $816.00  
 D) $228.00

**75)** Marioni Corporation has two manufacturing departments--Forming and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 7,000 | 3,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $37,100 | $9,000 | $46,100 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.70 | $ 2.60 |  |

During the most recent month, the company started and completed two jobs--Job B and Job H. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job B** | **Job H** |
| **Forming machine-hours** | 4,800 | 2,200 |
| **Assembly machine-hours** | 1,200 | 1,800 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job B is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $6,720   
 B) $33,600  
 C) $40,320  
 D) $39,480

**76)** Bassett Corporation has two production departments, Milling and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Milling** | **Customizing** |
| **Machine-hours** | 16,000 | 12,000 |
| **Direct labor-hours** | 2,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $118,400 | $87,200 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.30 |

The predetermined overhead rate for the Milling Department is closest to:

A) $19.00 per machine-hour   
 B) $2.10 per machine-hour  
 C) $9.50 per machine-hour  
 D) $7.40 per machine-hour

**77)** Fatzinger Corporation has two production departments, Milling and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Milling** | **Assembly** |
| **Machine-hours** | 20,000 | 14,000 |
| **Direct labor-hours** | 2,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $132,000 | $57,400 |
| **Variable manufacturing overhead per machine-hour** | $ 2.30 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.40 |

The predetermined overhead rate for the Assembly Department is closest to:

A) $8.20 per direct labor-hour   
 B) $3.40 per direct labor-hour  
 C) $4.06 per direct labor-hour  
 D) $11.60 per direct labor-hour

**78)** Swango Corporation has two production departments, Casting and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Casting** | **Customizing** |
| **Machine-hours** | 19,000 | 11,000 |
| **Direct labor-hours** | 1,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $138,700 | $86,400 |
| **Variable manufacturing overhead per machine-hour** | $ 1.60 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.00 |

The estimated total manufacturing overhead for the Customizing Department is closest to:

A) $24,000   
 B) $110,400  
 C) $86,400  
 D) $60,379

**79)** Tarrant Corporation has two manufacturing departments--Casting and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Casting** | **Finishing** | **Total** |
| **Estimated total machine-hours (MHs)** | 1,000 | 4,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $5,700 | $11,200 | $16,900 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.30 | $ 2.90 |  |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both departments. The departmental predetermined overhead rate in the Casting Department is closest to:

A) $5.70   
 B) $1.30  
 C) $5.96  
 D) $7.00

**80)** Prayer Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Customizing** |
| **Machine-hours** | 19,000 | 13,000 |
| **Direct labor-hours** | 1,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $110,200 | $68,800 |
| **Variable manufacturing overhead per machine-hour** | $ 2.00 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.60 |

The estimated total manufacturing overhead for the Machining Department is closest to:

A) $148,200   
 B) $110,200  
 C) $38,000  
 D) $299,725

**81)** Camm Corporation has two manufacturing departments--Forming and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 3,000 | 2,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $12,600 | $4,600 | $17,200 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.70 | $ 2.50 |  |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both departments. The departmental predetermined overhead rate in the Assembly Department is closest to:

A) $2.50   
 B) $2.30  
 C) $4.80  
 D) $5.46

**82)** Huang Aerospace Corporation manufactures aviation control panels in two departments, Fabrication and Assembly. In the Fabrication department, Huang uses a predetermined overhead rate of $30 per machine-hour. In the Assembly department, Huang uses a predetermined overhead rate of $12 per direct labor-hour. During the current year, Job #X2984 incurred the following number of hours in each department:

|  |  |  |
| --- | --- | --- |
|  | **Fabrication** | **Assembly** |
| **Machine-hours** | 40 | 12 |
| **Direct labor-hours** | 3 | 25 |

What is the total amount of manufacturing overhead that Huang should have applied to Job #X2984 during the current year?

A) $1,200   
 B) $1,500  
 C) $1,560  
 D) $1,734

**83)** Sargent Corporation applies overhead cost to jobs on the basis of 70% of direct labor cost. If Job 210 shows $10,500 of manufacturing overhead cost applied, how much was the direct labor cost on the job?

A) $15,000   
 B) $17,850  
 C) $7,350  
 D) $10,500

**84)** Sargent Corporation applies overhead cost to jobs on the basis of 80% of direct labor cost. If Job 210 shows $10,000 of manufacturing overhead cost applied, how much was the direct labor cost on the job?

A) $12,500   
 B) $11,000  
 C) $8,000  
 D) $10,000

**85)** Kreuzer Corporation is using a predetermined overhead rate of $22.30 per machine-hour that was based on estimated total fixed manufacturing overhead of $446,000 and 20,000 machine-hours for the period. The company incurred actual total fixed manufacturing overhead of $409,000 and 18,200 total machine-hours during the period. The amount of manufacturing overhead that would have been applied to all jobs during the period is closest to:

A) $446,000   
 B) $37,000  
 C) $372,190  
 D) $405,860

**86)** Kavin Corporation uses a predetermined overhead rate base on machine-hours that it recalculates at the beginning of each year. The company has provided the following data for the most recent year.

|  |  |
| --- | --- |
| **Predetermined overhead rate** | $ 23.60 per machine-hour |
| **Estimated total fixed manufacturing overhead from the beginning of the year** | $708,000 |
| **Estimated activity level from the beginning of the year** | 30,000 machine-hours |
| **Actual total fixed manufacturing overhead** | $752,000 |
| **Actual activity level** | 28,100 machine-hours |

The amount of manufacturing overhead that would have been applied to all jobs during the period is closest to:

A) $663,160   
 B) $708,000  
 C) $44,000  
 D) $704,373

**87)** Job 910 was recently completed. The following data have been recorded on its job cost sheet:

|  |  |
| --- | --- |
| **Direct materials** | $2,461 |
| **Direct labor-hours** | 74 labor-hours |
| **Direct labor wage rate** | $ 18 per labor-hour |
| **Machine-hours** | 137 machine-hours |

The Corporation applies manufacturing overhead on the basis of machine-hours. The predetermined overhead rate is $19 per machine-hour. The total cost that would be recorded on the job cost sheet for Job 910 would be:

A) $3,720   
 B) $7,236  
 C) $6,396  
 D) $3,793

**88)** Job 910 was recently completed. The following data have been recorded on its job cost sheet:

|  |  |
| --- | --- |
| **Direct materials** | $3,193 |
| **Direct labor-hours** | 21 labor-hours |
| **Direct labor wage rate** | $ 12 per labor-hour |
| **Machine-hours** | 166 machine-hours |

The Corporation applies manufacturing overhead on the basis of machine-hours. The predetermined overhead rate is $15 per machine-hour. The total cost that would be recorded on the job cost sheet for Job 910 would be:

A) $3,220   
 B) $3,760  
 C) $5,935  
 D) $3,445

**89)** Grib Corporation uses a predetermined overhead rate based on direct labor cost to apply manufacturing overhead to jobs. The predetermined overhead rates for the year are 200% of direct labor cost for Department A and 50% of direct labor cost for Department B. Job 436, started and completed during the year, was charged with the following costs:

|  |  |  |
| --- | --- | --- |
|  | **Department A** | **Department B** |
| **Direct materials** | $50,000 | $10,000 |
| **Direct labor** | ? | $60,000 |
| **Manufacturing overhead** | $80,000 | ? |

The total manufacturing cost assigned to Job 436 was:

A) $360,000   
 B) $390,000  
 C) $270,000  
 D) $480,000

**90)** The following data have been recorded for recently completed Job 450 on its job cost sheet. Direct materials cost was $2,132. A total of 40 direct labor-hours and 238 machine-hours were worked on the job. The direct labor wage rate is $17 per labor-hour. The Corporation applies manufacturing overhead on the basis of machine-hours. The predetermined overhead rate is $23 per machine-hour. The total cost for the job on its job cost sheet would be:

A) $5,242   
 B) $10,431  
 C) $5,661  
 D) $8,286

**91)** The following data have been recorded for recently completed Job 450 on its job cost sheet. Direct materials cost was $3,044. A total of 46 direct labor-hours and 104 machine-hours were worked on the job. The direct labor wage rate is $15 per labor-hour. The Corporation applies manufacturing overhead on the basis of machine-hours. The predetermined overhead rate is $13 per machine-hour. The total cost for the job on its job cost sheet would be:

A) $4,332   
 B) $3,734  
 C) $3,072  
 D) $5,086

**92)** Dejarnette Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 80,000 |
| **Total fixed manufacturing overhead cost** | $416,000 |
| **Variable manufacturing overhead per machine-hour** | $ 3.10 |

The estimated total manufacturing overhead is closest to:

A) $416,003   
 B) $248,000  
 C) $664,000  
 D) $416,000

**93)** Dejarnette Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 80,000 |
| **Total fixed manufacturing overhead cost** | $416,000 |
| **Variable manufacturing overhead per machine-hour** | $ 3.10 |

The predetermined overhead rate is closest to:

A) $8.30 per machine-hour   
 B) $11.40 per machine-hour  
 C) $5.20 per machine-hour  
 D) $3.10 per machine-hour

**94)** Odonnel Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $36,000, variable manufacturing overhead of $2.80 per direct labor-hour, and 10,000 direct labor-hours.  
 The estimated total manufacturing overhead is closest to:

A) $64,000   
 B) $36,000  
 C) $28,000  
 D) $36,003

**95)** Odonnel Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $36,000, variable manufacturing overhead of $2.80 per direct labor-hour, and 10,000 direct labor-hours.  
 The predetermined overhead rate is closest to:

A) $2.80 per direct labor-hour   
 B) $6.40 per direct labor-hour  
 C) $3.60 per direct labor-hour  
 D) $9.20 per direct labor-hour

**96)** Morataya Corporation has two manufacturing departments--Machining and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 7,000 | 3,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $39,200 | $6,600 | $45,800 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.90 | $ 2.10 |  |

During the most recent month, the company started and completed two jobs--Job B and Job G. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job B** | **Job G** |
| **Direct materials** | $14,800 | $8,300 |
| **Direct labor cost** | $22,000 | $8,900 |
| **Machining machine-hours** | 4,800 | 2,200 |
| **Assembly machine-hours** | 1,200 | 1,800 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. That predetermined manufacturing overhead rate is closest to:

A) $4.00   
 B) $7.50  
 C) $4.58  
 D) $6.54

**97)** Morataya Corporation has two manufacturing departments--Machining and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 7,000 | 3,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $39,200 | $6,600 | $45,800 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.90 | $ 2.10 |  |

During the most recent month, the company started and completed two jobs--Job B and Job G. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job B** | **Job G** |
| **Direct materials** | $14,800 | $8,300 |
| **Direct labor cost** | $22,000 | $8,900 |
| **Machining machine-hours** | 4,800 | 2,200 |
| **Assembly machine-hours** | 1,200 | 1,800 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job B is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $31,392   
 B) $27,480  
 C) $39,240  
 D) $7,848

**98)** Morataya Corporation has two manufacturing departments--Machining and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 7,000 | 3,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $39,200 | $6,600 | $45,800 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.90 | $ 2.10 |  |

During the most recent month, the company started and completed two jobs--Job B and Job G. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job B** | **Job G** |
| **Direct materials** | $14,800 | $8,300 |
| **Direct labor cost** | $22,000 | $8,900 |
| **Machining machine-hours** | 4,800 | 2,200 |
| **Assembly machine-hours** | 1,200 | 1,800 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job G is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $14,388   
 B) $26,160  
 C) $11,772  
 D) $18,320

**99)** Housholder Corporation uses a predetermined overhead rate base on machine-hours that it recalculates at the beginning of each year. The company has provided the following data for the most recent year.

|  |  |
| --- | --- |
| **Estimated total fixed manufacturing overhead from the beginning of the year** | $310,000 |
| **Estimated activity level from the beginning of the year** | 20,000 machine-hours |
| **Actual total fixed manufacturing overhead** | $338,000 |
| **Actual activity level** | 18,300 machine-hours |

The predetermined overhead rate is closest to:

A) $18.47   
 B) $16.94  
 C) $16.90  
 D) $15.50

**100)** Housholder Corporation uses a predetermined overhead rate base on machine-hours that it recalculates at the beginning of each year. The company has provided the following data for the most recent year.

|  |  |
| --- | --- |
| **Estimated total fixed manufacturing overhead from the beginning of the year** | $310,000 |
| **Estimated activity level from the beginning of the year** | 20,000 machine-hours |
| **Actual total fixed manufacturing overhead** | $338,000 |
| **Actual activity level** | 18,300 machine-hours |

The amount of manufacturing overhead that would have been applied to all jobs during the period is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $28,000   
 B) $309,270  
 C) $310,000  
 D) $283,650

**101)** Gerstein Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $90,000, variable manufacturing overhead of $3.70 per direct labor-hour, and 50,000 direct labor-hours. The company recently completed Job M800 which required 150 direct labor-hours.   
 The estimated total manufacturing overhead is closest to:

A) $90,000   
 B) $275,000  
 C) $185,000  
 D) $90,004

**102)** Gerstein Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $90,000, variable manufacturing overhead of $3.70 per direct labor-hour, and 50,000 direct labor-hours. The company recently completed Job M800 which required 150 direct labor-hours.  
 The predetermined overhead rate is closest to:

A) $1.80 per direct labor-hour   
 B) $5.50 per direct labor-hour  
 C) $9.20 per direct labor-hour  
 D) $3.70 per direct labor-hour

**103)** Gerstein Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $90,000, variable manufacturing overhead of $3.70 per direct labor-hour, and 50,000 direct labor-hours. The company recently completed Job M800 which required 150 direct labor-hours.  
 The amount of overhead applied to Job M800 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $270   
 B) $1,380  
 C) $825  
 D) $555

**104)** Krier Corporation uses a predetermined overhead rate that was based on estimated total fixed manufacturing overhead of $738,000 and 30,000 direct labor-hours for the period. The company incurred actual total fixed manufacturing overhead of $792,000 and 31,500 total direct labor-hours during the period.  
 The predetermined overhead rate is closest to:

A) $26.40   
 B) $25.14  
 C) $23.43  
 D) $24.60

**105)** Krier Corporation uses a predetermined overhead rate that was based on estimated total fixed manufacturing overhead of $738,000 and 30,000 direct labor-hours for the period. The company incurred actual total fixed manufacturing overhead of $792,000 and 31,500 total direct labor-hours during the period.  
 The amount of manufacturing overhead that would have been applied to all jobs during the period is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $831,600   
 B) $54,000  
 C) $774,900  
 D) $738,000

**106)** Harootunian Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 80,000 |
| **Total fixed manufacturing overhead cost** | $312,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |

Recently, Job T629 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 50 |
| **Total machine-hours** | 200 |

The estimated total manufacturing overhead is closest to:

A) $168,000   
 B) $312,002  
 C) $312,000  
 D) $480,000

**107)** Harootunian Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 80,000 |
| **Total fixed manufacturing overhead cost** | $312,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |

Recently, Job T629 was completed with the following characteristics:

|  |  |  |
| --- | --- | --- |
| **Number of units in the job** |  | 50 |
| **Total machine-hours** |  | 200 |

The predetermined overhead rate is closest to:

A) $8.10 per machine-hour   
 B) $2.10 per machine-hour  
 C) $3.90 per machine-hour  
 D) $6.00 per machine-hour

**108)** Harootunian Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 80,000 |
| **Total fixed manufacturing overhead cost** | $312,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |

Recently, Job T629 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 50 |
| **Total machine-hours** | 200 |

The amount of overhead applied to Job T629 is closest to:

A) $1,620   
 B) $780  
 C) $1,200  
 D) $420

**109)** Dehner Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 40,000 |
| **Total fixed manufacturing overhead cost** | $96,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 3.00 |

Recently, Job P951 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total direct labor-hours** | 100 |
| **Direct materials** | $ 755 |
| **Direct labor cost** | $4,000 |

The estimated total manufacturing overhead is closest to:

A) $120,000   
 B) $96,003  
 C) $96,000  
 D) $216,000

**110)** Dehner Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 40,000 |
| **Total fixed manufacturing overhead cost** | $96,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 3.00 |

Recently, Job P951 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total direct labor-hours** | 100 |
| **Direct materials** | $ 755 |
| **Direct labor cost** | $4,000 |

The predetermined overhead rate is closest to:

A) $2.40 per direct labor-hour   
 B) $3.00 per direct labor-hour  
 C) $8.40 per direct labor-hour  
 D) $5.40 per direct labor-hour

**111)** Dehner Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 40,000 |
| **Total fixed manufacturing overhead cost** | $96,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 3.00 |

Recently, Job P951 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total direct labor-hours** | 100 |
| **Direct materials** | $ 755 |
| **Direct labor cost** | $4,000 |

The amount of overhead applied to Job P951 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $840   
 B) $300  
 C) $540  
 D) $240

**112)** Dehner Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 47,000 |
| **Total fixed manufacturing overhead cost** | $202,100 |
| **Variable manufacturing overhead per direct labor-hour** | $ 2.00 |

Recently, Job P951 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 50 |
| **Total direct labor-hours** | 100 |
| **Direct materials** | $ 850 |
| **Direct labor cost** | $4,700 |

The total job cost for Job P951 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $5,330   
 B) $5,550  
 C) $1,480  
 D) $6,180

**113)** Dehner Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 40,000 |
| **Total fixed manufacturing overhead cost** | $96,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 3.00 |

Recently, Job P951 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total direct labor-hours** | 100 |
| **Direct materials** | $ 755 |
| **Direct labor cost** | $4,000 |

The total job cost for Job P951 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $4,540   
 B) $4,755  
 C) $1,295  
 D) $5,295

**114)** Dehner Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 90,000 |
| **Total fixed manufacturing overhead cost** | $279,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 5.00 |

Recently, Job P951 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 25 |
| **Total direct labor-hours** | 100 |
| **Direct materials** | $ 700 |
| **Direct labor cost** | $9,000 |

The unit product cost for Job P951 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $202.50   
 B) $420.40  
 C) $320.40  
 D) $105.10

**115)** Dehner Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 40,000 |
| **Total fixed manufacturing overhead cost** | $96,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 3.00 |

Recently, Job P951 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total direct labor-hours** | 100 |
| **Direct materials** | $ 755 |
| **Direct labor cost** | $4,000 |

The unit product cost for Job P951 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $237.75   
 B) $264.75   
 C) $64.75   
 D) $52.95

**116)** Branin Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $160,000, variable manufacturing overhead of $3.40 per direct labor-hour, and 80,000 direct labor-hours. The company has provided the following data concerning Job A578 which was recently completed:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 250 |
| **Direct materials** | $ 715 |
| **Direct labor cost** | $9,000 |

The estimated total manufacturing overhead is closest to:

A) $272,000   
 B) $160,000  
 C) $432,000  
 D) $160,003

**117)** Branin Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $160,000, variable manufacturing overhead of $3.40 per direct labor-hour, and 80,000 direct labor-hours. The company has provided the following data concerning Job A578 which was recently completed:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 250 |
| **Direct materials** | $ 715 |
| **Direct labor cost** | $9,000 |

The predetermined overhead rate is closest to:

A) $8.80 per direct labor-hour   
 B) $2.00 per direct labor-hour  
 C) $3.40 per direct labor-hour  
 D) $5.40 per direct labor-hour

**118)** Branin Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $160,000, variable manufacturing overhead of $3.40 per direct labor-hour, and 80,000 direct labor-hours. The company has provided the following data concerning Job A578 which was recently completed:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 250 |
| **Direct materials** | $ 715 |
| **Direct labor cost** | $9,000 |

The amount of overhead applied to Job A578 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $500   
 B) $1,350  
 C) $2,200  
 D) $850

**119)** Branin Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $160,000, variable manufacturing overhead of $3.40 per direct labor-hour, and 80,000 direct labor-hours. The company has provided the following data concerning Job A578 which was recently completed:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 250 |
| **Direct materials** | $ 715 |
| **Direct labor cost** | $9,000 |

The total job cost for Job A578 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $11,065   
 B) $10,350  
 C) $2,065  
 D) $9,715

**120)** Spang Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 20,000 |
| **Total fixed manufacturing overhead cost** | $176,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.20 |

Recently, Job P505 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Total machine-hours** | 200 |
| **Direct materials** | $ 540 |
| **Direct labor cost** | $7,200 |

The amount of overhead applied to Job P505 is closest to:

A) $2,200   
 B) $1,760  
 C) $2,640  
 D) $440

**121)** Spang Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 20,000 |
| **Total fixed manufacturing overhead cost** | $176,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.20 |

Recently, Job P505 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Total machine-hours** | 200 |
| **Direct materials** | $ 540 |
| **Direct labor cost** | $7,200 |

The total job cost for Job P505 is closest to:

A) $9,400   
 B) $9,940  
 C) $7,740  
 D) $2,740

**122)** Opunui Corporation has two manufacturing departments--Molding and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Molding** | **Finishing** | **Total** |
| **Estimated total machine-hours (MHs)** | 6,500 | 3,500 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $20,000 | $5,000 | $25,000 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 2.50 | $ 5.00 |  |

During the most recent month, the company started and completed two jobs--Job A and Job M. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job M** |
| **Direct materials** | $16,800 | $10,100 |
| **Direct labor cost** | $23,500 | $10,400 |
| **Molding machine-hours** | 2,500 | 4,000 |
| **Finishing machine-hours** | 2,500 | 1,000 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The total manufacturing cost assigned to Job M is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $29,400   
 B) $10,400  
 C) $49,900  
 D) $10,100

**123)** Opunui Corporation has two manufacturing departments--Molding and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Molding** | **Finishing** | **Total** |
| **Estimated total machine-hours (MHs)** | 4,000 | 1,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $19,600 | $2,400 | $22,000 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.10 | $ 2.10 |  |

During the most recent month, the company started and completed two jobs--Job A and Job M. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job M** |
| **Direct materials** | $13,600 | $7,500 |
| **Direct labor cost** | $20,700 | $7,400 |
| **Molding machine-hours** | 2,700 | 1,300 |
| **Finishing machine-hours** | 400 | 600 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The total manufacturing cost assigned to Job M is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $10,830   
 B) $7,400  
 C) $25,730  
 D) $7,500

**124)** Opunui Corporation has two manufacturing departments--Molding and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Molding** | **Finishing** | **Total** |
| **Estimated total machine-hours (MHs)** | 6,500 | 3,500 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $27,000 | $3,100 | $30,100 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.50 | $ 3.00 |  |

During the most recent month, the company started and completed two jobs--Job A and Job M. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job M** |
| **Direct materials** | $14,200 | $8,000 |
| **Direct labor cost** | $21,400 | $8,000 |
| **Molding machine-hours** | 2,500 | 4,000 |
| **Finishing machine-hours** | 2,500 | 1,000 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours and uses a markup of 30% on manufacturing cost to establish selling prices. The calculated selling price for Job A is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $60,800   
 B) $79,040  
 C) $111,150  
 D) $18,240

**125)** Opunui Corporation has two manufacturing departments--Molding and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Molding** | **Finishing** | **Total** |
| **Estimated total machine-hours (MHs)** | 4,000 | 1,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $19,600 | $2,400 | $22,000 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.10 | $ 2.10 |  |

During the most recent month, the company started and completed two jobs--Job A and Job M. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job M** |
| **Direct materials** | $13,600 | $7,500 |
| **Direct labor cost** | $20,700 | $7,400 |
| **Molding machine-hours** | 2,700 | 1,300 |
| **Finishing machine-hours** | 400 | 600 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours and uses a markup of 40% on manufacturing cost to establish selling prices. The calculated selling price for Job A is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $51,970   
 B) $72,758  
 C) $80,034  
 D) $20,788

**126)** Lueckenhoff Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $497,000, variable manufacturing overhead of $2.40 per direct labor-hour, and 70,000 direct labor-hours. The company has provided the following data concerning Job T498 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 40 |
| **Total direct labor-hours** | 80 |
| **Direct materials** | $ 950 |
| **Direct labor cost** | $2,720 |

The estimated total manufacturing overhead is closest to:

A) $665,000   
 B) $497,002  
 C) $497,000  
 D) $168,000

**127)** Lueckenhoff Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $497,000, variable manufacturing overhead of $2.40 per direct labor-hour, and 70,000 direct labor-hours. The company has provided the following data concerning Job T498 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 40 |
| **Total direct labor-hours** | 80 |
| **Direct materials** | $ 950 |
| **Direct labor cost** | $2,720 |

The predetermined overhead rate is closest to:

A) $11.90 per direct labor-hour   
 B) $7.10 per direct labor-hour  
 C) $9.50 per direct labor-hour  
 D) $2.40 per direct labor-hour

**128)** Lueckenhoff Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $497,000, variable manufacturing overhead of $2.40 per direct labor-hour, and 70,000 direct labor-hours. The company has provided the following data concerning Job T498 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 40 |
| **Total direct labor-hours** | 80 |
| **Direct materials** | $ 950 |
| **Direct labor cost** | $2,720 |

The amount of overhead applied to Job T498 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $568   
 B) $192  
 C) $760  
 D) $952

**129)** Lueckenhoff Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $497,000, variable manufacturing overhead of $2.40 per direct labor-hour, and 70,000 direct labor-hours. The company has provided the following data concerning Job T498 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 40 |
| **Total direct labor-hours** | 80 |
| **Direct materials** | $ 950 |
| **Direct labor cost** | $2,720 |

The total job cost for Job T498 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $4,430   
 B) $3,670  
 C) $1,710  
 D) $3,480

**130)** Lueckenhoff Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $497,000, variable manufacturing overhead of $2.40 per direct labor-hour, and 70,000 direct labor-hours. The company has provided the following data concerning Job T498 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 40 |
| **Total direct labor-hours** | 80 |
| **Direct materials** | $ 950 |
| **Direct labor cost** | $2,720 |

The unit product cost for Job T498 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $55.38   
 B) $42.75  
 C) $91.75  
 D) $110.75

**131)** Nielsen Corporation has two manufacturing departments--Machining and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 1,000 | 4,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $4,700 | $10,800 | $15,500 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.20 | $ 2.20 |  |

During the most recent month, the company started and completed two jobs--Job F and Job M. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job F** | **Job M** |
| **Direct materials** | $13,000 | $7,400 |
| **Direct labor cost** | $20,400 | $8,800 |
| **Machining machine-hours** | 700 | 300 |
| **Assembly machine-hours** | 1,600 | 2,400 |

Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The total manufacturing cost assigned to Job F is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $13,000   
 B) $20,400  
 C) $45,130  
 D) $11,730

**132)** Nielsen Corporation has two manufacturing departments--Machining and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 1,000 | 4,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $4,700 | $10,800 | $15,500 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.20 | $ 2.20 |  |

During the most recent month, the company started and completed two jobs--Job F and Job M. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job F** | **Job M** |
| **Direct materials** | $13,000 | $7,400 |
| **Direct labor cost** | $20,400 | $8,800 |
| **Machining machine-hours** | 700 | 300 |
| **Assembly machine-hours** | 1,600 | 2,400 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours and uses a markup of 40% on manufacturing cost to establish selling prices. The calculated selling price for Job M is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $46,154   
 B) $41,958  
 C) $29,970  
 D) $11,988

**133)** Decorte Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 10,000 |
| **Total fixed manufacturing overhead cost** | $33,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 2.50 |

Recently, Job K332 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 70 |
| **Total direct labor-hours** | 140 |
| **Direct materials** | $ 455 |
| **Direct labor cost** | $5,320 |

The amount of overhead applied to Job K332 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $812   
 B) $350  
 C) $462  
 D) $1,162

**134)** Decorte Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 10,000 |
| **Total fixed manufacturing overhead cost** | $33,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 2.50 |

Recently, Job K332 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 70 |
| **Total direct labor-hours** | 140 |
| **Direct materials** | $ 455 |
| **Direct labor cost** | $5,320 |

The total job cost for Job K332 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $5,775   
 B) $6,132  
 C) $6,587  
 D) $1,267

**135)** Decorte Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 10,000 |
| **Total fixed manufacturing overhead cost** | $33,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 2.50 |

Recently, Job K332 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 70 |
| **Total direct labor-hours** | 140 |
| **Direct materials** | $ 455 |
| **Direct labor cost** | $5,320 |

The unit product cost for Job K332 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $94.10   
 B) $18.10  
 C) $82.50  
 D) $47.05

**136)** Beans Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $162,000, variable manufacturing overhead of $2.80 per direct labor-hour, and 60,000 direct labor-hours. Recently, Job K818 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total direct labor-hours** | 50 |
| **Direct materials** | $ 920 |
| **Direct labor cost** | $1,400 |

The estimated total manufacturing overhead is closest to:

A) $330,000   
 B) $162,000  
 C) $168,000  
 D) $162,003

**137)** Beans Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $162,000, variable manufacturing overhead of $2.80 per direct labor-hour, and 60,000 direct labor-hours. Recently, Job K818 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total direct labor-hours** | 50 |
| **Direct materials** | $ 920 |
| **Direct labor cost** | $1,400 |

The predetermined overhead rate is closest to:

A) $5.50 per direct labor-hour   
 B) $8.30 per direct labor-hour  
 C) $2.80 per direct labor-hour  
 D) $2.70 per direct labor-hour

**138)** Beans Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $162,000, variable manufacturing overhead of $2.80 per direct labor-hour, and 60,000 direct labor-hours. Recently, Job K818 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total direct labor-hours** | 50 |
| **Direct materials** | $ 920 |
| **Direct labor cost** | $1,400 |

The amount of overhead applied to Job K818 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $135   
 B) $140  
 C) $415  
 D) $275

**139)** Beans Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $162,000, variable manufacturing overhead of $2.80 per direct labor-hour, and 60,000 direct labor-hours. Recently, Job K818 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total direct labor-hours** | 50 |
| **Direct materials** | $ 920 |
| **Direct labor cost** | $1,400 |

The total job cost for Job K818 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $1,675   
 B) $2,595  
 C) $1,195  
 D) $2,320

**140)** Beans Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $162,000, variable manufacturing overhead of $2.80 per direct labor-hour, and 60,000 direct labor-hours. Recently, Job K818 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total direct labor-hours** | 50 |
| **Direct materials** | $ 920 |
| **Direct labor cost** | $1,400 |

The unit product cost for Job K818 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $51.90   
 B) $259.50  
 C) $232.00  
 D) $119.50

**141)** Beans Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $162,000, variable manufacturing overhead of $2.80 per direct labor-hour, and 60,000 direct labor-hours. Recently, Job K818 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total direct labor-hours** | 50 |
| **Direct materials** | $ 920 |
| **Direct labor cost** | $1,400 |

If the company marks up its unit product costs by 40% then the selling price for a unit in Job K818 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $363.30   
 B) $103.80  
 C) $383.30  
 D) $324.80

**142)** Lupo Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 30,000 |
| **Total fixed manufacturing overhead cost** | $252,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |

Recently, Job T687 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total machine-hours** | 30 |
| **Direct materials** | $ 675 |
| **Direct labor cost** | $1,050 |

The estimated total manufacturing overhead is closest to:

A) $315,000   
 B) $252,000  
 C) $252,002  
 D) $63,000

**143)** Lupo Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 30,000 |
| **Total fixed manufacturing overhead cost** | $252,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |

Recently, Job T687 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total machine-hours** | 30 |
| **Direct materials** | $ 675 |
| **Direct labor cost** | $1,050 |

The predetermined overhead rate is closest to:

A) $12.60 per machine-hour   
 B) $10.50 per machine-hour  
 C) $8.40 per machine-hour  
 D) $2.10 per machine-hour

**144)** Lupo Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 31,500 |
| **Total fixed manufacturing overhead cost** | $220,500 |
| **Variable manufacturing overhead per machine-hour** | $6 |

Recently, Job T687 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total machine-hours** | 40 |
| **Direct materials** | $685 |
| **Direct labor cost** | $1,370 |

The amount of overhead applied to Job T687 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $520.00   
 B) $220.50  
 C) $623.00  
 D) $104.00

**145)** Lupo Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 30,000 |
| **Total fixed manufacturing overhead cost** | $252,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |

Recently, Job T687 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total machine-hours** | 30 |
| **Direct materials** | $ 675 |
| **Direct labor cost** | $1,050 |

The amount of overhead applied to Job T687 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $315   
 B) $252  
 C) $378  
 D) $63

**146)** Lupo Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 32,100 |
| **Total fixed manufacturing overhead cost** | $577,800 |
| **Variable manufacturing overhead per machine-hour** | $ 5 |

Recently, Job T687 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total machine-hours** | 30 |
| **Direct materials** | $ 595 |
| **Direct labor cost** | $1,190 |

The total job cost for Job T687 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $1,880   
 B) $1,785  
 C) $1,285  
 D) $2,475

**147)** Lupo Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 30,000 |
| **Total fixed manufacturing overhead cost** | $252,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |

Recently, Job T687 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total machine-hours** | 30 |
| **Direct materials** | $ 675 |
| **Direct labor cost** | $1,050 |

The total job cost for Job T687 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $1,365   
 B) $1,725  
 C) $990  
 D) $2,040

**148)** Lupo Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 32,000 |
| **Total fixed manufacturing overhead cost** | $352,000 |
| **Variable manufacturing overhead per machine-hour** | $ 3 |

Recently, Job T687 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total machine-hours** | 40 |
| **Direct materials** | $ 675 |
| **Direct labor cost** | $1,350 |

The unit product cost for Job T687 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $123.50   
 B) $64.63  
 C) $202.50  
 D) $258.50

**149)** Lupo Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 30,000 |
| **Total fixed manufacturing overhead cost** | $252,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |

Recently, Job T687 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total machine-hours** | 30 |
| **Direct materials** | $ 675 |
| **Direct labor cost** | $1,050 |

The unit product cost for Job T687 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $99.00   
 B) $68.00  
 C) $172.50  
 D) $204.00

**150)** Lupo Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 31,800 |
| **Total fixed manufacturing overhead cost** | $159,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.00 |

Recently, Job T687 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total machine-hours** | 30 |
| **Direct materials** | $ 660 |
| **Direct labor cost** | $1,320 |

If the company marks up its unit product costs by 40% then the selling price for a unit in Job T687 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $87.60   
 B) $203.00  
 C) $306.60  
 D) $277.20

**151)** Lupo Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 30,000 |
| **Total fixed manufacturing overhead cost** | $252,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |

Recently, Job T687 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total machine-hours** | 30 |
| **Direct materials** | $ 675 |
| **Direct labor cost** | $1,050 |

If the company marks up its unit product costs by 40% then the selling price for a unit in Job T687 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $81.60   
 B) $305.60  
 C) $285.60  
 D) $241.50

**152)** Ronson Corporation has two manufacturing departments--Casting and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Casting** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 5,000 | 5,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $27,500 | $10,500 | $38,000 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.70 | $ 2.60 |  |

During the most recent month, the company started and completed two jobs--Job C and Job G. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job C** | **Job G** |
| **Direct materials** | $10,600 | $6,800 |
| **Direct labor cost** | $23,700 | $7,900 |
| **Casting machine-hours** | 3,400 | 1,600 |
| **Customizing machine-hours** | 2,000 | 3,000 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job C is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $32,130   
 B) $11,900  
 C) $20,230  
 D) $20,520

**153)** Ronson Corporation has two manufacturing departments--Casting and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Casting** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 5,000 | 5,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $27,500 | $10,500 | $38,000 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.70 | $ 2.60 |  |

During the most recent month, the company started and completed two jobs--Job C and Job G. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job C** | **Job G** |
| **Direct materials** | $10,600 | $6,800 |
| **Direct labor cost** | $23,700 | $7,900 |
| **Casting machine-hours** | 3,400 | 1,600 |
| **Customizing machine-hours** | 2,000 | 3,000 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The total manufacturing cost assigned to Job G is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $42,070   
 B) $27,370  
 C) $6,800  
 D) $7,900

**154)** Sivret Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 80,000 |
| **Total fixed manufacturing overhead cost** | $624,000 |
| **Variable manufacturing overhead per machine-hour** | $ 3.10 |

Recently, Job M598 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 60 |
| **Total machine-hours** | 300 |
| **Direct materials** | $ 645 |
| **Direct labor cost** | $9,000 |

The amount of overhead applied to Job M598 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $930   
 B) $4,200  
 C) $2,340  
 D) $3,270

**155)** Sivret Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 80,000 |
| **Total fixed manufacturing overhead cost** | $624,000 |
| **Variable manufacturing overhead per machine-hour** | $ 3.10 |

Recently, Job M598 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 60 |
| **Total machine-hours** | 300 |
| **Direct materials** | $ 645 |
| **Direct labor cost** | $9,000 |

The total job cost for Job M598 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $12,270   
 B) $9,645  
 C) $3,915  
 D) $12,915

**156)** Sivret Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 80,000 |
| **Total fixed manufacturing overhead cost** | $624,000 |
| **Variable manufacturing overhead per machine-hour** | $ 3.10 |

Recently, Job M598 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 60 |
| **Total machine-hours** | 300 |
| **Direct materials** | $ 645 |
| **Direct labor cost** | $9,000 |

The unit product cost for Job M598 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $65.25   
 B) $160.75  
 C) $215.25  
 D) $43.05

**157)** Sivret Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 80,000 |
| **Total fixed manufacturing overhead cost** | $624,000 |
| **Variable manufacturing overhead per machine-hour** | $ 3.10 |

Recently, Job M598 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 60 |
| **Total machine-hours** | 300 |
| **Direct materials** | $ 645 |
| **Direct labor cost** | $9,000 |

If the company marks up its unit product costs by 40% then the selling price for a unit in Job M598 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $321.35   
 B) $225.05  
 C) $86.10  
 D) $301.35

**158)** Levron Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $58,000, variable manufacturing overhead of $2.00 per machine-hour, and 20,000 machine-hours. The company has provided the following data concerning Job P978 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 500 |
| **Direct labor cost** | $2,640 |

The predetermined overhead rate is closest to:

A) $2.90 per machine-hour   
 B) $2.00 per machine-hour  
 C) $4.90 per machine-hour  
 D) $6.90 per machine-hour

**159)** Levron Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $58,000, variable manufacturing overhead of $2.00 per machine-hour, and 20,000 machine-hours. The company has provided the following data concerning Job P978 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 500 |
| **Direct labor cost** | $2,640 |

The amount of overhead applied to Job P978 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $232   
 B) $160  
 C) $392  
 D) $552

**160)** Levron Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $58,000, variable manufacturing overhead of $2.00 per machine-hour, and 20,000 machine-hours. The company has provided the following data concerning Job P978 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 500 |
| **Direct labor cost** | $2,640 |

The total job cost for Job P978 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $3,140   
 B) $892  
 C) $3,532  
 D) $3,032

**161)** Levron Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $58,000, variable manufacturing overhead of $2.00 per machine-hour, and 20,000 machine-hours. The company has provided the following data concerning Job P978 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 500 |
| **Direct labor cost** | $2,640 |

The unit product cost for Job P978 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $176.60   
 B) $157.00  
 C) $44.60  
 D) $44.15

**162)** Levron Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $58,000, variable manufacturing overhead of $2.00 per machine-hour, and 20,000 machine-hours. The company has provided the following data concerning Job P978 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 500 |
| **Direct labor cost** | $2,640 |

If the company marks up its unit product costs by 30% then the selling price for a unit in Job P978 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $249.58   
 B) $229.58  
 C) $204.10  
 D) $52.98

**163)** Bolander Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 70,000 |
| **Total fixed manufacturing overhead cost** | $294,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.30 |

Recently, Job M825 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 665 |
| **Direct labor cost** | $1,840 |

The predetermined overhead rate is closest to:

A) $8.80 per machine-hour   
 B) $6.50 per machine-hour  
 C) $2.30 per machine-hour  
 D) $4.20 per machine-hour

**164)** Bolander Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 70,000 |
| **Total fixed manufacturing overhead cost** | $294,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.30 |

Recently, Job M825 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 665 |
| **Direct labor cost** | $1,840 |

The amount of overhead applied to Job M825 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $184   
 B) $520  
 C) $704  
 D) $336

**165)** Bolander Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 70,000 |
| **Total fixed manufacturing overhead cost** | $294,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.30 |

Recently, Job M825 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 665 |
| **Direct labor cost** | $1,840 |

The total job cost for Job M825 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $2,360   
 B) $2,505  
 C) $1,185  
 D) $3,025

**166)** Bolander Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 70,000 |
| **Total fixed manufacturing overhead cost** | $294,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.30 |

Recently, Job M825 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 665 |
| **Direct labor cost** | $1,840 |

The unit product cost for Job M825 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $37.81   
 B) $59.25  
 C) $151.25  
 D) $125.25

**167)** Bolander Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total machine-hours** | 70,000 |
| **Total fixed manufacturing overhead cost** | $294,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.30 |

Recently, Job M825 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 665 |
| **Direct labor cost** | $1,840 |

If the company marks up its unit product costs by 40% then the selling price for a unit in Job M825 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $60.50   
 B) $175.35  
 C) $211.75  
 D) $231.75

**168)** Cull Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $462,000, variable manufacturing overhead of $2.20 per machine-hour, and 60,000 machine-hours. The company has provided the following data concerning Job X455 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 940 |
| **Direct labor cost** | $2,240 |

The amount of overhead applied to Job X455 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $176   
 B) $792  
 C) $968  
 D) $616

**169)** Cull Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $462,000, variable manufacturing overhead of $2.20 per machine-hour, and 60,000 machine-hours. The company has provided the following data concerning Job X455 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 940 |
| **Direct labor cost** | $2,240 |

The total job cost for Job X455 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $3,972   
 B) $1,732  
 C) $3,180  
 D) $3,032

**170)** Cull Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $462,000, variable manufacturing overhead of $2.20 per machine-hour, and 60,000 machine-hours. The company has provided the following data concerning Job X455 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 940 |
| **Direct labor cost** | $2,240 |

The unit product cost for Job X455 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $86.60   
 B) $159.00  
 C) $198.60  
 D) $49.65

**171)** Cull Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $234,000, variable manufacturing overhead of $2.60 per machine-hour, and 30,000 machine-hours. The company has provided the following data concerning Job X455 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 790 |
| **Direct labor cost** | $1,580 |

If the company marks up its unit product costs by 20% then the selling price for a unit in Job X455 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $212.12   
 B) $160.10  
 C) $32.02  
 D) $192.12

**172)** Cull Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $462,000, variable manufacturing overhead of $2.20 per machine-hour, and 60,000 machine-hours. The company has provided the following data concerning Job X455 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 940 |
| **Direct labor cost** | $2,240 |

If the company marks up its unit product costs by 20% then the selling price for a unit in Job X455 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $258.32   
 B) $190.80  
 C) $39.72  
 D) $238.32

**173)** Kostelnik Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $237,000, variable manufacturing overhead of $3.90 per machine-hour, and 30,000 machine-hours. The company has provided the following data concerning Job A496 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 500 |
| **Direct labor cost** | $2,160 |

The amount of overhead applied to Job A496 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $1,256   
 B) $632  
 C) $944  
 D) $312

**174)** Kostelnik Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $237,000, variable manufacturing overhead of $3.90 per machine-hour, and 30,000 machine-hours. The company has provided the following data concerning Job A496 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 500 |
| **Direct labor cost** | $2,160 |

The total job cost for Job A496 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $2,660   
 B) $3,104  
 C) $3,604  
 D) $1,444

**175)** Kostelnik Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $488,400, variable manufacturing overhead of $2.70 per machine-hour, and 74,000 machine-hours. The company has provided the following data concerning Job A496 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 930 |
| **Direct labor cost** | $1,860 |

The unit product cost for Job A496 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $139.50   
 B) $34.88  
 C) $44.17  
 D) $176.70

**176)** Kostelnik Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $237,000, variable manufacturing overhead of $3.90 per machine-hour, and 30,000 machine-hours. The company has provided the following data concerning Job A496 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 500 |
| **Direct labor cost** | $2,160 |

The unit product cost for Job A496 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $133.00   
 B) $72.20  
 C) $45.05  
 D) $180.20

**177)** Kostelnik Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $237,000, variable manufacturing overhead of $3.90 per machine-hour, and 30,000 machine-hours. The company has provided the following data concerning Job A496 which was recently completed:

|  |  |
| --- | --- |
| **Number of units in the job** | 20 |
| **Total machine-hours** | 80 |
| **Direct materials** | $ 500 |
| **Direct labor cost** | $2,160 |

If the company marks up its unit product costs by 40% then the selling price for a unit in Job A496 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $186.20   
 B) $272.28  
 C) $72.08  
 D) $252.28

**178)** Halbur Corporation has two manufacturing departments--Machining and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 6,000 | 4,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $33,600 | $10,000 | $43,600 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.80 | $ 2.80 |  |

During the most recent month, the company started and completed two jobs--Job C and Job J. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job C** | **Job J** |
| **Direct materials** | $11,300 | $8,100 |
| **Direct labor cost** | $18,500 | $6,300 |
| **Machining machine-hours** | 4,100 | 1,900 |
| **Customizing machine-hours** | 1,600 | 2,400 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job J is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $28,208   
 B) $18,748  
 C) $12,464  
 D) $15,744

**179)** Halbur Corporation has two manufacturing departments--Machining and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 6,000 | 4,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $33,600 | $10,000 | $43,600 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.80 | $ 2.80 |  |

During the most recent month, the company started and completed two jobs--Job C and Job J. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job C** | **Job J** |
| **Direct materials** | $11,300 | $8,100 |
| **Direct labor cost** | $18,500 | $6,300 |
| **Machining machine-hours** | 4,100 | 1,900 |
| **Customizing machine-hours** | 1,600 | 2,400 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The total manufacturing cost assigned to Job C is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $18,500   
 B) $67,192  
 C) $11,300  
 D) $37,392

**180)** Prather Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 50,000 |
| **Total fixed manufacturing overhead cost** | $285,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 3.80 |

Recently, Job P513 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total direct labor-hours** | 20 |
| **Direct materials** | $710 |
| **Direct labor cost** | $500 |

The estimated total manufacturing overhead is closest to:

A) $475,000   
 B) $285,000  
 C) $190,000  
 D) $285,004

**181)** Prather Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 50,000 |
| **Total fixed manufacturing overhead cost** | $285,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 3.80 |

Recently, Job P513 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total direct labor-hours** | 20 |
| **Direct materials** | $710 |
| **Direct labor cost** | $500 |

The predetermined overhead rate is closest to:

A) $13.30 per direct labor-hour   
 B) $3.80 per direct labor-hour  
 C) $9.50 per direct labor-hour  
 D) $5.70 per direct labor-hour

**182)** Prather Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 50,000 |
| **Total fixed manufacturing overhead cost** | $285,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 3.80 |

Recently, Job P513 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total direct labor-hours** | 20 |
| **Direct materials** | $710 |
| **Direct labor cost** | $500 |

The amount of overhead applied to Job P513 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $76   
 B) $190  
 C) $266  
 D) $114

**183)** Prather Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 50,000 |
| **Total fixed manufacturing overhead cost** | $285,000 |
| **Variable manufacturing overhead per direct labor-hour** | $ 3.80 |

Recently, Job P513 was completed with the following characteristics:

|  |  |
| --- | --- |
| **Number of units in the job** | 10 |
| **Total direct labor-hours** | 20 |
| **Direct materials** | $710 |
| **Direct labor cost** | $500 |

The total job cost for Job P513 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $690   
 B) $900  
 C) $1,400  
 D) $1,210

**184)** Kubes Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $90,000, variable manufacturing overhead of $3.50 per direct labor-hour, and 30,000 direct labor-hours. The company has provided the following data concerning Job A477 which was recently completed:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 100 |
| **Direct materials** | $ 520 |
| **Direct labor cost** | $2,800 |

The amount of overhead applied to Job A477 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $300   
 B) $350  
 C) $650  
 D) $1,000

**185)** Kubes Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $90,000, variable manufacturing overhead of $3.50 per direct labor-hour, and 30,000 direct labor-hours. The company has provided the following data concerning Job A477 which was recently completed:

|  |  |
| --- | --- |
| **Total direct labor-hours** | 100 |
| **Direct materials** | $ 520 |
| **Direct labor cost** | $2,800 |

The total job cost for Job A477 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $3,450   
 B) $1,170  
 C) $3,970  
 D) $3,320

**186)** Deloria Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Assembly** |
| **Machine-hours** | 19,000 | 15,000 |
| **Direct labor-hours** | 4,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $129,200 | $77,600 |
| **Variable manufacturing overhead per machine-hour** | $ 1.60 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.00 |

During the current month the company started and finished Job T288. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T288:** | **Forming** | **Assembly** |
| Machine-hours | 80 | 10 |
| Direct labor-hours | 30 | 40 |
| Direct materials | $730 | $ 380 |
| Direct labor cost | $900 | $1,200 |

The estimated total manufacturing overhead for the Assembly Department is closest to:

A) $77,600   
 B) $101,600  
 C) $56,674  
 D) $24,000

**187)** Deloria Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Assembly** |
| **Machine-hours** | 19,000 | 15,000 |
| **Direct labor-hours** | 4,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $129,200 | $77,600 |
| **Variable manufacturing overhead per machine-hour** | $ 1.60 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.00 |

During the current month the company started and finished Job T288. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T288:** | **Forming** | **Assembly** |
| Machine-hours | 80 | 10 |
| Direct labor-hours | 30 | 40 |
| Direct materials | $730 | $ 380 |
| Direct labor cost | $900 | $1,200 |

The predetermined overhead rate for the Assembly Department is closest to:

A) $3.00 per direct labor-hour   
 B) $12.70 per direct labor-hour  
 C) $9.70 per direct labor-hour  
 D) $5.35 per direct labor-hour

**188)** Deloria Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Assembly** |
| **Machine-hours** | 19,000 | 15,000 |
| **Direct labor-hours** | 4,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $129,200 | $77,600 |
| **Variable manufacturing overhead per machine-hour** | $ 1.60 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.00 |

During the current month the company started and finished Job T288. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T288:** | **Forming** | **Assembly** |
| Machine-hours | 80 | 10 |
| Direct labor-hours | 30 | 40 |
| Direct materials | $730 | $ 380 |
| Direct labor cost | $900 | $1,200 |

The amount of overhead applied in the Assembly Department to Job T288 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $508.00   
 B) $101,600.00  
 C) $388.00  
 D) $120.00

**189)** Deloria Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Assembly** |
| **Machine-hours** | 19,000 | 15,000 |
| **Direct labor-hours** | 4,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $129,200 | $77,600 |
| **Variable manufacturing overhead per machine-hour** | $ 1.60 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.00 |

During the current month the company started and finished Job T288. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T288:** | **Forming** | **Assembly** |
| Machine-hours | 80 | 10 |
| Direct labor-hours | 30 | 40 |
| Direct materials | $730 | $ 380 |
| Direct labor cost | $900 | $1,200 |

The total amount of overhead applied in both departments to Job T288 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $508   
 B) $672  
 C) $1,688  
 D) $1,180

**190)** Deloria Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Assembly** |
| **Machine-hours** | 19,000 | 15,000 |
| **Direct labor-hours** | 4,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $129,200 | $77,600 |
| **Variable manufacturing overhead per machine-hour** | $ 1.60 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.00 |

During the current month the company started and finished Job T288. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T288:** | **Forming** | **Assembly** |
| Machine-hours | 80 | 10 |
| Direct labor-hours | 30 | 40 |
| Direct materials | $730 | $ 380 |
| Direct labor cost | $900 | $1,200 |

The total job cost for Job T288 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $672   
 B) $2,088  
 C) $2,302  
 D) $4,390

**191)** Deloria Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Assembly** |
| **Machine-hours** | 19,000 | 15,000 |
| **Direct labor-hours** | 4,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $129,200 | $77,600 |
| **Variable manufacturing overhead per machine-hour** | $ 1.60 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.00 |

During the current month the company started and finished Job T288. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T288:** | **Forming** | **Assembly** |
| Machine-hours | 80 | 10 |
| Direct labor-hours | 30 | 40 |
| Direct materials | $730 | $ 380 |
| Direct labor cost | $900 | $1,200 |

If the company marks up its manufacturing costs by 20% then the selling price for Job T288 would be closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $4,390.00   
 B) $878.00  
 C) $5,268.00  
 D) $5,795.00

**192)** Macnamara Corporation has two manufacturing departments--Casting and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Casting** | **Finishing** | **Total** |
| **Estimated total machine-hours (MHs)** | 1,000 | 4,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $4,800 | $8,800 | $13,600 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.80 | $ 2.90 |  |

During the most recent month, the company started and completed two jobs--Job F and Job M. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job F** | **Job M** |
| **Direct materials** | $11,500 | $9,000 |
| **Direct labor cost** | $18,400 | $7,400 |
| **Casting machine-hours** | 700 | 300 |
| **Finishing machine-hours** | 1,600 | 2,400 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job F is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $4,620   
 B) $12,780  
 C) $12,420  
 D) $8,160

**193)** Macnamara Corporation has two manufacturing departments--Casting and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Casting** | **Finishing** | **Total** |
| **Estimated total machine-hours (MHs)** | 1,000 | 4,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $4,800 | $8,800 | $13,600 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.80 | $ 2.90 |  |

During the most recent month, the company started and completed two jobs--Job F and Job M. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job F** | **Job M** |
| **Direct materials** | $11,500 | $9,000 |
| **Direct labor cost** | $18,400 | $7,400 |
| **Casting machine-hours** | 700 | 300 |
| **Finishing machine-hours** | 1,600 | 2,400 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job M is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $15,310   
 B) $47,767  
 C) $30,620  
 D) $45,930

**194)** Hickingbottom Corporation has two production departments, Forming and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Finishing** |
| **Machine-hours** | 17,000 | 15,000 |
| **Direct labor-hours** | 1,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $96,900 | $65,800 |
| **Variable manufacturing overhead per machine-hour** | $ 2.00 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.60 |

During the current month the company started and finished Job M381. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job M381:** | **Forming** | **Finishing** |
| Machine-hours | 80 | 30 |
| Direct labor-hours | 30 | 40 |
| Direct materials | $840 | $ 350 |
| Direct labor cost | $750 | $1,000 |

The predetermined overhead rate for the Forming Department is closest to:

A) $5.70 per machine-hour   
 B) $7.70 per machine-hour  
 C) $2.00 per machine-hour  
 D) $18.70 per machine-hour

**195)** Hickingbottom Corporation has two production departments, Forming and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Finishing** |
| **Machine-hours** | 17,000 | 15,000 |
| **Direct labor-hours** | 1,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $96,900 | $65,800 |
| **Variable manufacturing overhead per machine-hour** | $ 2.00 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.60 |

During the current month the company started and finished Job M381. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job M381:** | **Forming** | **Finishing** |
| Machine-hours | 80 | 30 |
| Direct labor-hours | 30 | 40 |
| Direct materials | $840 | $ 350 |
| Direct labor cost | $750 | $1,000 |

The predetermined overhead rate for the Finishing Department is closest to:

A) $9.40 per direct labor-hour   
 B) $13.00 per direct labor-hour  
 C) $3.60 per direct labor-hour  
 D) $5.35 per direct labor-hour

**196)** Hickingbottom Corporation has two production departments, Forming and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Finishing** |
| **Machine-hours** | 17,000 | 15,000 |
| **Direct labor-hours** | 1,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $96,900 | $65,800 |
| **Variable manufacturing overhead per machine-hour** | $ 2.00 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.60 |

During the current month the company started and finished Job M381. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job M381:** | **Forming** | **Finishing** |
| Machine-hours | 80 | 30 |
| Direct labor-hours | 30 | 40 |
| Direct materials | $840 | $ 350 |
| Direct labor cost | $750 | $1,000 |

The total job cost for Job M381 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $2,206   
 B) $616  
 C) $4,076  
 D) $1,870

**197)** Kalp Corporation has two production departments, Machining and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Finishing** |
| **Machine-hours** | 19,000 | 12,000 |
| **Direct labor-hours** | 2,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $136,800 | $69,600 |
| **Variable manufacturing overhead per machine-hour** | $ 1.80 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.20 |

During the current month the company started and finished Job K928. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job K928:** | **Machining** | **Finishing** |
| Machine-hours | 90 | 10 |
| Direct labor-hours | 30 | 50 |
| Direct materials | $775 | $ 415 |
| Direct labor cost | $630 | $1,050 |

The estimated total manufacturing overhead for the Machining Department is closest to:

A) $136,800   
 B) $34,200  
 C) $171,000  
 D) $359,100

**198)** Kalp Corporation has two production departments, Machining and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Finishing** |
| **Machine-hours** | 19,000 | 12,000 |
| **Direct labor-hours** | 2,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $136,800 | $69,600 |
| **Variable manufacturing overhead per machine-hour** | $ 1.80 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.20 |

During the current month the company started and finished Job K928. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job K928:** | **Machining** | **Finishing** |
| Machine-hours | 90 | 10 |
| Direct labor-hours | 30 | 50 |
| Direct materials | $775 | $ 415 |
| Direct labor cost | $630 | $1,050 |

The predetermined overhead rate for the Machining Department is closest to:

A) $7.20 per machine-hour   
 B) $9.00 per machine-hour  
 C) $21.38 per machine-hour  
 D) $1.80 per machine-hour

**199)** Kalp Corporation has two production departments, Machining and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Finishing** |
| **Machine-hours** | 19,000 | 12,000 |
| **Direct labor-hours** | 2,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $136,800 | $69,600 |
| **Variable manufacturing overhead per machine-hour** | $ 1.80 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.20 |

During the current month the company started and finished Job K928. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job K928:** | **Machining** | **Finishing** |
| Machine-hours | 90 | 10 |
| Direct labor-hours | 30 | 50 |
| Direct materials | $775 | $ 415 |
| Direct labor cost | $630 | $1,050 |

The amount of overhead applied in the Machining Department to Job K928 is closest to:

A) $783.00   
 B) $810.00  
 C) $162.00  
 D) $171,000.00

**200)** Kalp Corporation has two production departments, Machining and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Finishing** |
| **Machine-hours** | 19,000 | 12,000 |
| **Direct labor-hours** | 2,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $136,800 | $69,600 |
| **Variable manufacturing overhead per machine-hour** | $ 1.80 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.20 |

During the current month the company started and finished Job K928. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job K928:** | **Machining** | **Finishing** |
| Machine-hours | 90 | 10 |
| Direct labor-hours | 30 | 50 |
| Direct materials | $775 | $ 415 |
| Direct labor cost | $630 | $1,050 |

The total amount of overhead applied in both departments to Job K928 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $1,405   
 B) $2,000  
 C) $810  
 D) $595

**201)** Kalp Corporation has two production departments, Machining and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Finishing** |
| **Machine-hours** | 19,000 | 12,000 |
| **Direct labor-hours** | 2,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $136,800 | $69,600 |
| **Variable manufacturing overhead per machine-hour** | $ 1.80 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.20 |

During the current month the company started and finished Job K928. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job K928:** | **Machining** | **Finishing** |
| Machine-hours | 90 | 10 |
| Direct labor-hours | 30 | 50 |
| Direct materials | $775 | $ 415 |
| Direct labor cost | $630 | $1,050 |

The total job cost for Job K928 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $810   
 B) $4,275  
 C) $2,060  
 D) $2,215

**202)** Kalp Corporation has two production departments, Machining and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Finishing** |
| **Machine-hours** | 19,000 | 12,000 |
| **Direct labor-hours** | 2,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $136,800 | $69,600 |
| **Variable manufacturing overhead per machine-hour** | $ 1.80 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.20 |

During the current month the company started and finished Job K928. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job K928:** | **Machining** | **Finishing** |
| Machine-hours | 90 | 10 |
| Direct labor-hours | 30 | 50 |
| Direct materials | $775 | $ 415 |
| Direct labor cost | $630 | $1,050 |

If the company marks up its manufacturing costs by 20% then the selling price for Job K928 would be closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $4,275.00   
 B) $5,643.00  
 C) $5,130.00  
 D) $855.00

**203)** Janicki Corporation has two manufacturing departments--Machining and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 1,000 | 9,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $4,800 | $23,400 | $28,200 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.10 | $ 2.50 |  |

During the most recent month, the company started and completed two jobs--Job A and Job J. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job J** |
| **Direct materials** | $12,000 | $7,700 |
| **Direct labor cost** | $20,700 | $6,400 |
| **Machining machine-hours** | 700 | 300 |
| **Customizing machine-hours** | 3,600 | 5,400 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours and uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job A is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $90,707   
 B) $27,487  
 C) $82,461  
 D) $54,974

**204)** Janicki Corporation has two manufacturing departments--Machining and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 1,000 | 9,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $4,800 | $23,400 | $28,200 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.10 | $ 2.50 |  |

During the most recent month, the company started and completed two jobs--Job A and Job J. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job J** |
| **Direct materials** | $12,000 | $7,700 |
| **Direct labor cost** | $20,700 | $6,400 |
| **Machining machine-hours** | 700 | 300 |
| **Customizing machine-hours** | 3,600 | 5,400 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours and uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job J is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $71,983   
 B) $65,439  
 C) $43,626  
 D) $21,813

**205)** Janicki Corporation has two manufacturing departments--Machining and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 1,000 | 9,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $4,800 | $23,400 | $28,200 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.10 | $ 2.50 |  |

During the most recent month, the company started and completed two jobs--Job A and Job J. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job J** |
| **Direct materials** | $12,000 | $7,700 |
| **Direct labor cost** | $20,700 | $6,400 |
| **Machining machine-hours** | 700 | 300 |
| **Customizing machine-hours** | 3,600 | 5,400 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job A is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $27,595   
 B) $87,752  
 C) $82,785  
 D) $55,190

**206)** Janicki Corporation has two manufacturing departments--Machining and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 1,000 | 9,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $4,800 | $23,400 | $28,200 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.10 | $ 2.50 |  |

During the most recent month, the company started and completed two jobs--Job A and Job J. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job J** |
| **Direct materials** | $12,000 | $7,700 |
| **Direct labor cost** | $20,700 | $6,400 |
| **Machining machine-hours** | 700 | 300 |
| **Customizing machine-hours** | 3,600 | 5,400 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job J is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $65,115   
 B) $67,720  
 C) $21,705  
 D) $43,410

**207)** Comans Corporation has two production departments, Milling and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Milling** | **Customizing** |
| **Machine-hours** | 18,000 | 13,000 |
| **Direct labor-hours** | 4,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $113,400 | $64,400 |
| **Variable manufacturing overhead per machine-hour** | $ 1.60 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.90 |

During the current month the company started and finished Job A319. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job A319:** | **Milling** | **Customizing** |
| Machine-hours | 60 | 10 |
| Direct labor-hours | 20 | 60 |
| Direct materials | $655 | $ 305 |
| Direct labor cost | $400 | $1,200 |

The amount of overhead applied in the Milling Department to Job A319 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $142,200.00   
 B) $552.00  
 C) $96.00  
 D) $474.00

**208)** Comans Corporation has two production departments, Milling and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Milling** | **Customizing** |
| **Machine-hours** | 18,000 | 13,000 |
| **Direct labor-hours** | 4,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $113,400 | $64,400 |
| **Variable manufacturing overhead per machine-hour** | $ 1.60 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.90 |

During the current month the company started and finished Job A319. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job A319:** | **Milling** | **Customizing** |
| Machine-hours | 60 | 10 |
| Direct labor-hours | 20 | 60 |
| Direct materials | $655 | $ 305 |
| Direct labor cost | $400 | $1,200 |

The amount of overhead applied in the Customizing Department to Job A319 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $234.00   
 B) $786.00  
 C) $552.00  
 D) $91,700.00

**209)** Comans Corporation has two production departments, Milling and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Milling** | **Customizing** |
| **Machine-hours** | 28,000 | 15,000 |
| **Direct labor-hours** | 15,000 | 9,000 |
| **Total fixed manufacturing overhead cost** | $154,000 | $36,900 |
| **Variable manufacturing overhead per machine-hour** | $ 1.70 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.20 |

During the current month the company started and finished Job A319. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job A319:** | **Milling** | **Customizing** |
| Machine-hours | 30 | 30 |
| Direct labor-hours | 60 | 50 |
| Direct materials | $560 | $210 |
| Direct labor cost | $640 | $630 |

If the company marks up its manufacturing costs by 20% then the selling price for Job A319 would be closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $3,774   
 B) $3,145  
 C) $2,621  
 D) $524

**210)** Comans Corporation has two production departments, Milling and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Milling** | **Customizing** |
| **Machine-hours** | 18,000 | 13,000 |
| **Direct labor-hours** | 4,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $113,400 | $64,400 |
| **Variable manufacturing overhead per machine-hour** | $ 1.60 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.90 |

During the current month the company started and finished Job A319. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job A319:** | **Milling** | **Customizing** |
| Machine-hours | 60 | 10 |
| Direct labor-hours | 20 | 60 |
| Direct materials | $655 | $ 305 |
| Direct labor cost | $400 | $1,200 |

If the company marks up its manufacturing costs by 20% then the selling price for Job A319 would be closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $5,042.00   
 B) $4,584.00  
 C) $3,820.00  
 D) $764.00

**211)** Sanderlin Corporation has two manufacturing departments--Machining and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Finishing** | **Total** |
| **Estimated total machine-hours (MHs)** | 5,000 | 5,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $26,500 | $13,500 | $40,000 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 2.00 | $ 3.00 |  |

During the most recent month, the company started and completed two jobs--Job C and Job L. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job C** | **Job L** |
| **Direct materials** | $12,500 | $8,200 |
| **Direct labor cost** | $20,200 | $6,400 |
| **Machining machine-hours** | 3,400 | 1,600 |
| **Finishing machine-hours** | 2,000 | 3,000 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job L is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $29,900   
 B) $11,680  
 C) $28,780  
 D) $17,100

**212)** Sanderlin Corporation has two manufacturing departments--Machining and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Finishing** | **Total** |
| **Estimated total machine-hours (MHs)** | 5,000 | 5,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $ 26,500 | $ 13,500 | $ 40,000 |
| **Estimated variable manufacturing overhead cost per MH** | $ 2.00 | $ 3.00 |  |

During the most recent month, the company started and completed two jobs--Job C and Job L. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job C** | **Job L** |
| **Direct materials** | $ 12,500 | $ 8,200 |
| **Direct labor cost** | $ 20,200 | $ 6,400 |
| **Machining machine-hours** | 3,400 | 1,600 |
| **Finishing machine-hours** | 2,000 | 3,000 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 20% on manufacturing cost to establish selling prices. The calculated selling price for Job C is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $87,666   
 B) $68,920  
 C) $13,784  
 D) $82,704

**213)** Collini Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Customizing** |
| **Machine-hours** | 17,000 | 15,000 |
| **Direct labor-hours** | 3,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $102,000 | $61,200 |
| **Variable manufacturing overhead per machine-hour** | $ 1.70 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.10 |

During the current month the company started and finished Job T268. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T268:** | **Machining** | **Customizing** |
| Machine-hours | 80 | 30 |
| Direct labor-hours | 30 | 50 |
| Direct materials | $720 | $ 380 |
| Direct labor cost | $900 | $1,500 |

The total amount of overhead applied in both departments to Job T268 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $616   
 B) $715  
 C) $2,046  
 D) $1,331

**214)** Collini Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Customizing** |
| **Machine-hours** | 17,000 | 15,000 |
| **Direct labor-hours** | 3,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $102,000 | $61,200 |
| **Variable manufacturing overhead per machine-hour** | $ 1.70 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.10 |

During the current month the company started and finished Job T268. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T268:** | **Machining** | **Customizing** |
| Machine-hours | 80 | 30 |
| Direct labor-hours | 30 | 50 |
| Direct materials | $720 | $ 380 |
| Direct labor cost | $900 | $1,500 |

The total job cost for Job T268 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $2,595   
 B) $616  
 C) $4,831  
 D) $2,236

**215)** Collini Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Customizing** |
| **Machine-hours** | 17,000 | 15,000 |
| **Direct labor-hours** | 3,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $102,000 | $61,200 |
| **Variable manufacturing overhead per machine-hour** | $ 1.70 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.10 |

During the current month the company started and finished Job T268. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T268:** | **Machining** | **Customizing** |
| Machine-hours | 80 | 30 |
| Direct labor-hours | 30 | 50 |
| Direct materials | $720 | $ 380 |
| Direct labor cost | $900 | $1,500 |

If the company marks up its manufacturing costs by 40% then the selling price for Job T268 would be closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $1,932.40   
 B) $6,763.40  
 C) $4,831.00  
 D) $7,440.00

**216)** Heroux Corporation has two manufacturing departments--Forming and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 3,000 | 7,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $16,500 | $20,300 | $36,800 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.70 | $ 2.50 |  |

During the most recent month, the company started and completed two jobs--Job A and Job H. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job H** |
| **Direct materials** | $12,800 | $6,700 |
| **Direct labor cost** | $24,300 | $7,800 |
| **Forming machine-hours** | 2,000 | 1,000 |
| **Customizing machine-hours** | 2,800 | 4,200 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job A is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $28,512   
 B) $16,632  
 C) $11,880  
 D) $17,664

**217)** Heroux Corporation has two manufacturing departments--Forming and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 3,000 | 7,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $16,500 | $20,300 | $36,800 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.70 | $ 2.50 |  |

During the most recent month, the company started and completed two jobs--Job A and Job H. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job H** |
| **Direct materials** | $12,800 | $6,700 |
| **Direct labor cost** | $24,300 | $7,800 |
| **Forming machine-hours** | 2,000 | 1,000 |
| **Customizing machine-hours** | 2,800 | 4,200 |

Assume that the company uses a plantwide predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job H is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $19,136   
 B) $5,940  
 C) $30,888  
 D) $24,948

**218)** Heroux Corporation has two manufacturing departments--Forming and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 3,000 | 7,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $16,500 | $20,300 | $36,800 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.70 | $ 2.50 |  |

During the most recent month, the company started and completed two jobs--Job A and Job H. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job H** |
| **Direct materials** | $12,800 | $6,700 |
| **Direct labor cost** | $24,300 | $7,800 |
| **Forming machine-hours** | 2,000 | 1,000 |
| **Customizing machine-hours** | 2,800 | 4,200 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job A is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $14,400   
 B) $15,120  
 C) $28,512  
 D) $29,520

**219)** Heroux Corporation has two manufacturing departments--Forming and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Customizing** | **Total** |
| **Estimated total machine-hours (MHs)** | 3,000 | 7,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $16,500 | $20,300 | $36,800 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.70 | $ 2.50 |  |

During the most recent month, the company started and completed two jobs--Job A and Job H. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job A** | **Job H** |
| **Direct materials** | $12,800 | $6,700 |
| **Direct labor cost** | $24,300 | $7,800 |
| **Forming machine-hours** | 2,000 | 1,000 |
| **Customizing machine-hours** | 2,800 | 4,200 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job H is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $22,680   
 B) $30,888  
 C) $29,880  
 D) $7,200

**220)** Tiff Corporation has two production departments, Casting and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Casting** | **Assembly** |
| **Machine-hours** | 17,000 | 10,000 |
| **Direct labor-hours** | 1,000 | 5,000 |
| **Total fixed manufacturing overhead cost** | $129,200 | $46,500 |
| **Variable manufacturing overhead per machine-hour** | $ 1.80 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.80 |

During the current month the company started and finished Job P131. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job P131:** | **Casting** | **Assembly** |
| Machine-hours | 90 | 20 |
| Direct labor-hours | 20 | 60 |

The predetermined overhead rate for the Casting Department is closest to:

A) $9.40 per machine-hour   
 B) $7.60 per machine-hour  
 C) $1.80 per machine-hour  
 D) $31.96 per machine-hour

**221)** Tiff Corporation has two production departments, Casting and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Casting** | **Assembly** |
| **Machine-hours** | 17,000 | 10,000 |
| **Direct labor-hours** | 1,000 | 5,000 |
| **Total fixed manufacturing overhead cost** | $129,200 | $46,500 |
| **Variable manufacturing overhead per machine-hour** | $ 1.80 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.80 |

During the current month the company started and finished Job P131. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job P131:** | **Casting** | **Assembly** |
| Machine-hours | 90 | 20 |
| Direct labor-hours | 20 | 60 |

The amount of overhead applied in the Assembly Department to Job P131 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $228.00   
 B) $558.00  
 C) $65,500.00  
 D) $786.00

**222)** Eisentrout Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Customizing** |
| **Machine-hours** | 25,000 | 17,000 |
| **Direct labor-hours** | 10,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $135,000 | $28,700 |
| **Variable manufacturing overhead per machine-hour** | $1.20 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $4.70 |

During the current month the company started and finished Job T272. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T272:** | **Machining** | **Customizing** |
| Machine-hours | 60 | 40 |
| Direct labor-hours | 20 | 60 |

The estimated total manufacturing overhead for the Machining Department is closest to:

A) $165,000   
 B) $135,000  
 C) $30,000  
 D) $155,400

**223)** Eisentrout Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Customizing** |
| **Machine-hours** | 16,000 | 11,000 |
| **Direct labor-hours** | 2,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $104,000 | $56,400 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.30 |

During the current month the company started and finished Job T272. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T272:** | **Machining** | **Customizing** |
| Machine-hours | 60 | 30 |
| Direct labor-hours | 10 | 60 |

The estimated total manufacturing overhead for the Machining Department is closest to:

A) $137,600   
 B) $104,000  
 C) $33,600  
 D) $310,933

**224)** Eisentrout Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Customizing** |
| **Machine-hours** | 16,000 | 11,000 |
| **Direct labor-hours** | 2,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $104,000 | $56,400 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.30 |

During the current month the company started and finished Job T272. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T272:** | **Machining** | **Customizing** |
| Machine-hours | 60 | 30 |
| Direct labor-hours | 10 | 60 |

The estimated total manufacturing overhead for the Customizing Department is closest to:

A) $40,950   
 B) $19,800  
 C) $56,400  
 D) $76,200

**225)** Eisentrout Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Customizing** |
| **Machine-hours** | 16,000 | 11,000 |
| **Direct labor-hours** | 2,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $104,000 | $56,400 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.30 |

During the current month the company started and finished Job T272. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T272:** | **Machining** | **Customizing** |
| Machine-hours | 60 | 30 |
| Direct labor-hours | 10 | 60 |

The predetermined overhead rate for the Machining Department is closest to:

A) $22.93 per machine-hour   
 B) $6.50 per machine-hour  
 C) $2.10 per machine-hour  
 D) $8.60 per machine-hour

**226)** Eisentrout Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Customizing** |
| **Machine-hours** | 16,000 | 11,000 |
| **Direct labor-hours** | 2,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $104,000 | $56,400 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.30 |

During the current month the company started and finished Job T272. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T272:** | **Machining** | **Customizing** |
| Machine-hours | 60 | 30 |
| Direct labor-hours | 10 | 60 |

The predetermined overhead rate for the Customizing Department is closest to:

A) $3.30 per direct labor-hour   
 B) $12.70 per direct labor-hour  
 C) $9.40 per direct labor-hour  
 D) $4.76 per direct labor-hour

**227)** Eisentrout Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Customizing** |
| **Machine-hours** | 16,000 | 11,000 |
| **Direct labor-hours** | 2,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $104,000 | $56,400 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.30 |

During the current month the company started and finished Job T272. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T272:** | **Machining** | **Customizing** |
| Machine-hours | 60 | 30 |
| Direct labor-hours | 10 | 60 |

The amount of overhead applied in the Machining Department to Job T272 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $137,600.00   
 B) $126.00  
 C) $516.00  
 D) $564.00

**228)** Eisentrout Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Customizing** |
| **Machine-hours** | 16,000 | 11,000 |
| **Direct labor-hours** | 2,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $104,000 | $56,400 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.30 |

During the current month the company started and finished Job T272. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T272:** | **Machining** | **Customizing** |
| Machine-hours | 60 | 30 |
| Direct labor-hours | 10 | 60 |

The amount of overhead applied in the Customizing Department to Job T272 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $76,200.00   
 B) $762.00  
 C) $564.00  
 D) $198.00

**229)** Stoke Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Assembly** |
| **Machine-hours** | 20,000 | 15,000 |
| **Direct labor-hours** | 2,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $138,000 | $58,100 |
| **Variable manufacturing overhead per machine-hour** | $ 2.30 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.00 |

During the current month the company started and finished Job A460. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job A460:** | **Forming** | **Assembly** |
| Machine-hours | 80 | 10 |
| Direct labor-hours | 30 | 50 |

The amount of overhead applied in the Forming Department to Job A460 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $184,000.00   
 B) $184.00  
 C) $736.00  
 D) $664.00

**230)** Stoke Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Assembly** |
| **Machine-hours** | 20,000 | 15,000 |
| **Direct labor-hours** | 2,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $138,000 | $58,100 |
| **Variable manufacturing overhead per machine-hour** | $ 2.30 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.00 |

During the current month the company started and finished Job A460. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job A460:** | **Forming** | **Assembly** |
| Machine-hours | 80 | 10 |
| Direct labor-hours | 30 | 50 |

The amount of overhead applied in the Assembly Department to Job A460 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $415.00   
 B) $150.00  
 C) $565.00  
 D) $79,100.00

**231)** Vanliere Corporation has two production departments, Machining and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Finishing** |
| **Machine-hours** | 19,000 | 11,000 |
| **Direct labor-hours** | 3,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $138,700 | $52,800 |
| **Variable manufacturing overhead per machine-hour** | $ 1.90 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.80 |

During the current month the company started and finished Job A803. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job A803:** | **Machining** | **Finishing** |
| Machine-hours | 90 | 20 |
| Direct labor-hours | 20 | 60 |

The predetermined overhead rate for the Finishing Department is closest to:

A) $8.80 per direct labor-hour   
 B) $3.98 per direct labor-hour  
 C) $12.60 per direct labor-hour  
 D) $3.80 per direct labor-hour

**232)** Vanliere Corporation has two production departments, Machining and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Machining** | **Finishing** |
| **Machine-hours** | 19,000 | 11,000 |
| **Direct labor-hours** | 3,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $138,700 | $52,800 |
| **Variable manufacturing overhead per machine-hour** | $ 1.90 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.80 |

During the current month the company started and finished Job A803. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job A803:** | **Machining** | **Finishing** |
| Machine-hours | 90 | 20 |
| Direct labor-hours | 20 | 60 |

The amount of overhead applied in the Machining Department to Job A803 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $828.00   
 B) $792.00  
 C) $171.00  
 D) $174,800.00

**233)** Ahlheim Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Assembly** |
| **Machine-hours** | 16,000 | 15,000 |
| **Direct labor-hours** | 2,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $102,400 | $55,200 |
| **Variable manufacturing overhead per machine-hour** | $ 2.30 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.50 |

During the current month the company started and finished Job T924. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T924:** | **Forming** | **Assembly** |
| Machine-hours | 70 | 20 |
| Direct labor-hours | 30 | 40 |
| Direct materials | $870 | $385 |
| Direct labor cost | $630 | $840 |

The estimated total manufacturing overhead for the Forming Department is closest to:

A) $36,800   
 B) $102,400  
 C) $309,867  
 D) $139,200

**234)** Ahlheim Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Assembly** |
| **Machine-hours** | 16,000 | 15,000 |
| **Direct labor-hours** | 2,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $102,400 | $55,200 |
| **Variable manufacturing overhead per machine-hour** | $ 2.30 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.50 |

During the current month the company started and finished Job T924. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T924:** | **Forming** | **Assembly** |
| Machine-hours | 70 | 20 |
| Direct labor-hours | 30 | 40 |
| Direct materials | $870 | $385 |
| Direct labor cost | $630 | $840 |

The estimated total manufacturing overhead for the Assembly Department is closest to:

A) $27,000   
 B) $55,200  
 C) $82,200  
 D) $47,700

**235)** Ahlheim Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Assembly Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Assembly** |
| **Machine-hours** | 16,000 | 15,000 |
| **Direct labor-hours** | 2,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $102,400 | $55,200 |
| **Variable manufacturing overhead per machine-hour** | $ 2.30 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.50 |

During the current month the company started and finished Job T924. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T924:** | **Forming** | **Assembly** |
| Machine-hours | 70 | 20 |
| Direct labor-hours | 30 | 40 |
| Direct materials | $870 | $385 |
| Direct labor cost | $630 | $840 |

The total amount of overhead applied in both departments to Job T924 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $1,157   
 B) $548  
 C) $609  
 D) $1,705

**236)** Merati Corporation has two manufacturing departments--Forming and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 5,000 | 5,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $28,000 | $10,500 | $38,500 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.80 | $ 2.60 |  |

During the most recent month, the company started and completed two jobs--Job B and Job L. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job B** | **Job L** |
| **Forming machine-hours** | 3,400 | 1,600 |
| **Assembly machine-hours** | 2,000 | 3,000 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both departments. The departmental predetermined overhead rate in the Forming Department is closest to:

A) $5.60   
 B) $7.40  
 C) $1.80  
 D) $6.05

**237)** Merati Corporation has two manufacturing departments--Forming and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Assembly** | **Total** |
| **Estimated total machine-hours(MHs)** | 5,000 | 5,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $28,000 | $10,500 | $38,500 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.80 | $ 2.60 |  |

During the most recent month, the company started and completed two jobs--Job B and Job L. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job B** | **Job L** |
| **Forming machine-hours** | 3,400 | 1,600 |
| **Assembly machine-hours** | 2,000 | 3,000 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both departments. The departmental predetermined overhead rate in the Assembly Department is closest to:

A) $2.60   
 B) $4.70  
 C) $6.05  
 D) $2.10

**238)** Merati Corporation has two manufacturing departments--Forming and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Assembly** | **Total** |
| **Estimated total machine-hours(MHs)** | 5,000 | 5,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $28,000 | $10,500 | $38,500 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.80 | $ 2.60 |  |

During the most recent month, the company started and completed two jobs--Job B and Job L. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job B** | **Job L** |
| **Forming machine-hours** | 3,400 | 1,600 |
| **Assembly machine-hours** | 2,000 | 3,000 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job B is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $9,400   
 B) $25,160  
 C) $32,670  
 D) $34,560

**239)** Merati Corporation has two manufacturing departments--Forming and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 5,000 | 5,000 | 10,000 |
| **Estimated total fixed manufacturing overhead cost** | $28,000 | $10,500 | $38,500 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.80 | $ 2.60 |  |

During the most recent month, the company started and completed two jobs--Job B and Job L. There were no beginning inventories. Data concerning those two jobs follow:

|  |  |  |
| --- | --- | --- |
|  | **Job B** | **Job L** |
| **Forming machine-hours** | 3,400 | 1,600 |
| **Assembly machine-hours** | 2,000 | 3,000 |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job L is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $27,830   
 B) $11,840  
 C) $25,940  
 D) $14,100

**240)** Barbeau Corporation has two production departments, Milling and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Milling** | **Customizing** |
| **Machine-hours** | 17,000 | 13,000 |
| **Direct labor-hours** | 2,000 | 5,000 |
| **Total fixed manufacturing overhead cost** | $119,000 | $42,000 |
| **Variable manufacturing overhead per machine-hour** | $ 1.60 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.30 |

During the current month the company started and finished Job A492. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job A492:** | **Milling** | **Customizing** |
| Machine-hours | 90 | 20 |
| Direct labor-hours | 20 | 50 |

The estimated total manufacturing overhead for the Customizing Department is closest to:

A) $63,500   
 B) $21,500  
 C) $42,000  
 D) $33,853

**241)** Barbeau Corporation has two production departments, Milling and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Milling** | **Customizing** |
| **Machine-hours** | 17,000 | 13,000 |
| **Direct labor-hours** | 2,000 | 5,000 |
| **Total fixed manufacturing overhead cost** | $119,000 | $42,000 |
| **Variable manufacturing overhead per machine-hour** | $ 1.60 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.30 |

During the current month the company started and finished Job A492. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job A492:** | **Milling** | **Customizing** |
| Machine-hours | 90 | 20 |
| Direct labor-hours | 20 | 50 |

The amount of overhead applied in the Milling Department to Job A492 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $146,200.00   
 B) $144.00  
 C) $756.00  
 D) $774.00

**242)** Kroeker Corporation has two production departments, Milling and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Milling** | **Customizing** |
| **Machine-hours** | 17,000 | 12,000 |
| **Direct labor-hours** | 1,000 | 9,000 |
| **Total fixed manufacturing overhead cost** | $112,200 | $81,000 |
| **Variable manufacturing overhead per machine-hour** | $ 1.70 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.30 |

During the current month the company started and finished Job T898. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T898:** | **Milling** | **Customizing** |
| Machine-hours | 80 | 30 |
| Direct labor-hours | 20 | 50 |

The estimated total manufacturing overhead for the Milling Department is closest to:

A) $240,833   
 B) $141,100  
 C) $28,900  
 D) $112,200

**243)** Kroeker Corporation has two production departments, Milling and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Milling** | **Customizing** |
| **Machine-hours** | 17,000 | 12,000 |
| **Direct labor-hours** | 1,000 | 9,000 |
| **Total fixed manufacturing overhead cost** | $112,200 | $81,000 |
| **Variable manufacturing overhead per machine-hour** | $ 1.70 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.30 |

During the current month the company started and finished Job T898. The following data were recorded for this job:

|  |  |  |
| --- | --- | --- |
| **Job T898:** | **Milling** | **Customizing** |
| Machine-hours | 80 | 30 |
| Direct labor-hours | 20 | 50 |

The amount of overhead applied in the Customizing Department to Job T898 is closest to: **(Round your intermediate calculations to 2 decimal places.)**

A) $450.00   
 B) $119,700.00  
 C) $665.00  
 D) $215.00

**244)** Petty Corporation has two production departments, Milling and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Milling** | **Finishing** |
| **Machine-hours** | 20,000 | 14,000 |
| **Direct labor-hours** | 2,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $148,000 | $88,000 |
| **Variable manufacturing overhead per machine-hour** | $ 1.90 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.60 |

The estimated total manufacturing overhead for the Milling Department is closest to:

A) $408,000   
 B) $38,000  
 C) $148,000  
 D) $186,000

**245)** Petty Corporation has two production departments, Milling and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Milling** | **Finishing** |
| **Machine-hours** | 20,000 | 14,000 |
| **Direct labor-hours** | 2,000 | 8,000 |
| **Total fixed manufacturing overhead cost** | $148,000 | $88,000 |
| **Variable manufacturing overhead per machine-hour** | $ 1.90 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.60 |

The predetermined overhead rate for the Finishing Department is closest to:

A) $5.84 per direct labor-hour   
 B) $3.60 per direct labor-hour  
 C) $11.00 per direct labor-hour  
 D) $14.60 per direct labor-hour

**246)** Garza Corporation has two production departments, Casting and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Casting** | **Customizing** |
| **Machine-hours** | 23,000 | 15,000 |
| **Direct labor-hours** | 7,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $82,800 | $30,100 |
| **Variable manufacturing overhead per machine-hour** | $ 1.40 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.70 |

The estimated total manufacturing overhead for the Customizing Department is closest to:

A) $115,700   
 B) $32,900  
 C) $63,000  
 D) $30,100

**247)** Garza Corporation has two production departments, Casting and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Casting** | **Customizing** |
| **Machine-hours** | 20,000 | 13,000 |
| **Direct labor-hours** | 1,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $152,000 | $68,600 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.30 |

The estimated total manufacturing overhead for the Customizing Department is closest to:

A) $54,110   
 B) $30,100  
 C) $98,700  
 D) $68,600

**248)** Garza Corporation has two production departments, Casting and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Casting** | **Customizing** |
| **Machine-hours** | 20,000 | 13,000 |
| **Direct labor-hours** | 1,000 | 7,000 |
| **Total fixed manufacturing overhead cost** | $152,000 | $68,600 |
| **Variable manufacturing overhead per machine-hour** | $ 2.10 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 4.30 |

The predetermined overhead rate for the Casting Department is closest to:

A) $9.70 per machine-hour   
 B) $7.60 per machine-hour  
 C) $2.10 per machine-hour  
 D) $27.71 per machine-hour

**249)** Marciante Corporation has two production departments, Casting and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Casting** | **Finishing** |
| **Machine-hours** | 17,000 | 10,000 |
| **Direct labor-hours** | 2,000 | 5,000 |
| **Total fixed manufacturing overhead cost** | $105,400 | $52,000 |
| **Variable manufacturing overhead per machine-hour** | $ 1.70 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.90 |

The estimated total manufacturing overhead for the Casting Department is closest to:

A) $387,260   
 B) $134,300  
 C) $28,900  
 D) $105,400

**250)** Marciante Corporation has two production departments, Casting and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department’s predetermined overhead rate is based on machine-hours and the Finishing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Casting** | **Finishing** |
| **Machine-hours** | 17,000 | 10,000 |
| **Direct labor-hours** | 2,000 | 5,000 |
| **Total fixed manufacturing overhead cost** | $105,400 | $52,000 |
| **Variable manufacturing overhead per machine-hour** | $ 1.70 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.90 |

The estimated total manufacturing overhead for the Finishing Department is closest to:

A) $71,500   
 B) $52,000  
 C) $34,794  
 D) $19,500

**251)** Jurica Corporation has two production departments, Forming and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Customizing** |
| **Machine-hours** | 19,000 | 15,000 |
| **Direct labor-hours** | 4,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $100,700 | $63,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.00 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.90 |

The predetermined overhead rate for the Forming Department is closest to:

A) $23.12 per machine-hour   
 B) $2.00 per machine-hour  
 C) $5.30 per machine-hour  
 D) $7.30 per machine-hour

**252)** Jurica Corporation has two production departments, Forming and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department’s predetermined overhead rate is based on machine-hours and the Customizing Department’s predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

|  |  |  |
| --- | --- | --- |
|  | **Forming** | **Customizing** |
| **Machine-hours** | 19,000 | 15,000 |
| **Direct labor-hours** | 4,000 | 6,000 |
| **Total fixed manufacturing overhead cost** | $100,700 | $63,000 |
| **Variable manufacturing overhead per machine-hour** | $ 2.00 |  |
| **Variable manufacturing overhead per direct labor-hour** |  | $ 3.90 |

The predetermined overhead rate for the Customizing Department is closest to:

A) $4.55 per direct labor-hour   
 B) $3.90 per direct labor-hour  
 C) $10.50 per direct labor-hour  
 D) $14.40 per direct labor-hour

**253)** Claybrooks Corporation has two manufacturing departments--Casting and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Casting** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 3,000 | 2,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $17,700 | $5,800 | $23,500 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.50 | $ 2.20 |  |

Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. That predetermined manufacturing overhead rate is closest to:

A) $4.70   
 B) $7.40  
 C) $6.48  
 D) $3.70

**254)** Claybrooks Corporation has two manufacturing departments--Casting and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Casting** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 3,000 | 2,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $17,700 | $5,800 | $23,500 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.50 | $ 2.20 |  |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both departments. The departmental predetermined overhead rate in the Casting Department is closest to:

A) $1.50   
 B) $7.40  
 C) $5.90  
 D) $6.48

**255)** Claybrooks Corporation has two manufacturing departments--Casting and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Casting** | **Assembly** | **Total** |
| **Estimated total machine-hours (MHs)** | 3,000 | 2,000 | 5,000 |
| **Estimated total fixed manufacturing overhead cost** | $17,700 | $5,800 | $23,500 |
| **Estimated variable manufacturing overhead cost per machine-hour** | $ 1.50 | $ 2.20 |  |

Assume that the company uses departmental predetermined overhead rates with machine-hours as the allocation base in both departments. The departmental predetermined overhead rate in the Assembly Department is closest to:

A) $2.90   
 B) $6.48  
 C) $5.10  
 D) $2.20

**ESSAY. Write your answer in the space provided or on a separate sheet of paper.  
256)** Henkes Corporation bases its predetermined overhead rate on the estimated labor-hours for the upcoming year. At the beginning of the most recently completed year, the company estimated the labor-hours for the upcoming year at 66,000 labor-hours. The estimated variable manufacturing overhead was $8.41 per labor-hour and the estimated total fixed manufacturing overhead was $1,533,180. The actual labor-hours for the year turned out to be 68,400 labor-hours.  
 **Required:**  
 Compute the company's predetermined overhead rate for the recently completed year.

**257)** Mccaughan Corporation bases its predetermined overhead rate on the estimated labor-hours for the upcoming year. Data for the most recently completed year appear below:

|  |  |
| --- | --- |
| **Estimates made at the beginning of the year:** |  |
| **Estimated labor-hours** | 37,000 |
| **Estimated variable manufacturing overhead** | $ 4.43per labor-hour |
| **Estimated total fixed manufacturing overhead** | $705,220 |
| **Actual labor-hours for the year** | 32,100 |

**Required:**  
 Compute the company's predetermined overhead rate for the recently completed year.

**258)** Moscone Corporation bases its predetermined overhead rate on the estimated labor-hours for the upcoming year. At the beginning of the most recently completed year, the company estimated the labor-hours for the upcoming year at 78,000 labor-hours. The estimated variable manufacturing overhead was $9.99 per labor-hour and the estimated total fixed manufacturing overhead was $985,920.  
 **Required:**  
 Compute the company's predetermined overhead rate.

**259)** Lightner Corporation bases its predetermined overhead rate on the estimated machine-hours for the upcoming year. Data for the upcoming year appear below:

|  |  |
| --- | --- |
| **Estimated machine-hours** | 50,000 |
| **Estimated variable manufacturing overhead** | $ 8.82per machine-hour |
| **Estimated total fixed manufacturing overhead** | $1,077,000 |

**Required:**  
 Compute the company's predetermined overhead rate.

**260)** Job 243 was recently completed. The following data have been recorded on its job cost sheet:

|  |  |
| --- | --- |
| **Direct materials** | $48,870 |
| **Direct labor-hours** | 405labor-hours |
| **Direct labor wage rate** | $ 13 per labor-hour |
| **Machine-hours** | 486machine-hours |
| **Number of units completed** | 2,700units |

The company applies manufacturing overhead on the basis of machine-hours. The predetermined overhead rate is $11 per machine-hour.  
 **Required:**  
 Compute the unit product cost that would appear on the job cost sheet for this job.

**261)** Job 652 was recently completed. The following data have been recorded on its job cost sheet:

|  |  |
| --- | --- |
| **Direct materials** | $59,400 |
| **Direct labor-hours** | 1,224 direct labor-hours |
| **Direct labor wage rate** | $ 15per direct labor-hour |
| **Number of units completed** | 3,600units |

The company applies manufacturing overhead on the basis of direct labor-hours. The predetermined overhead rate is $35 per direct labor-hour.  
 **Required:**  
 Compute the unit product cost that would appear on the job cost sheet for this job.

**Answer Key**Test name: ch 2ii

1) FALSE

2) TRUE

3) TRUE

4) FALSE

5) FALSE

6) FALSE

7) TRUE

8) FALSE

9) FALSE

10) FALSE

11) FALSE

12) FALSE

13) FALSE

14) FALSE

15) TRUE

16) FALSE

17) TRUE

18) TRUE

19) FALSE

20) FALSE

21) TRUE

22) TRUE

23) C

24) B

25) B

26) C

27) B

28) D

29) A

|  |  |
| --- | --- |
| **Rent on factory building** | $ 15,000 |
| **Depreciation on factory equipment** | 8,000 |
| **Indirect labor** | 12,000 |
| **Production supervisor's salary** | 15,000 |
| **Manufacturing overhead** | $ 50,000 |

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base  
 Predetermined overhead rate = $50,000 ÷ 20,000 direct labor-hours = $2.50 per direct labor-hour

30) C

Department A Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base Predetermined overhead rate = $90,000 ÷ $60,000 = 150% of direct labor cost  
 Department B Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base Predetermined overhead rate = $45,000 ÷ 15,000 machine-hours = $3.00 per machine-hour

31) B

|  |  |
| --- | --- |
| **Estimated total fixed manufacturing overhead (a)** | $ 121,000 |
| **Estimated activity level (b)** | 10,000 |
| **Predetermined overhead rate (a) ÷ (b)** | $ 12.10 |

32) D

|  |  |
| --- | --- |
| **Salary of production supervisor** | $ 2,000 |
| **Indirect materials** | 400 |
| **Rent on factory equipment** | 1,000 |
| **Total manufacturing overhead** | $ 3,400 |

Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $3,400 ÷ 1,000 machine-hours = $3.40 per machine-hour

33) A

|  |  |
| --- | --- |
| **Estimated total fixed manufacturing overhead (a)** | $ 534,000 |
| **Estimated activity level (b)** | 30,000 |
| **Predetermined overhead rate (a) ÷ (b)** | $ 17.80 |

34) C

Estimated total manufacturing overhead = $838,700 + ($3.20 per machine-hour × 72,500 machine-hours) = $1,070,700  
 Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $1,070,700 ÷ 72,500 machine-hours = $14.77 per machine-hour

35) B

Estimated total manufacturing overhead = $1,058,040 + ($3.01 per machine-hour × 36,000 machine-hours) = $1,166,400  
 Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $1,166,400 ÷ 36,000 machine-hours = $32.40 per machine-hour

36) A

Estimated total manufacturing overhead = $1,723,880 + ($4.34 per machine-hour × 60,700 machine-hours) = $1,987,318   
 Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $1,987,318 ÷ 60,700 machine-hours = $32.74 per machine-hour

37) A

Estimated total manufacturing overhead = $2,347,090 + ($7.38 per machine-hour × 79,000 machine-hours) = $2,930,110   
 Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $2,930,110 ÷ 79,000 machine-hours = $37.09 per machine-hour

38) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $144,000 + ($2.00 per machine-hour × 60,000 machine-hours) = $144,000 + $120,000 = $264,000   
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $264,000 ÷ 60,000 machine-hours = $4.40 per machine-hour

39) A

Estimated total manufacturing overhead = $1,245,216 + ($6.17 per labor-hour × 43,600 labor-hours) = $1,514,228   
 Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $1,514,228 ÷ 43,600 labor-hours = $34.73 per labor-hour

40) A

Estimated total manufacturing overhead = $1,026,260 + ($6.25 per labor-hour × 46,000 labor-hours) = $1,313,760   
 Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $1,313,760 ÷ 46,000 labor-hours = $28.56 per labor-hour

41) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $440,000 + ($2.20 per machine-hour × 50,000 machine-hours) = $440,000 + $110,000 = $550,000

42) B

Estimated total manufacturing overhead = $1,445,444 + ($5.02 per machine-hour × 49,400 machine-hours) = $1,693,432  
 Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $1,693,432 ÷ 49,400 machine-hours = $34.28 per machine-hour

43) B

Estimated total manufacturing overhead = $794,430 + ($6.76 per machine-hour × 39,000 machine-hours) = $1,058,070   
 Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $1,058,070 ÷ 39,000 machine-hours = $27.13 per machine-hour

44) A

|  |  |
| --- | --- |
| **Salary of production supervisor** | $40,000 |
| **Indirect materials** | 8,000 |
| **Rent on factory equipment** | 20,000 |
| **Manufacturing overhead** | $68,000 |

Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base  
 Predetermined overhead rate = $68,000 ÷ 16,000 machine-hours = $4.25 per machine-hour

45) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $189,000 + ($2.50 per direct labor-hour × 30,000 direct labor-hours) = $189,000 + $75,000 = $264,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $264,000 ÷ 30,000 direct labor-hours = $8.80 per direct labor-hour

46) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $357,000 + ($3.90 per machine-hour × 70,000 machine-hours) = $357,000 + $273,000 = $630,000

47) A

The first step is to calculate the estimated total overhead costs in the two departments.  
 Forming

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $40,600 |
| **Estimated variable manufacturing overhead ($1.30 per machine-hour × 7,000 machine-hours)** | 9,100 |
| **Estimated total manufacturing overhead cost** | $49,700 |

Finishing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 8,100 |
| **Estimated variable manufacturing overhead ($2.80 per machine-hour × 3,000 machine-hours)** | 8,400 |
| **Estimated total manufacturing overhead cost** | $16,500 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($49,700 + $16,500 = $66,200) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $66,200 |
| **Estimated total machine hours** | 10,000 machine-hours |
| **Predetermined overhead rate** | $6.62 per machine-hour |

48) A

|  |  |
| --- | --- |
| **Estimated total fixed manufacturing overhead (a)** | $492,000 |
| **Estimated activity level (b)** | 30,000 |
| **Predetermined overhead rate (a) ÷ (b)** | $ 16.40 |
| **Actual activity level** | 28,300 |
| **Manufacturing overhead applied** | $464,120 |

49) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $344,000 + ($3.90 per machine-hour × 40,000 machine-hours) = $344,000 + $156,000 = $500,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $500,000 ÷ 40,000 machine-hours = $12.50 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.50 per machine-hour × 60 machine-hours = $750

50) A

The first step is to calculate the estimated total overhead costs in the two departments.  
 Forming

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $52,200 |
| **Estimated variable manufacturing overhead ($2.00 per machine-hour × 9,000 machine-hours)** | 18,000 |
| **Estimated total manufacturing overhead cost** | $70,200 |

Assembly

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $2,400 |
| **Estimated variable manufacturing overhead ($2.10 per machine-hour × 1,000 machine-hours)** | 2,100 |
| **Estimated total manufacturing overhead cost** | $4,500 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($70,200 + $4,500 = $74,700) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $74,700 |
| **Estimated total machine hours** | 10,000machine-hours |
| **Predetermined overhead rate** | $ 7.47 per machine-hour |

The overhead applied to Job B is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $7.47 per machine-hour × (6,100 machine-hours + 400 machine-hours)  
 = $7.47 per machine-hour × (6,500 machine-hours)  
 = $48,555

51) B

The first step is to calculate the estimated total overhead costs in the two departments.  
 Casting

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $44,000 |
| **Estimated variable manufacturing overhead ($1.90 per machine-hour × 8,000 machine-hours)** | 15,200 |
| **Estimated total manufacturing overhead cost** | $59,200 |

Assembly

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 4,200 |
| **Estimated variable manufacturing overhead ($3.00 per machine-hour × 2,000 machine-hours)** | 6,000 |
| **Estimated total manufacturing overhead cost** | $10,200 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($59,200 + $10,200 = $69,400) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $69,400 |
| **Estimated total machine hours** | 10,000 machine-hours |
| **Predetermined overhead rate** | $ 6.94 per machine-hour |

The overhead applied to Job H is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $6.94 per machine-hour × (2,600 machine-hours + 1,200 machine-hours)  
 = $6.94 per machine-hour × (3,800 machine-hours)  
 = $26,372

52) D

Overhead applied = Predetermined overhead rate × Amount of the allocation base incurred $600 = Predetermined overhead rate × $150  
 Predetermined overhead rate = $600 ÷ $150 = 4.0

|  |  |
| --- | --- |
| **Direct materials** | $ 480 |
| **Direct labor ($150 + $100)** | 250 |
| **Manufacturing overhead applied (4.0 × $250)** | 1,000 |
| **Total product cost** | $1,730 |

53) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $105,000 + ($3.00 per machine-hour × 70,000 machine-hours) = $105,000 + $210,000 = $315,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $315,000 ÷ 70,000 machine-hours = $4.50 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $4.50 per machine-hour × 60 machine-hours = $270

54) A

|  |  |
| --- | --- |
| **Estimated total fixed manufacturing overhead (a)** | $684,000 |
| **Estimated activity level (b)** | 40,000 |
| **Predetermined overhead rate (a) ÷ (b)** | $ 17.10 |
| **Actual activity level** | 37,700 |
| **Manufacturing overhead applied** | $644,670 |

55) A

The first step is to calculate the estimated total overhead costs in the two departments.  
 Molding

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $4,000 |
| **Estimated variable manufacturing overhead ($2.00 per machine-hour × 1,000 machine-hours)** | 2,000 |
| **Estimated total manufacturing overhead cost** | $6,000 |

Customizing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $25,200 |
| **Estimated variable manufacturing overhead ($3.00 per machine-hour × 9,000 machine-hours)** | 27,000 |
| **Estimated total manufacturing overhead cost** | $52,200 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($6,000 + $52,200 = $58,200) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $58,200 |
| **Estimated total machine hours** | 10,000 machine-hours |
| **Predetermined overhead rate** | $ 5.82 per machine-hour |

The overhead applied to Job K is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.82 per machine-hour × (300 machine-hours + 5,400 machine-hours)  
 = $5.82 per machine-hour × (5,700 machine-hours)  
 = $33,174  
 Job K’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $ 8,400 |
| **Direct labor cost** | 6,800 |
| **Manufacturing overhead applied** | 33,174 |
| **Total manufacturing cost** | $48,374 |

The selling price for Job K:

|  |  |
| --- | --- |
| **Total manufacturing cost** | $48,374 |
| **Markup (50%)** | 24,187 |
| **Selling price** | $72,561 |

56) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $665,000 + ($3.00 per machine-hour × 70,000 machine-hours) = $665,000 + $210,000 = $875,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $875,000 ÷ 70,000 machine-hours = $12.50 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.50 per machine-hour × 90 machine-hours = $1,125

|  |  |
| --- | --- |
| **Direct materials** | $ 630 |
| **Direct labor** | 2,880 |
| **Manufacturing overhead applied** | 1,125 |
| **Total cost of Job T321** | $4,635 |

|  |  |
| --- | --- |
| **Total cost of Job T321 (a)** | $ 4,635 |
| **Number of units (b)** | 30 |
| **Unit product cost (a) ÷ (b)** | $154.50 |

57) A

The first step is to calculate the estimated total overhead costs in the two departments.  
 Machining

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $22,000 |
| **Estimated variable manufacturing overhead ($1.80 per machine-hour × 5,000 machine-hours)** | 9,000 |
| **Estimated total manufacturing overhead cost** | $31,000 |

Customizing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $11,500 |
| **Estimated variable manufacturing overhead ($3.00 per machine-hour × 5,000 machine-hours)** | 15,000 |
| **Estimated total manufacturing overhead cost** | $26,500 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($31,000 + $26,500 = $57,500) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $57,500 |
| **Estimated total machine hours** | 10,000 machine-hours |
| **Predetermined overhead rate** | $ 5.75 per machine-hour |

The overhead applied to Job E is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.75 per machine-hour × (3,400 machine-hours + 2,000 machine-hours)  
 = $5.75 per machine-hour × (5,400 machine-hours)  
 = $31,050  
 Job E’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $12,800 |
| **Direct labor cost** | 17,600 |
| **Manufacturing overhead applied** | 31,050 |
| **Total manufacturing cost** | $61,450 |

The overhead applied to Job J is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.75 per machine-hour × (1,600 machine-hours + 3,000 machine-hours)  
 = $5.75 per machine-hour × (4,600 machine-hours)  
 = $26,450  
 Job J’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $ 7,000 |
| **Direct labor cost** | 7,700 |
| **Manufacturing overhead applied** | 26,450 |
| **Total manufacturing cost** | $41,150 |

|  |  |
| --- | --- |
| **Total manufacturing cost assigned to Job E** | $ 61,450 |
| **Total manufacturing cost assigned to Job J** | 41,150 |
| **Cost of goods sold** | $102,600 |

58) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $511,000 + ($2.10 per direct labor-hour × 70,000 direct labor-hours) = $511,000 + $147,000 = $658,000 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $658,000 ÷ 70,000 direct labor-hours = $9.40 per direct labor-hour Overhead applied to a particular job = Predetermined overhead rate× Amount of the allocation base incurred by the job = $9.40 per direct labor-hour × 150 direct labor-hours = $1,410

|  |  |
| --- | --- |
| **Direct materials** | $ 705 |
| **Direct labor cost** | 4,650 |
| **Manufacturing overhead applied** | 1,410 |
| **Total cost of Job K913** | $6,765 |

59) C

The first step is to calculate the estimated total overhead costs in the two departments.  
 Casting

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 9,800 |
| **Estimated variable manufacturing overhead ($2.00 per machine-hour × 2,000 machine-hours)** | 4,000 |
| **Estimated total manufacturing overhead cost** | $13,800 |

Finishing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 6,300 |
| **Estimated variable manufacturing overhead ($2.40 per machine-hour × 3,000 machine-hours)** | 7,200 |
| **Estimated total manufacturing overhead cost** | $13,500 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($13,800 + $13,500 = $27,300) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $27,300 |
| **Estimated total machine hours** | 5,000 machine-hours |
| **Predetermined overhead rate** | $ 5.46 per machine-hour |

The overhead applied to Job L is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.46 per machine-hour × (600 machine-hours + 1,800 machine-hours)  
 = $5.46 per machine-hour × (2,400 machine-hours)  
 = $13,104  
 Job L’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $ 9,600 |
| **Direct labor cost** | 6,200 |
| **Manufacturing overhead applied** | 13,104 |
| **Total manufacturing cost** | $28,904 |

60) B

The first step is to calculate the estimated total overhead costs in the two departments.  
 Forming

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $27,000 |
| **Estimated variable manufacturing overhead ($1.10 per machine hour × 5,000 machine hours)** | 5,500 |
| **Estimated total manufacturing overhead cost** | $32,500 |

Assembly

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $10,500 |
| **Estimated variable manufacturing overhead ($2.80 per machine hour × 5,000 machine hours)** | 14,000 |
| **Estimated total manufacturing overhead cost** | $24,500 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($32,500 + $24,500 = $57,000) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $57,000 |
| **Estimated total machine hours** | 10,000 machine hours |
| **Predetermined overhead rate** | $ 5.70 per machine hour |

The overhead applied to Job C is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.70 per machine hour × (3,400 machine hours + 2,000 machine hours)  
 = $5.70 per machine hour × (5,400 machine hours)  
 = $30,780  
 Job C’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $11,200 |
| **Direct labor cost** | 21,000 |
| **Manufacturing overhead applied** | 30,780 |
| **Total manufacturing cost** | $62,980 |

The selling price for Job C:

|  |  |
| --- | --- |
| **Total manufacturing cost** | $62,980 |
| **Markup (40%)** | 25,192 |
| **Selling price** | $88,172 |

61) D

The first step is to calculate the estimated total overhead costs in the two departments.  
 Machining

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $30,000 |
| **Estimated variable manufacturing overhead ($2.00 per machine hour × 6,000 machine hours)** | 12,000 |
| **Estimated total manufacturing overhead cost** | $42,000 |

Finishing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $11,200 |
| **Estimated variable manufacturing overhead ($2.40 per machine hour × 4,000 machine hours)** | 9,600 |
| **Estimated total manufacturing overhead cost** | $20,800 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($42,000 + $20,800 = $62,800) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $62,800 |
| **Estimated total machine hours** | 10,000 machine hours |
| **Predetermined overhead rate** | $6.28 per machine hour |

The overhead applied to Job E is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $6.28 per machine hour × (4,100 machine hours + 1,600 machine hours)  
 = $6.28 per machine hour × (5,700 machine hours)  
 = $35,796  
 Job E’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $13,400 |
| **Direct labor cost** | 24,500 |
| **Manufacturing overhead applied** | 35,796 |
| **Total manufacturing cost** | $73,696 |

62) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $249,000 + ($3.80 per machine-hour × 30,000 machine-hours) = $249,000 + $114,000 = $363,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $363,000 ÷ 30,000 machine-hours = $12.10 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.10 per machine-hour × 250 machine-hours = $3,025

|  |  |
| --- | --- |
| **Direct materials** | $ 470 |
| **Direct labor** | 5,500 |
| **Manufacturing overhead applied** | 3,025 |
| **Total cost of Job X784** | $8,995 |

|  |  |
| --- | --- |
| **Total cost of Job X784 (a)** | $ 8,995 |
| **Number of units (b)** | 50 |
| **Unit product cost (a) ÷ (b)** | $179.90 |

|  |  |
| --- | --- |
| **Unit product cost for Job X784** | $179.90 |
| **Markup (30% × $179.90)** | 53.97 |
| **Selling price** | $233.87 |

63) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $35,000 + ($2.20 per machine-hour × 10,000 machine-hours) = $35,000 + $22,000 = $57,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $57,000 ÷ 10,000 machine-hours = $5.70 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate× Amount of the allocation base incurred by the job = $5.70 per machine-hour × 40 machine-hours = $228

|  |  |
| --- | --- |
| **Direct materials** | $ 750 |
| **Direct labor** | 1,560 |
| **Manufacturing overhead applied** | 228 |
| **Total cost of Job T369** | $2,538 |

|  |  |
| --- | --- |
| **Total cost of Job T369 (a)** | $ 2,538 |
| **Number of units (b)** | 10 |
| **Unit product cost (a) ÷ (b)** | $253.80 |

|  |  |
| --- | --- |
| **Unit product cost for Job T369** | $253.80 |
| **Markup (20% × $253.80)** | 50.76 |
| **Selling price** | $304.56 |

64) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $378,000 + ($2.20 per direct labor-hour × 60,000 direct labor-hours) = $378,000 + $132,000 = $510,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $510,000 ÷ 60,000 direct labor-hours = $8.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate× Amount of the allocation base incurred by the job = $8.50 per direct labor-hour × 120 direct labor-hours = $1,020

|  |  |
| --- | --- |
| **Direct materials** | $ 630 |
| **Direct labor** | 2,400 |
| **Manufacturing overhead applied** | 1,020 |
| **Total cost of Job M843** | $4,050 |

|  |  |
| --- | --- |
| **Total cost of Job M843 (a)** | $4,050 |
| **Number of units (b)** | 60 |
| **Unit product cost (a) ÷ (b)** | $67.50 |

65) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $155,000 + ($3.40 per machine-hour × 50,000 machine-hours) = $155,000 + $170,000 = $325,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $325,000 ÷ 50,000 machine-hours = $6.50 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate× Amount of the allocation base incurred by the job = $6.50 per machine-hour × 100 machine-hours = $650

|  |  |
| --- | --- |
| **Direct materials** | $ 645 |
| **Direct labor** | 2,300 |
| **Manufacturing overhead applied** | 650 |
| **Total cost of Job A881** | $3,595 |

66) A

Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $99,000 + ($2.10 per machine-hour × 18,000 machine-hours)  
 = $99,000 + $37,800 = $136,800  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $136,800 ÷ 18,000 machine-hours = $7.60 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.60 per machine-hour × 90 machine-hours = $684  
 Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $70,400 + ($3.70 per direct labor-hour × 8,000 direct labor-hours)  
 = $70,400 + $29,600 = $100,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $100,000 ÷ 8,000 direct labor-hours = $12.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.50 per direct labor-hour × 60 direct labor-hours = $750

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Finishing** | **Total** |
| **Direct materials** | $940 | $ 350 | $1,290 |
| **Direct labor** | $960 | $1,920 | 2,880 |
| **Manufacturing overhead applied** | $684 | $ 750 | 1,434 |
| **Total cost of Job T617** |  |  | $5,604 |

67) A

Machining Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 9,400 |
| **Estimated variable manufacturing overhead ($1.80 per machine-hour × 2,000 machine-hours)** | 3,600 |
| **Estimated total manufacturing overhead cost (a)** | $13,000 |
| **Estimated total machine-hours (b)** | 2,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 6.50 per machine-hour |

Assembly Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 8,100 |
| **Estimated variable manufacturing overhead ($2.40 per machine-hour × 3,000 machine-hours)** | 7,200 |
| **Estimated total manufacturing overhead cost (a)** | $15,300 |
| **Estimated total machine-hours (b)** | 3,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 5.10 per machine-hour |

Manufacturing overhead applied to Job L:

|  |  |
| --- | --- |
| **Machining ($6.50 per machine-hour × 600 machine-hours)** | $ 3,900 |
| **Assembly ($5.10 per machine-hour × 1,800 machine-hours)** | 9,180 |
| **Total manufacturing overhead applied** | $13,080 |

The selling price for Job L would be calculated as follows:

|  |  |
| --- | --- |
| **Direct materials** | $ 7,100 |
| **Direct labor cost** | 6,700 |
| **Manufacturing overhead applied** | 13,080 |
| **Total manufacturing cost** | $26,880 |
| **Markup (50%)** | 13,440 |
| **Selling price** | $40,320 |

68) A

Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $110,500 + ($1.60 per machine-hour × 17,000 machine-hours)  
 = $110,500 + $27,200 = $137,700  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $137,700 ÷ 17,000 machine-hours = $8.10 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.10 per machine-hour × 70 machine-hours = $567  
 Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $78,300 + ($3.30 per direct labor-hour × 9,000 direct labor-hours)  
 = $78,300 + $29,700 = $108,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $108,000 ÷ 9,000 direct labor-hours = $12.00 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.00 per direct labor-hour × 50 direct labor-hours = $600

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Finishing** | **Total** |
| **Direct materials** | $650 | $ 330 | $ 980 |
| **Direct labor** | $380 | $1,900 | 2,280 |
| **Manufacturing overhead applied** | $567 | $600 | 1,167 |
| **Total cost of Job A948** |  |  | $4,427 |

|  |  |
| --- | --- |
| **Total cost of Job A948** | $4,427.00 |
| **Markup ($4,427.00 × 40%)** | 1,770.80 |
| **Selling price** | $6,197.80 |

69) B

Casting Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $10,200 |
| **Estimated variable manufacturing overhead ($1.20 per machine-hour × 2,000 machine-hours)** | 2,400 |
| **Estimated total manufacturing overhead cost (a)** | $12,600 |
| **Estimated total machine-hours (b)** | 2,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 6.30 per machine-hour |

Finishing Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $19,200 |
| **Estimated variable manufacturing overhead ($2.20 per machine-hour × 8,000 machine-hours)** | 17,600 |
| **Estimated total manufacturing overhead cost (a)** | $36,800 |
| **Estimated total machine-hours (b)** | 8,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 4.60 per machine-hour |

Manufacturing overhead applied to Job F:

|  |  |
| --- | --- |
| **Casting ($6.30 per machine-hour × 1,400 machine-hours)** | $ 8,820 |
| **Finishing ($4.60 per machine-hour × 3,200 machine-hours)** | 14,720 |
| **Total manufacturing overhead applied** | $23,540 |

The selling price for Job F would be calculated as follows:

|  |  |
| --- | --- |
| **Direct materials** | $14,400 |
| **Direct labor cost** | 22,500 |
| **Manufacturing overhead applied** | 23,540 |
| **Total manufacturing cost** | $60,440 |
| **Markup (50%)** | 30,220 |
| **Selling price** | $90,660 |

70) D

Machining Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $4,700 |
| **Estimated variable manufacturing overhead ($1.10 per machine-hour × 1,000 machine-hours)** | 1,100 |
| **Estimated total manufacturing overhead cost (a)** | $5,800 |
| **Estimated total machine-hours (b)** | 1,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 5.80 per machine-hour |

Customizing Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 9,200 |
| **Estimated variable manufacturing overhead ($2.60 per machine-hour × 4,000 machine-hours)** | 10,400 |
| **Estimated total manufacturing overhead cost (a)** | $19,600 |
| **Estimated total machine-hours (b)** | 4,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 4.90 per machine-hour |

Manufacturing overhead applied to Job K:

|  |  |
| --- | --- |
| **Machining ($5.80 per machine-hour × 300 machine-hours)** | $ 1,740 |
| **Customizing ($4.90 per machine-hour × 2,400 machine-hours)** | 11,760 |
| **Total manufacturing overhead applied** | $13,500 |

71) D

Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $120,600 + ($2.00 per machine-hour × 18,000 machine-hours)  
 = $120,600 + $36,000 = $156,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $156,600 ÷ 18,000 machine-hours = $8.70 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.70 per machine-hour × 50 machine-hours = $435  
 Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $76,300 + ($4.30 per direct labor-hour × 7,000 direct labor-hours)  
 = $76,300 + $30,100 = $106,400  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $106,400 ÷ 7,000 direct labor-hours = $15.20 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $15.20 per direct labor-hour × 40 direct labor-hours = $608  
 Overhead applied to Job T818

|  |  |
| --- | --- |
| **Milling Department** | $ 435 |
| **Assembly Department** | 608 |
| **Total** | $1,043 |

72) C

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $102,600 + ($2.10 per machine-hour × 18,000 machine-hours)  
 = $102,600 + $37,800 = $140,400  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $140,400 ÷ 18,000 machine-hours = $7.80 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.80 per machine-hour × 80 machine-hours = $624

73) C

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $62,400 + ($4.50 per direct labor-hour ×6,000 direct labor-hours)  
 = $62,400 + $27,000 = $89,400  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $89,400 ÷ 6,000 direct labor-hours = $14.90 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $14.90 per direct labor-hour × 70 direct labor-hours = $1,043

74) C

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $68,600 + ($3.80 per direct labor-hour × 7,000 direct labor-hours)  
 = $68,600 + $26,600 = $95,200  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $95,200 ÷ 7,000 direct labor-hours = $13.60 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.60 per direct labor-hour × 60 direct labor-hours = $816

75) C

Forming Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $37,100 |
| **Estimated variable manufacturing overhead**  **($1.70 per machine-hour × 7,000 machine-hours)** | 11,900 |
| **Estimated total manufacturing overhead cost (a)** | $49,000 |
| **Estimated total machine-hours (b)** | 7,000 Machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 7.00 per Machine-hour |

Assembly Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 9,000 |
| **Estimated variable manufacturing overhead**  **($2.60 per machine-hour × 3,000 machine-hours)** | 7,800 |
| **Estimated total manufacturing overhead cost (a)** | $16,800 |
| **Estimated total machine-hours (b)** | 3,000 Machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 5.60 per Machine-hour |

Manufacturing overhead applied to Job B:

|  |  |
| --- | --- |
| **Forming ($7.00 per Machine-hour × 4,800 Machine-hours)** | $33,600 |
| **Assembly ($5.60 per Machine-hour × 1,200 Machine-hours)** | 6,720 |
| **Total manufacturing overhead applied** | $40,320 |

76) C

Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $118,400 + ($2.10 per machine-hour × 16,000 machine-hours)  
 = $118,400 + $33,600 = $152,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $152,000 ÷ 16,000 machine-hours = $9.50 per machine-hour

77) D

Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $57,400 + ($3.40 per direct labor-hour × 7,000 direct labor-hours)  
 = $57,400 + $23,800 = $81,200  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $81,200 ÷ 7,000 direct labor-hours = $11.60 per direct labor-hour

78) B

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $86,400 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)  
 = $86,400 + $24,000 = $110,400

79) D

Casting Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $5,700 |
| **Estimated variable manufacturing overhead**  **($1.30 per machine-hour × 1,000 machine-hours)** | 1,300 |
| **Estimated total manufacturing overhead cost (a)** | $7,000 |
| **Estimated total machine-hours (b)** | 1,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 7.00 per machine-hour |

80) A

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $110,200 + ($2.00 per machine-hour × 19,000 machine-hours)  
 = $110,200 + $38,000 = $148,200

81) C

Assembly Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $4,600 |
| **Estimated variable manufacturing overhead ($2.50 per machine-hour × 2,000 machine-hours)** | 5,000 |
| **Estimated total manufacturing overhead cost (a)** | $9,600 |
| **Estimated total machine-hours (b)** | 2,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 4.80 per machine-hour |

82) B

Manufacturing overhead applied to Work in Process:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Fabrication** | **Assembly** | **Total** |
| **Predetermined overhead rate (a)** | $ 30 per machine-hour | $ 12 per direct labor-hour |  |
| **Actual total amount of the allocation base (b)** | 40 machine-hours | 25 direct labor-hours |  |
| **Manufacturing overhead applied (a) × (b)** | $1,200 | $300 | $1,500 |

83) A

Manufacturing overhead applied = Predetermined overhead rate × Amount of the allocation base incurred  
 $10,500 = 0.70 × Direct labor cost  
 Direct labor cost = $10,500 ÷ 0.70 = $15,000

84) A

Manufacturing overhead applied = Predetermined overhead rate × Amount of the allocation base incurred  
 $10,000 = 0.80 × Direct labor cost  
 Direct labor cost = $10,000 ÷ 0.80 = $12,500

85) D

|  |  |
| --- | --- |
| **Predetermined overhead rate (a)** | $ 22.30 |
| **Actual activity level (b)** | 18,200 |
| **Manufacturing overhead applied (a) × (b)** | $405,860 |

86) A

|  |  |
| --- | --- |
| **Predetermined overhead rate** | $ 23.60 |
| **Actual activity level** | 28,100 |
| **Manufacturing overhead applied** | $663,160 |

87) C

|  |  |
| --- | --- |
| **Direct materials** | $2,461 |
| **Direct labor (74 direct labor-hours × $18 per direct labor-hour)** | 1,332 |
| **Overhead (137 machine-hours × $19 per machine-hour)** | 2,603 |
| **Total manufacturing cost for Job 910** | $6,396 |

88) C

|  |  |
| --- | --- |
| **Direct materials** | $3,193 |
| **Direct labor (21 direct labor-hours × $12.00 per direct labor-hour)** | 252 |
| **Overhead (166 machine-hours × $15.00 per machine-hour)** | 2,490 |
| **Total manufacturing cost for Job 910** | $5,935 |

89) C

Department A manufacturing overhead = Predetermined overhead rate × Amount of the allocation base incurred  
 $80,000 = 200% × Direct labor  
 Direct labor = $40,000  
 Department B manufacturing overhead = Predetermined overhead rate × Amount of the allocation base incurred  
 = 50% × $60,000 = $30,000

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Department A** | **Department B** | **Total** |
| **Direct materials** | $ 50,000 | $ 10,000 |  |
| **Direct labor** | 40,000 | $ 60,000 |  |
| **Manufacturing overhead** | $ 80,000 | 30,000 |  |
| **Total product cost** | 170,000 | $100,000 | $270,000 |

90) D

|  |  |
| --- | --- |
| **Direct materials** | $2,132 |
| **Direct labor (40 direct labor-hours × $17 per direct labor-hour)** | 680 |
| **Overhead (238 machine-hours × $23 per machine-hour)** | 5,474 |
| **Total manufacturing cost for Job 450** | $8,286 |

91) D

|  |  |
| --- | --- |
| **Direct materials** | $3,044 |
| **Direct labor (46 direct labor-hours × $15.00 per direct labor-hour)** | 690 |
| **Overhead (104 machine-hours × $13.00 per machine-hour)** | 1,352 |
| **Total manufacturing cost for Job 450** | $5,086 |

92) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $416,000 + ($3.10 per machine-hour × 80,000 machine-hours) = $416,000 + $248,000 = $664,000

93) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $416,000 + ($3.10 per machine-hour × 80,000 machine-hours) = $416,000 + $248,000 = $664,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $664,000 ÷ 80,000 machine-hours = $8.30 per machine-hour

94) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $36,000 + ($2.80 per direct labor-hour × 10,000 direct labor-hours) = $36,000 + $28,000 = $64,000

95) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $36,000 + ($2.80 per direct labor-hour × 10,000 direct labor-hours) = $36,000 + $28,000 = $64,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $64,000 ÷ 10,000 direct labor-hours = $6.40 per direct labor-hour

96) D

The first step is to calculate the estimated total overhead costs in the two departments.  
 Machining

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $39,200 |
| **Estimated variable manufacturing overhead ($1.90 per machine-hour × 7,000 machine-hours)** | 13,300 |
| **Estimated total manufacturing overhead cost** | $52,500 |

Assembly

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 6,600 |
| **Estimated variable manufacturing overhead ($2.10 per machine-hour × 3,000 machine-hours)** | 6,300 |
| **Estimated total manufacturing overhead cost** | $12,900 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($52,500 + $12,900 = $65,400) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $65,400 |
| **Estimated total machine hours** | 10,000 machine-hours |
| **Predetermined overhead rate** | $6.54 per machine-hour |

97) C

The first step is to calculate the estimated total overhead costs in the two departments.  
 Machining

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $39,200 |
| **Estimated variable manufacturing overhead ($1.90 per machine-hour × 7,000 machine-hours)** | 13,300 |
| **Estimated total manufacturing overhead cost** | $52,500 |

Assembly

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 6,600 |
| **Estimated variable manufacturing overhead ($2.10 per machine-hour × 3,000 machine-hours)** | 6,300 |
| **Estimated total manufacturing overhead cost** | $12,900 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($52,500 + $12,900 = $65,400) to calculate the plantwide predetermined overhead rate as follow:

|  |  |  |
| --- | --- | --- |
| **Estimated total manufacturing overhead cost** | $65,400 |  |
| **Estimated total machine hours** | 10,000 machine-hours |  |
| **Predetermined overhead rate** | $ 6.54 per machine-hour |  |

The overhead applied to Job B is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $6.54 per machine-hour × (4,800 machine-hours + 1,200 machine-hours)  
 = $6.54 per machine-hour × (6,000 machine-hours)  
 = $39,240

98) B

The first step is to calculate the estimated total overhead costs in the two departments.  
 Machining

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $39,200 |
| **Estimated variable manufacturing overhead ($1.90 per machine-hour × 7,000 machine-hours)** | 13,300 |
| **Estimated total manufacturing overhead cost** | $52,500 |

Assembly

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 6,600 |
| **Estimated variable manufacturing overhead ($2.10 per machine-hour × 3,000 machine-hours)** | 6,300 |
| **Estimated total manufacturing overhead cost** | $12,900 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($52,500 + $12,900 = $65,400) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $65,400 |
| **Estimated total machine hours** | 10,000 machine-hours |
| **Predetermined overhead rate** | $ 6.54 per machine-hour |

The overhead applied to Job G is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $6.54 per machine-hour × (2,200 machine-hours + 1,800 machine-hours)  
 = $6.54 per machine-hour × (4,000 machine-hours)  
 = $26,160

99) D

|  |  |
| --- | --- |
| **Estimated total fixed manufacturing overhead (a)** | $310,000 |
| **Estimated activity level (b)** | 20,000 |
| **Predetermined overhead rate (a) ÷ (b)** | $ 15.50 |

100) D

|  |  |
| --- | --- |
| **Estimated total fixed manufacturing overhead (a)** | $310,000 |
| **Estimated activity level (b)** | 20,000 |
| **Predetermined overhead rate (a) ÷ (b)** | $ 15.50 |
| **Actual activity level** | 18,300 |
| **Manufacturing overhead applied** | $283,650 |

101) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $90,000 + ($3.70 per direct labor-hour × 50,000 direct labor-hours) = $90,000 + $185,000 = $275,000

102) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $90,000 + ($3.70 per direct labor-hour × 50,000 direct labor-hours) = $90,000 + $185,000 = $275,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $275,000 ÷ 50,000 direct labor-hours = $5.50 per direct labor-hour

103) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $90,000 + ($3.70 per direct labor-hour × 50,000 direct labor-hours) = $90,000 + $185,000 = $275,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $275,000 ÷ 50,000 direct labor-hours = $5.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $5.50 per direct labor-hour × 150 direct labor-hours = $825

104) D

|  |  |
| --- | --- |
| **Estimated total fixed manufacturing overhead (a)** | $738,000 |
| **Estimated activity level (b)** | 30,000 |
| **Predetermined overhead rate (a) ÷ (b)** | $ 24.60 |

105) C

|  |  |
| --- | --- |
| **Estimated total fixed manufacturing overhead (a)** | $738,000 |
| **Estimated activity level (b)** | 30,000 |
| **Predetermined overhead rate (a) ÷ (b)** | $ 24.60 |
| **Actual activity level** | 31,500 |
| **Manufacturing overhead applied** | $774,900 |

106) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $312,000 + ($2.10 per machine-hour × 80,000 machine-hours) = $312,000 + $168,000 = $480,000

107) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $312,000 + ($2.10 per machine-hour × 80,000 machine-hours) = $312,000 + $168,000 = $480,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $480,000 ÷ 80,000 machine-hours = $6.00 per machine-hour

108) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $312,000 + ($2.10 per machine-hour × 80,000 machine-hours) = $312,000 + $168,000 = $480,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $480,000 ÷ 80,000 machine-hours = $6.00 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $6.00 per machine-hour × 200 machine-hours = $1,200

109) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $96,000 + ($3.00 per direct labor-hour × 40,000 direct labor-hours) = $96,000 + $120,000 = $216,000

110) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $96,000 + ($3.00 per direct labor-hour × 40,000 direct labor-hours) = $96,000 + $120,000 = $216,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $216,000 ÷ 40,000 direct labor-hours = $5.40 per direct labor-hour

111) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $96,000 + ($3.00 per direct labor-hour × 40,000 direct labor-hours) = $96,000 + $120,000 = $216,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $216,000 ÷ 40,000 direct labor-hours = $5.40 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $5.40 per direct labor-hour × 100 direct labor-hours = $540

112) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $202,100 + ($2.00 per direct labor-hour × 47,000 direct labor-hours) = $202,100 + $94,000 = $296,100  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $296,100 ÷ 47,000 direct labor-hours = $6.30 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $6.30 per direct labor-hour × 100 direct labor-hours = $630

|  |  |
| --- | --- |
| **Direct materials** | $ 850 |
| **Direct labor** | 4,700 |
| **Manufacturing overhead applied** | 630 |
| **Total cost of Job P951** | $6,180 |

113) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $96,000 + ($3.00 per direct labor-hour × 40,000 direct labor-hours) = $96,000 + $120,000 = $216,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $216,000 ÷ 40,000 direct labor-hours = $5.40 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $5.40 per direct labor-hour × 100 direct labor-hours = $540

|  |  |
| --- | --- |
| **Direct materials** | $ 755 |
| **Direct labor** | 4,000 |
| **Manufacturing overhead applied** | 540 |
| **Total cost of Job P951** | $5,295 |

114) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $279,000 + ($5.00 per direct labor-hour × 90,000 direct labor-hours) = $279,000 + $450,000 = $729,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $729,000 ÷ 90,000 direct labor-hours = $8.10 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.10 per direct labor-hour × 100 direct labor-hours = $810

|  |  |
| --- | --- |
| **Direct materials** | $ 700 |
| **Direct labor** | 9,000 |
| **Manufacturing overhead applied** | 810 |
| **Total cost of Job P951** | $10,510 |

|  |  |
| --- | --- |
| **Total cost of Job P951 (a)** | $10,510 |
| **Number of units (b)** | 25 |
| **Unit product cost (a) ÷ (b)** | $420.40 |

115) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $96,000 + ($3.00 per direct labor-hour × 40,000 direct labor-hours) = $96,000 + $120,000 = $216,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $216,000 ÷ 40,000 direct labor-hours = $5.40 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $5.40 per direct labor-hour × 100 direct labor-hours = $540

|  |  |
| --- | --- |
| **Direct materials** | $ 755 |
| **Direct labor** | 4,000 |
| **Manufacturing overhead applied** | 540 |
| **Total cost of Job P951** | $5,295 |

|  |  |
| --- | --- |
| **Total cost of Job P951 (a)** | $5,295 |
| **Number of units (b)** | 20 |
| **Unit product cost (a) ÷ (b)** | $264.75 |

116) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $160,000 + ($3.40 per direct labor-hour × 80,000 direct labor-hours) = $160,000 + $272,000 = $432,000

117) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $160,000 + ($3.40 per direct labor-hour × 80,000 direct labor-hours) = $160,000 + $272,000 = $432,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $432,000 ÷ 80,000 direct labor-hours = $5.40 per direct labor-hour

118) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $160,000 + ($3.40 per direct labor-hour × 80,000 direct labor-hours) = $160,000 + $272,000 = $432,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $432,000 ÷ 80,000 direct labor-hours = $5.40 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $5.40 per direct labor-hour × 250 direct labor-hours = $1,350

119) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $160,000 + ($3.40 per direct labor-hour × 80,000 direct labor-hours) = $160,000 + $272,000 = $432,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $432,000 ÷ 80,000 direct labor-hours = $5.40 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $5.40 per direct labor-hour × 250 direct labor-hours = $1,350

|  |  |
| --- | --- |
| **Direct materials** | $ 715 |
| **Direct labor** | 9,000 |
| **Manufacturing overhead applied** | 1,350 |
| **Total cost of Job A578** | $11,065 |

120) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $176,000 + ($2.20 per machine-hour × 20,000 machine-hours) = $176,000 + $44,000 = $220,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $220,000 ÷ 20,000 machine-hours = $11.00 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.00 per machine-hour × 200 machine-hours = $2,200

121) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $176,000 + ($2.20 per machine-hour × 20,000 machine-hours) = $176,000 + $44,000 = $220,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $220,000 ÷ 20,000 machine-hours = $11.00 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.00 per machine-hour × 200 machine-hours = $2,200

|  |  |
| --- | --- |
| **Direct materials** | $ 540 |
| **Direct labor** | 7,200 |
| **Manufacturing overhead applied** | 2,200 |
| **Total cost of Job P505** | $9,940 |

122) C

The first step is to calculate the estimated total overhead costs in the two departments.  
 Molding

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $20,000 |
| **Estimated variable manufacturing overhead**  **($2.50 per machine-hour × 6,500 machine-hours)** | 16,250 |
| **Estimated total manufacturing overhead cost** | $36,250 |

Finishing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 5,000 |
| **Estimated variable manufacturing overhead**  **($5.00 per machine-hour × 3,500 machine-hours)** | 17,500 |
| **Estimated total manufacturing overhead cost** | $22,500 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($36,250 + $22,500 = $58,750) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $58,750 |
| **Estimated total machine hours** | 10,000machine-hours |
| **Predetermined overhead rate** | $ 5.88per machine-hour |

The overhead applied to Job M is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
   
 = $5.88 per machine-hour × (4,000 machine-hours + 1,000 machine-hours)  
 = $5.88 per machine-hour × (5,000 machine-hours)  
 = $29,400  
 Job M’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $10,100 |
| **Direct labor cost** | 10,400 |
| **Manufacturing overhead applied** | 29,400 |
| **Total manufacturing cost** | $49,900 |

123) C

The first step is to calculate the estimated total overhead costs in the two departments.  
 Molding

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $19,600 |
| **Estimated variable manufacturing overhead**  **($1.10 per machine-hour × 4,000 machine-hours)** | 4,400 |
| **Estimated total manufacturing overhead cost** | $24,000 |

Finishing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $2,400 |
| **Estimated variable manufacturing overhead**  **($2.10 per machine-hour × 1,000 machine-hours)** | 2,100 |
| **Estimated total manufacturing overhead cost** | $4,500 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($24,000 + $4,500 = $28,500) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $28,500 |
| **Estimated total machine hours** | 5,000machine-hours |
| **Predetermined overhead rate** | $ 5.70per machine-hour |

The overhead applied to Job M is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
   
 = $5.70 per machine-hour × (1,300 machine-hours + 600 machine-hours)  
 = $5.70 per machine-hour × (1,900 machine-hours)  
 = $10,830  
 Job M’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $ 7,500 |
| **Direct labor cost** | 7,400 |
| **Manufacturing overhead applied** | 10,830 |
| **Total manufacturing cost** | $25,730 |

124) B

The first step is to calculate the estimated total overhead costs in the two departments.  
 Molding

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $27,000 |
| **Estimated variable manufacturing overhead**  **($1.50 per machine-hour × 6,500 machine-hours)** | 9,750 |
| **Estimated total manufacturing overhead cost** | $36,750 |

Finishing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 3,100 |
| **Estimated variable manufacturing overhead**  **($3.00 per machine-hour × 3,500 machine-hours)** | 10,500 |
| **Estimated total manufacturing overhead cost** | $13,600 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($36,750 + $13,600 = $50,350) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $50,350 |
| **Estimated total machine hours** | 10,000machine-hours |
| **Predetermined overhead rate** | $ 5.04per machine-hour |

The overhead applied to Job A is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.04 per machine-hour × (2,500 machine-hours + 2,500 machine-hours)  
 = $5.04 per machine-hour × (5,000 machine-hours)  
 = $25,200  
 Job A’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $14,200 |
| **Direct labor cost** | 21,400 |
| **Manufacturing overhead applied** | 25,200 |
| **Total manufacturing cost** | $60,800 |

The selling price for Job A:

|  |  |
| --- | --- |
| **Total manufacturing cost** | $60,800 |
| **Markup (30%)** | 18,240 |
| **Selling price** | $79,040 |

125) B

The first step is to calculate the estimated total overhead costs in the two departments.  
 Molding

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $19,600 |
| **Estimated variable manufacturing overhead**  **($1.10 per machine-hour × 4,000 machine-hours)** | 4,400 |
| **Estimated total manufacturing overhead cost** | $24,000 |

Finishing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $2,400 |
| **Estimated variable manufacturing overhead**  **($2.10 per machine-hour × 1,000 machine-hours)** | 2,100 |
| **Estimated total manufacturing overhead cost** | $4,500 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($24,000 + $4,500 = $28,500) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $28,500 |
| **Estimated total machine hours** | 5,000machine-hours |
| **Predetermined overhead rate** | $ 5.70per machine-hour |

The overhead applied to Job A is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.70 per machine-hour × (2,700 machine-hours + 400 machine-hours)  
 = $5.70 per machine-hour × (3,100 machine-hours)  
 = $17,670  
 Job A’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $13,600 |
| **Direct labor cost** | 20,700 |
| **Manufacturing overhead applied** | 17,670 |
| **Total manufacturing cost** | $51,970 |

The selling price for Job A:

|  |  |
| --- | --- |
| **Total manufacturing cost** | $51,970 |
| **Markup (40%)** | 20,788 |
| **Selling price** | $72,758 |

126) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $497,000 + ($2.40 per direct labor-hour × 70,000 direct labor-hours) = $497,000 + $168,000 = $665,000

127) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $497,000 + ($2.40 per direct labor-hour × 70,000 direct labor-hours) = $497,000 + $168,000 = $665,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $665,000 ÷ 70,000 direct labor-hours = $9.50 per direct labor-hour

128) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $497,000 + ($2.40 per direct labor-hour × 70,000 direct labor-hours) = $497,000 + $168,000 = $665,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $665,000 ÷ 70,000 direct labor-hours = $9.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.50 per direct labor-hour × 80 direct labor-hours = $760

129) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $497,000 + ($2.40 per direct labor-hour × 70,000 direct labor-hours) = $497,000 + $168,000 = $665,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $665,000 ÷ 70,000 direct labor-hours = $9.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.50 per direct labor-hour × 80 direct labor-hours = $760

|  |  |
| --- | --- |
| **Direct materials** | $ 950 |
| **Direct labor** | 2,720 |
| **Manufacturing overhead applied** | 760 |
| **Total cost of Job T498** | $4,430 |

130) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $497,000 + ($2.40 per direct labor-hour × 70,000 direct labor-hours) = $497,000 + $168,000 = $665,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $665,000 ÷ 70,000 direct labor-hours = $9.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.50 per direct labor-hour × 80 direct labor-hours = $760

|  |  |
| --- | --- |
| **Direct materials** | $ 950 |
| **Direct labor** | 2720 |
| **Manufacturing overhead applied** | 760 |
| **Total cost of Job T498** | $4,430 |

|  |  |
| --- | --- |
| **Total cost of Job T498 (a)** | $4,430 |
| **Number of units (b)** | 40 |
| **Unit product cost (a) ÷ (b)** | $110.75 |

131) C

The first step is to calculate the estimated total overhead costs in the two departments.  
 Machining

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $4,700 |
| **Estimated variable manufacturing overhead**  **($1.20 per machine-hour × 1,000 machine-hours)** | 1,200 |
| **Estimated total manufacturing overhead cost** | $5,900 |

Assembly

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $10,800 |
| **Estimated variable manufacturing overhead**  **($2.20 per machine-hour × 4,000 machine-hours)** | 8,800 |
| **Estimated total manufacturing overhead cost** | $19,600 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($5,900 + $19,600 = $25,500) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $25,500 |
| **Estimated total machine hours** | 5,000machine-hours |
| **Predetermined overhead rate** | $ 5.10per machine-hour |

The overhead applied to Job F is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.10 per machine-hour × (700 machine-hours + 1,600 machine-hours)  
 = $5.10 per machine-hour × (2,300 machine-hours)  
 = $11,730  
 Job F’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $13,000 |
| **Direct labor cost** | 20,400 |
| **Manufacturing overhead applied** | 11,730 |
| **Total manufacturing cost** | $45,130 |

132) B

The first step is to calculate the estimated total overhead costs in the two departments.  
 Machining

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $4,700 |
| **Estimated variable manufacturing overhead**  **($1.20 per machine-hour × 1,000 machine-hours)** | 1,200 |
| **Estimated total manufacturing overhead cost** | $5,900 |

Assembly

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $10,800 |
| **Estimated variable manufacturing overhead**  **($2.20 per machine-hour × 4,000 machine-hours)** | 8,800 |
| **Estimated total manufacturing overhead cost** | $19,600 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($5,900 + $19,600 = $25,500) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $25,500 |
| **Estimated total machine hours** | 5,000machine-hours |
| **Predetermined overhead rate** | $ 5.10per machine-hour |

The overhead applied to Job M is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.10 per machine-hour × (300 machine-hours + 2,400 machine-hours)  
 = $5.10 per machine-hour × (2,700 machine-hours)  
 = $13,770  
 Job M’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $ 7,400 |
| **Direct labor cost** | 8,800 |
| **Manufacturing overhead applied** | 13,770 |
| **Total manufacturing cost** | $29,970 |

The selling price for Job M:

|  |  |
| --- | --- |
| **Total manufacturing cost** | $29,970 |
| **Markup (40%)** | 11,988 |
| **Selling price** | $41,958 |

133) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $33,000 + ($2.50 per direct labor-hour × 10,000 direct labor-hours) = $33,000 + $25,000 = $58,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $58,000 ÷ 10,000 direct labor-hours = $5.80 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate× Amount of the allocation base incurred by the job = $5.80 per direct labor-hour × 140 direct labor-hours = $812

134) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $33,000 + ($2.50 per direct labor-hour × 10,000 direct labor-hours) = $33,000 + $25,000 = $58,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $58,000 ÷ 10,000 direct labor-hours = $5.80 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate× Amount of the allocation base incurred by the job = $5.80 per direct labor-hour × 140 direct labor-hours = $812

|  |  |
| --- | --- |
| **Direct materials** | $ 455 |
| **Direct labor** | 5,320 |
| **Manufacturing overhead applied** | 812 |
| **Total cost of Job K332** | $6,587 |

135) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $33,000 + ($2.50 per direct labor-hour × 10,000 direct labor-hours) = $33,000 + $25,000 = $58,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $58,000 ÷ 10,000 direct labor-hours = $5.80 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate× Amount of the allocation base incurred by the job = $5.80 per direct labor-hour × 140 direct labor-hours = $812

|  |  |
| --- | --- |
| **Direct materials** | $ 455 |
| **Direct labor** | 5,320 |
| **Manufacturing overhead applied** | 812 |
| **Total cost of Job K332** | $6,587 |

|  |  |
| --- | --- |
| **Total cost of Job K332 (a)** | $6,587 |
| **Number of units (b)** | 70 |
| **Unit product cost (a) ÷ (b)** | $94.10 |

136) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $162,000 + ($2.80 per direct labor-hour × 60,000 direct labor-hours) = $162,000 + $168,000 = $330,000

137) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $162,000 + ($2.80 per direct labor-hour × 60,000 direct labor-hours) = $162,000 + $168,000 = $330,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $330,000 ÷ 60,000 direct labor-hours = $5.50 per direct labor-hour

138) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $162,000 + ($2.80 per direct labor-hour × 60,000 direct labor-hours) = $162,000 + $168,000 = $330,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $330,000 ÷ 60,000 direct labor-hours = $5.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $5.50 per direct labor-hour × 50 direct labor-hours = $275

139) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $162,000 + ($2.80 per direct labor-hour × 60,000 direct labor-hours) = $162,000 + $168,000 = $330,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $330,000 ÷ 60,000 direct labor-hours = $5.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate× Amount of the allocation base incurred by the job = $5.50 per direct labor-hour × 50 direct labor-hours = $275

|  |  |
| --- | --- |
| **Direct materials** | $ 920 |
| **Direct labor** | 1,400 |
| **Manufacturing overhead applied** | 275 |
| **Total cost of Job K818** | $2,595 |

140) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $162,000 + ($2.80 per direct labor-hour × 60,000 direct labor-hours) = $162,000 + $168,000 = $330,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $330,000 ÷ 60,000 direct labor-hours = $5.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $5.50 per direct labor-hour × 50 direct labor-hours = $275

|  |  |
| --- | --- |
| **Direct materials** | $ 920 |
| **Direct labor** | 1,400 |
| **Manufacturing overhead applied** | 275 |
| **Total cost of Job K818** | $2,595 |

|  |  |
| --- | --- |
| **Total cost of Job K818 (a)** | $2,595 |
| **Number of units (b)** | 10 |
| **Unit product cost (a) ÷ (b)** | $259.50 |

141) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $162,000 + ($2.80 per direct labor-hour × 60,000 direct labor-hours) = $162,000 + $168,000 = $330,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $330,000 ÷ 60,000 direct labor-hours = $5.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $5.50 per direct labor-hour × 50 direct labor-hours = $275

|  |  |
| --- | --- |
| **Direct materials** | $ 920 |
| **Direct labor** | 1,400 |
| **Manufacturing overhead applied** | 275 |
| **Total cost of Job K818** | $2,595 |

|  |  |
| --- | --- |
| **Total cost of Job K818 (a)** | $2,595 |
| **Number of units (b)** | 10 |
| **Unit product cost (a) ÷ (b)** | $259.50 |

|  |  |
| --- | --- |
| **Unit product cost for Job K818** | $259.50 |
| **Markup (40% × $259.50)** | 103.80 |
| **Selling price** | $363.30 |

142) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $252,000 + ($2.10 per machine-hour × 30,000 machine-hours) = $252,000 + $63,000 = $315,000

143) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $252,000 + ($2.10 per machine-hour × 30,000 machine-hours) = $252,000 + $63,000 = $315,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $315,000 ÷ 30,000 machine-hours = $10.50 per machine-hour

144) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $220,500 + ($6 per machine-hour × 31,500 machine-hours) = $220,500 + $189,000 = $409,500  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $409,500 ÷ 31,500 machine-hours = $13 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.00 per machine-hour × 40 machine-hours = $520

145) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $252,000 + ($2.10 per machine-hour × 30,000 machine-hours) = $252,000 + $63,000 = $315,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $315,000 ÷ 30,000 machine-hours = $10.50 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate× Amount of the allocation base incurred by the job = $10.50 per machine-hour × 30 machine-hours = $315

146) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $577,800 + ($5 per machine-hour × 32,100 machine-hours) = $577,800 + $160,500 = $738,300  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $738,300 ÷ 32,100 machine-hours = $23 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $23 per machine-hour × 30 machine-hours = $690

|  |  |
| --- | --- |
| **Direct materials** | $ 595 |
| **Direct labor** | 1,190 |
| **Manufacturing overhead applied** | 690 |
| **Total cost of Job T687** | $2,475 |

147) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $252,000 + ($2.10 per machine-hour × 30,000 machine-hours) = $252,000 + $63,000 = $315,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $315,000 ÷ 30,000 machine-hours = $10.50 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $10.50 per machine-hour × 30 machine-hours = $315

|  |  |
| --- | --- |
| **Direct materials** | $ 675 |
| **Direct labor** | 1,050 |
| **Manufacturing overhead applied** | 315 |
| **Total cost of Job T687** | $2,040 |

148) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $352,000 + ($3 per machine-hour × 32,000 machine-hours) = $352,000 + $96,000 = $448,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $448,000 ÷ 32,000 machine-hours = $14 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $14 per machine-hour × 40 machine-hours = $560

|  |  |
| --- | --- |
| **Direct materials** | $ 675 |
| **Direct labor** | 1,350 |
| **Manufacturing overhead applied** | 560 |
| **Total cost of Job T687** | $2,585 |

|  |  |
| --- | --- |
| **Total cost of Job T687 (a)** | $2,585 |
| **Number of units (b)** | 10 |
| **Unit product cost (a) ÷ (b)** | $258.50 |

149) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $252,000 + ($2.10 per machine-hour × 30,000 machine-hours) = $252,000 + $63,000 = $315,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $315,000 ÷ 30,000 machine-hours = $10.50 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $10.50 per machine-hour × 30 machine-hours = $315

|  |  |
| --- | --- |
| **Direct materials** | $ 675 |
| **Direct labor** | 1,050 |
| **Manufacturing overhead applied** | 315 |
| **Total cost of Job T687** | $2,040 |

|  |  |
| --- | --- |
| **Total cost of Job T687 (a)** | $2,040 |
| **Number of units (b)** | 10 |
| **Unit product cost (a) ÷ (b)** | $204.00 |

150) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $159,000 + ($2.00 per machine-hour × 31,800 machine-hours) = $159,000 + $63,600 = $222,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $222,600 ÷ 31,800 machine-hours = $7 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7 per machine-hour × 30 machine-hours = $210

|  |  |
| --- | --- |
| **Direct materials** | $ 660 |
| **Direct labor** | 1,320 |
| **Manufacturing overhead applied** | 210 |
| **Total cost of Job T687** | $2,190 |

|  |  |
| --- | --- |
| **Total cost of Job T687 (a)** | $2,190 |
| **Number of units (b)** | 10 |
| **Unit product cost (a) ÷ (b)** | $219.00 |

|  |  |
| --- | --- |
| **Unit product cost for Job T687** | $219.00 |
| **Markup (40% × $219.00)** | 87.60 |
| **Selling price** | $306.60 |

151) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $252,000 + ($2.10 per machine-hour × 30,000 machine-hours) = $252,000 + $63,000 = $315,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $315,000 ÷ 30,000 machine-hours = $10.50 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $10.50 per machine-hour × 30 machine-hours = $315

|  |  |
| --- | --- |
| **Direct materials** | $ 675 |
| **Direct labor** | 1,050 |
| **Manufacturing overhead applied** | 315 |
| **Total cost of Job T687** | $2,040 |

|  |  |
| --- | --- |
| **Total cost of Job T687 (a)** | $2,040 |
| **Number of units (b)** | 10 |
| **Unit product cost (a) ÷ (b)** | $204.00 |

|  |  |
| --- | --- |
| **Unit product cost for Job T687** | $204.00 |
| **Markup (40% × $204.00)** | 81.60 |
| **Selling price** | $285.60 |

152) A

The first step is to calculate the estimated total overhead costs in the two departments.  
 Casting

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $27,500 |
| **Estimated variable manufacturing overhead**  **($1.70 per machine-hour × 5,000 machine-hours)** | 8,500 |
| **Estimated total manufacturing overhead cost** | $36,000 |

Customizing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $10,500 |
| **Estimated variable manufacturing overhead**  **($2.60 per machine-hour × 5,000 machine-hours)** | 13,000 |
| **Estimated total manufacturing overhead cost** | $23,500 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($36,000 + $23,500 = $59,500) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $59,500 |
| **Estimated total machine hours** | 10,000machine-hours |
| **Predetermined overhead rate** | $ 5.95per machine-hour |

The overhead applied to Job C is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.95 per machine-hour × (3,400 machine-hours + 2,000 machine-hours)  
 = $5.95 per machine-hour × (5,400 machine-hours)  
 = $32,130

153) A

The first step is to calculate the estimated total overhead costs in the two departments.  
 Casting

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $27,500 |
| **Estimated variable manufacturing overhead**  **($1.70 per machine-hour × 5,000 machine-hours)** | 8,500 |
| **Estimated total manufacturing overhead cost** | $36,000 |

Customizing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $10,500 |
| **Estimated variable manufacturing overhead**  **($2.60 per machine-hour × 5,000 machine-hours)** | 13,000 |
| **Estimated total manufacturing overhead cost** | $23,500 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($36,000 + $23,500 = $59,500) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $59,500 |
| **Estimated total machine hours** | 10,000machine-hours |
| **Predetermined overhead rate** | $ 5.95per machine-hour |

The overhead applied to Job G is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.95 per machine-hour × (1,600 machine-hours + 3,000 machine-hours)  
 = $5.95 per machine-hour × (4,600 machine-hours)  
 = $27,370  
 Job G’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $ 6,800 |
| **Direct labor cost** | 7,900 |
| **Manufacturing overhead applied** | 27,370 |
| **Total manufacturing cost** | $42,070 |

154) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $624,000 + ($3.10 per machine-hour × 80,000 machine-hours) = $624,000 + $248,000 = $872,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $872,000 ÷ 80,000 machine-hours = $10.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $10.90 per machine-hour × 300 machine-hours = $3,270

155) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $624,000 + ($3.10 per machine-hour × 80,000 machine-hours) = $624,000 + $248,000 = $872,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $872,000 ÷ 80,000 machine-hours = $10.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate× Amount of the allocation base incurred by the job = $10.90 per machine-hour × 300 machine-hours = $3,270

|  |  |
| --- | --- |
| **Direct materials** | $ 645 |
| **Direct labor** | 9,000 |
| **Manufacturing overhead applied** | 3,270 |
| **Total cost of Job M598** | $12,915 |

156) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $624,000 + ($3.10 per machine-hour × 80,000 machine-hours) = $624,000 + $248,000 = $872,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $872,000 ÷ 80,000 machine-hours = $10.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $10.90 per machine-hour × 300 machine-hours = $3,270

|  |  |
| --- | --- |
| **Direct materials** | $ 645 |
| **Direct labor** | 9,000 |
| **Manufacturing overhead applied** | 3,270 |
| **Total cost of Job M598** | $12,915 |

|  |  |
| --- | --- |
| **Total cost of Job M598 (a)** | $12,915 |
| **Number of units (b)** | 60 |
| **Unit product cost (a) ÷ (b)** | $215.25 |

157) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $624,000 + ($3.10 per machine-hour × 80,000 machine-hours) = $624,000 + $248,000 = $872,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $872,000 ÷ 80,000 machine-hours = $10.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $10.90 per machine-hour × 300 machine-hours = $3,270

|  |  |
| --- | --- |
| **Direct materials** | $ 645 |
| **Direct labor** | 9,000 |
| **Manufacturing overhead applied** | 3,270 |
| **Total cost of Job M598** | $12,915 |

|  |  |
| --- | --- |
| **Total cost of Job M598 (a)** | $12,915 |
| **Number of units (b)** | 60 |
| **Unit product cost (a) ÷ (b)** | $215.25 |

|  |  |
| --- | --- |
| **Unit product cost for Job M598** | $215.25 |
| **Markup (40% × $215.25)** | 86.10 |
| **Selling price** | $301.35 |

158) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $58,000 + ($2.00 per machine-hour × 20,000 machine-hours) = $58,000 + $40,000 = $98,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $98,000 ÷ 20,000 machine-hours = $4.90 per machine-hour

159) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $58,000 + ($2.00 per machine-hour × 20,000 machine-hours) = $58,000 + $40,000 = $98,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $98,000 ÷ 20,000 machine-hours = $4.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $4.90 per machine-hour × 80 machine-hours = $392

160) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $58,000 + ($2.00 per machine-hour × 20,000 machine-hours) = $58,000 + $40,000 = $98,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $98,000 ÷ 20,000 machine-hours = $4.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $4.90 per machine-hour × 80 machine-hours = $392

|  |  |
| --- | --- |
| **Direct materials** | $ 500 |
| **Direct labor** | 2,640 |
| **Manufacturing overhead applied** | 392 |
| **Total cost of Job P978** | $3,532 |

161) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $58,000 + ($2.00 per machine-hour × 20,000 machine-hours) = $58,000 + $40,000 = $98,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $98,000 ÷ 20,000 machine-hours = $4.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $4.90 per machine-hour × 80 machine-hours = $392

|  |  |
| --- | --- |
| **Direct materials** | $ 500 |
| **Direct labor** | 2,640 |
| **Manufacturing overhead applied** | 392 |
| **Total cost of Job P978** | $3,532 |

|  |  |
| --- | --- |
| **Total cost of Job P978 (a)** | $3,532 |
| **Number of units (b)** | 20 |
| **Unit product cost (a) ÷ (b)** | $176.60 |

162) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $58,000 + ($2.00 per machine-hour × 20,000 machine-hours) = $58,000 + $40,000 = $98,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $98,000 ÷ 20,000 machine-hours = $4.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $4.90 per machine-hour × 80 machine-hours = $392

|  |  |
| --- | --- |
| **Direct materials** | $ 500 |
| **Direct labor** | 2,640 |
| **Manufacturing overhead applied** | 392 |
| **Total cost of Job P978** | $3,532 |

|  |  |
| --- | --- |
| **Total cost of Job P978 (a)** | $3,532 |
| **Number of units (b)** | 20 |
| **Unit product cost (a) ÷ (b)** | $176.60 |

|  |  |
| --- | --- |
| **Unit product cost for Job P978** | $176.60 |
| **Markup (30% × $176.60)** | 52.98 |
| **Selling price** | $229.58 |

163) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $294,000 + ($2.30 per machine-hour × 70,000 machine-hours) = $294,000 + $161,000 = $455,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $455,000 ÷ 70,000 machine-hours = $6.50 per machine-hour

164) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $294,000 + ($2.30 per machine-hour × 70,000 machine-hours) = $294,000 + $161,000 = $455,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $455,000 ÷ 70,000 machine-hours = $6.50 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $6.50 per machine-hour × 80 machine-hours = $520

165) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $294,000 + ($2.30 per machine-hour × 70,000 machine-hours) = $294,000 + $161,000 = $455,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $455,000 ÷ 70,000 machine-hours = $6.50 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $6.50 per machine-hour × 80 machine-hours = $520

|  |  |
| --- | --- |
| **Direct materials** | $ 665 |
| **Direct labor** | 1,840 |
| **Manufacturing overhead applied** | 520 |
| **Total cost of Job M825** | $3,025 |

166) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $294,000 + ($2.30 per machine-hour × 70,000 machine-hours) = $294,000 + $161,000 = $455,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $455,000 ÷ 70,000 machine-hours = $6.50 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $6.50 per machine-hour × 80 machine-hours = $520

|  |  |
| --- | --- |
| **Direct materials** | $ 665 |
| **Direct labor** | 1,840 |
| **Manufacturing overhead applied** | 520 |
| **Total cost of Job M825** | $3,025 |

|  |  |
| --- | --- |
| **Total cost of Job M825 (a)** | $3,025 |
| **Number of units (b)** | 20 |
| **Unit product cost (a) ÷ (b)** | $151.25 |

167) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $294,000 + ($2.30 per machine-hour × 70,000 machine-hours) = $294,000 + $161,000 = $455,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $455,000 ÷ 70,000 machine-hours = $6.50 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $6.50 per machine-hour × 80 machine-hours = $520

|  |  |
| --- | --- |
| **Direct materials** | $ 665 |
| **Direct labor** | 1,840 |
| **Manufacturing overhead applied** | 520 |
| **Total cost of Job M825** | $3,025 |

|  |  |
| --- | --- |
| **Total cost of Job M825 (a)** | $3,025 |
| **Number of units (b)** | 20 |
| **Unit product cost (a) ÷ (b)** | $151.25 |

|  |  |
| --- | --- |
| **Unit product cost for Job M825** | $151.25 |
| **Markup (40% × $151.25)** | 60.50 |
| **Selling price** | $211.75 |

168) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $462,000 + ($2.20 per machine-hour × 60,000 machine-hours) = $462,000 + $132,000 = $594,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $594,000 ÷ 60,000 machine-hours = $9.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.90 per machine-hour × 80 machine-hours = $792

169) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $462,000 + ($2.20 per machine-hour × 60,000 machine-hours) = $462,000 + $132,000 = $594,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $594,000 ÷ 60,000 machine-hours = $9.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.90 per machine-hour × 80 machine-hours = $792

|  |  |
| --- | --- |
| **Direct materials** | $ 940 |
| **Direct labor** | 2,240 |
| **Manufacturing overhead applied** | 792 |
| **Total cost of Job X455** | $3,972 |

170) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $462,000 + ($2.20 per machine-hour × 60,000 machine-hours) = $462,000 + $132,000 = $594,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $594,000 ÷ 60,000 machine-hours = $9.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.90 per machine-hour × 80 machine-hours = $792

|  |  |
| --- | --- |
| **Direct materials** | $ 940 |
| **Direct labor** | 2,240 |
| **Manufacturing overhead applied** | 792 |
| **Total cost of Job X455** | $3,972 |

|  |  |
| --- | --- |
| **Total cost of Job X455 (a)** | $3,972 |
| **Number of units (b)** | 20 |
| **Unit product cost (a) ÷ (b)** | $198.60 |

171) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $234,000 + ($2.60 per machine-hour × 30,000 machine-hours) = $234,000 + $78,000 = $312,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $312,000 ÷ 30,000 machine-hours = $10.40 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $10.40 per machine-hour × 80 machine-hours = $832

|  |  |
| --- | --- |
| **Direct materials** | $ 790 |
| **Direct labor** | 1,580 |
| **Manufacturing overhead applied** | 832 |
| **Total cost of Job X455** | $3,202 |

|  |  |
| --- | --- |
| **Total cost of Job X455 (a)** | $3,202 |
| **Number of units (b)** | 20 |
| **Unit product cost (a) ÷ (b)** | $160.10 |

|  |  |
| --- | --- |
| **Unit product cost for Job X455** | $160.10 |
| **Markup (20% × $160.10)** | 32.02 |
| **Selling price** | $192.12 |

172) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $462,000 + ($2.20 per machine-hour × 60,000 machine-hours) = $462,000 + $132,000 = $594,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $594,000 ÷ 60,000 machine-hours = $9.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.90 per machine-hour × 80 machine-hours = $792

|  |  |
| --- | --- |
| **Direct materials** | $ 940 |
| **Direct labor** | 2,240 |
| **Manufacturing overhead applied** | 792 |
| **Total cost of Job X455** | $3,972 |

|  |  |
| --- | --- |
| **Total cost of Job X455 (a)** | $3,972 |
| **Number of units (b)** | 20 |
| **Unit product cost (a) ÷ (b)** | $198.60 |

|  |  |
| --- | --- |
| **Unit product cost for Job X455** | $198.60 |
| **Markup (20% × $198.60)** | 39.72 |
| **Selling price** | $238.32 |

173) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $237,000 + ($3.90 per machine-hour × 30,000 machine-hours) = $237,000 + $117,000 = $354,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $354,000 ÷ 30,000 machine-hours = $11.80 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.80 per machine-hour × 80 machine-hours = $944

174) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $237,000 + ($3.90 per machine-hour × 30,000 machine-hours) = $237,000 + $117,000 = $354,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $354,000 ÷ 30,000 machine-hours = $11.80 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.80 per machine-hour × 80 machine-hours = $944

|  |  |
| --- | --- |
| **Direct materials** | $ 500 |
| **Direct labor** | 2,160 |
| **Manufacturing overhead applied** | 944 |
| **Total cost of Job A496** | $3,604 |

175) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $488,400 + ($2.70 per machine-hour × 74,000 machine-hours) = $488,400 + $199,800 = $688,200  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $688,200 ÷ 74,000 machine-hours = $9.30 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.30 per machine-hour × 80 machine-hours = $744

|  |  |
| --- | --- |
| **Direct materials** | $930 |
| **Direct labor** | 1,860 |
| **Manufacturing overhead applied** | 744 |
| **Total cost of Job A496** | $3,534 |

|  |  |
| --- | --- |
| **Total cost of Job A496 (a)** | $3,534 |
| **Number of units (b)** | 20 |
| **Unit product cost (a) ÷ (b)** | $176.70 |

176) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $237,000 + ($3.90 per machine-hour × 30,000 machine-hours) = $237,000 + $117,000 = $354,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $354,000 ÷ 30,000 machine-hours = $11.80 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.80 per machine-hour × 80 machine-hours = $944

|  |  |
| --- | --- |
| **Direct materials** | $ 500 |
| **Direct labor** | 2,160 |
| **Manufacturing overhead applied** | 944 |
| **Total cost of Job A496** | $3,604 |

|  |  |
| --- | --- |
| **Total cost of Job A496 (a)** | $3,604 |
| **Number of units (b)** | 20 |
| **Unit product cost (a) ÷ (b)** | $180.20 |

177) D

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $237,000 + ($3.90 per machine-hour × 30,000 machine-hours) = $237,000 + $117,000 = $354,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $354,000 ÷ 30,000 machine-hours = $11.80 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.80 per machine-hour × 80 machine-hours = $944

|  |  |
| --- | --- |
| **Direct materials** | $ 500 |
| **Direct labor** | 2,160 |
| **Manufacturing overhead applied** | 944 |
| **Total cost of Job A496** | $3,604 |

|  |  |
| --- | --- |
| **Total cost of Job A496 (a)** | $3,604 |
| **Number of units (b)** | 20 |
| **Unit product cost (a) ÷ (b)** | $180.20 |

|  |  |
| --- | --- |
| **Unit product cost for Job A496** | $180.20 |
| **Markup (40% × $180.20)** | 72.08 |
| **Selling price** | $252.28 |

178) A

The first step is to calculate the estimated total overhead costs in the two departments.  
 Machining

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $33,600 |
| **Estimated variable manufacturing overhead**  **($1.80 per machine-hour × 6,000 machine-hours)** | 10,800 |
| **Estimated total manufacturing overhead cost** | $44,400 |

Customizing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $10,000 |
| **Estimated variable manufacturing overhead**  **($2.80 per machine-hour × 4,000 machine-hours)** | 11,200 |
| **Estimated total manufacturing overhead cost** | $21,200 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($44,400 + $21,200 = $65,600) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $65,600 |
| **Estimated total machine hours** | 10,000machine-hours |
| **Predetermined overhead rate** | $ 6.56per machine-hour |

The overhead applied to Job J is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $6.56 per machine-hour × (1,900 machine-hours + 2,400 machine-hours)  
 = $6.56 per machine-hour × (4,300 machine-hours)  
 = $28,208

179) B

The first step is to calculate the estimated total overhead costs in the two departments.  
 Machining

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $33,600 |
| **Estimated variable manufacturing overhead**  **($1.80 per machine-hour × 6,000 machine-hours)** | 10,800 |
| **Estimated total manufacturing overhead cost** | $44,400 |

Customizing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $10,000 |
| **Estimated variable manufacturing overhead**  **($2.80 per machine-hour × 4,000 machine-hours)** | 11,200 |
| **Estimated total manufacturing overhead cost** | $21,200 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($44,400 + $21,200 = $65,600) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $65,600 |
| **Estimated total machine-hours** | 10,000 machine-hours |
| **Predetermined overhead rate** | $ 6.56 per machine-hour |

The overhead applied to Job C is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job  
 = $6.56 per machine-hour × (4,100 machine-hours + 1,600 machine-hours)  
 = $6.56 per machine-hour × (5,700 machine-hours )  
 = $37,392  
 Job C’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $11,300 |
| **Direct labor cost** | 18,500 |
| **Manufacturing overhead applied** | 37,392 |
| **Total manufacturing cost** | $67,192 |

180) A

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $285,000 + ($3.80 per direct labor-hour × 50,000 direct labor-hours) = $285,000 + $190,000 = $475,000

181) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $285,000 + ($3.80 per direct labor-hour × 50,000 direct labor-hours) = $285,000 + $190,000 = $475,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $475,000 ÷ 50,000 direct labor-hours = $9.50 per direct labor-hour

182) B

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $285,000 + ($3.80 per direct labor-hour × 50,000 direct labor-hours) = $285,000 + $190,000 = $475,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $475,000 ÷ 50,000 direct labor-hours = $9.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.50 per direct labor-hour × 20 direct labor-hours = $190

183) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $285,000 + ($3.80 per direct labor-hour × 50,000 direct labor-hours) = $285,000 + $190,000 = $475,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $475,000 ÷ 50,000 direct labor-hours = $9.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.50 per direct labor-hour × 20 direct labor-hours = $190

|  |  |
| --- | --- |
| **Direct materials** | $ 710 |
| **Direct labor** | 500 |
| **Manufacturing overhead applied** | 190 |
| **Total cost of Job P513** | $1,400 |

184) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $90,000 + ($3.50 per direct labor-hour × 30,000 direct labor-hours) = $90,000 + $105,000 = $195,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $195,000 ÷ 30,000 direct labor-hours = $6.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $6.50 per direct labor-hour × 100 direct labor-hours = $650

185) C

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $90,000 + ($3.50 per direct labor-hour × 30,000 direct labor-hours) = $90,000 + $105,000 = $195,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $195,000 ÷ 30,000 direct labor-hours = $6.50 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $6.50 per direct labor-hour × 100 direct labor-hours = $650

|  |  |
| --- | --- |
| **Direct materials** | $520 |
| **Direct labor** | 2,800 |
| **Manufacturing overhead applied** | 650 |
| **Total cost of Job A477** | $3,970 |

186) B

Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $77,600 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)  
 = $77,600 + $24,000 = $101,600

187) B

Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $77,600 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)  
 = $77,600 + $24,000 = $101,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $101,600 ÷8,000 direct labor-hours = $12.70 per direct labor-hour

188) A

Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $77,600 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)  
 = $77,600 + $24,000 = $101,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $101,600 ÷ 8,000 direct labor-hours = $12.70 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.70 per direct labor-hour × 40 direct labor-hours = $508

189) D

Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $129,200 + ($1.60 per machine-hour × 19,000 machine-hours)  
 = $129,200 + $30,400 = $159,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $159,600 ÷ 19,000 machine-hours = $8.40 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.40 per machine-hour × 80 machine-hours = $672  
 Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $77,600 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)  
 = $77,600 + $24,000 = $101,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $101,600 ÷ 8,000 direct labor-hours = $12.70 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.70 per direct labor-hour × 40 direct labor-hours = $508  
 Overhead applied to Job T288

|  |  |
| --- | --- |
| **Forming Department** | $ 672 |
| **Assembly Department** | 508 |
| **Total** | $1,180 |

190) D

Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $129,200 + ($1.60 per machine-hour × 19,000 machine-hours)  
 = $129,200 + $30,400 = $159,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $159,600 ÷ 19,000 machine-hours = $8.40 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.40 per machine-hour × 80 machine-hours = $672  
 Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $77,600 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)  
 = $77,600 + $24,000 = $101,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $101,600 ÷ 8,000 direct labor-hours = $12.70 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.70 per direct labor-hour × 40 direct labor-hours = $508

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Assembly** | **Total** |
| **Direct materials** | $730 | $ 380 | $1,110 |
| **Direct labor** | $900 | $1,200 | 2,100 |
| **Manufacturing overhead applied** | $672 | $ 508 | 1,180 |
| **Total cost of Job T288** |  |  | $4,390 |

191) C

Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $129,200 + ($1.60 per machine-hour × 19,000 machine-hours)  
 = $129,200 + $30,400 = $159,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $159,600 ÷ 19,000 machine-hours = $8.40 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.40 per machine-hour × 80 machine-hours = $672  
 Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $77,600 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)  
 = $77,600 + $24,000 = $101,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $101,600 ÷ 8,000 direct labor-hours = $12.70 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.70 per direct labor-hour × 40 direct labor-hours = $508

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Assembly** | **Total** |
| **Direct materials** | $730 | $ 380 | $1,110 |
| **Direct labor** | $900 | $1,200 | 2,100 |
| **Manufacturing overhead applied** | $672 | $ 508 | 1,180 |
| **Total cost of Job T288** |  |  | $4,390 |

|  |  |
| --- | --- |
| **Total cost of Job T288** | $4,390.00 |
| **Markup ($4,390.00 × 20%)** | 878.00 |
| **Selling price** | $5,268.00 |

192) B

Casting Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $4,800 |
| **Estimated variable manufacturing overhead**  **($1.80 per machine-hour × 1,000 machine-hours)** | 1,800 |
| **Estimated total manufacturing overhead cost (a)** | $6,600 |
| **Estimated total machine-hours (b)** | 1,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 6.60 per machine-hour |

Finishing Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 8,800 |
| **Estimated variable manufacturing overhead**  **($2.90 per machine-hour × 4,000 machine-hours)** | 11,600 |
| **Estimated total manufacturing overhead cost (a)** | $20,400 |
| **Estimated total machine-hours (b)** | 4,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 5.10 per machine-hour |

Manufacturing overhead applied to Job F:

|  |  |
| --- | --- |
| **Casting ($6.60 per machine-hour × 700 machine-hours)** | $ 4,620 |
| **Finishing ($5.10 per machine-hour × 1,600 machine-hours)** | 8,160 |
| **Total manufacturing overhead applied** | $12,780 |

193) D

Casting Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $4,800 |
| **Estimated variable manufacturing overhead**  **($1.80 per machine-hour × 1,000 machine-hours)** | 1,800 |
| **Estimated total manufacturing overhead cost (a)** | $6,600 |
| **Estimated total machine-hours (b)** | 1,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 6.60 per machine-hour |

Finishing Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 8,800 |
| **Estimated variable manufacturing overhead**  **($2.90 per machine-hour × 4,000 machine-hours)** | 11,600 |
| **Estimated total manufacturing overhead cost (a)** | $20,400 |
| **Estimated total machine-hours (b)** | 4,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 5.10 per machine-hour |

Manufacturing overhead applied to Job M:

|  |  |
| --- | --- |
| **Casting ($6.60 per machine-hour × 300 machine-hours)** | $ 1,980 |
| **Finishing ($5.10 per machine-hour × 2,400 machine-hours)** | 12,240 |
| **Total manufacturing overhead applied** | $14,220 |

The selling price for Job M would be calculated as follows:

|  |  |
| --- | --- |
| **Direct materials** | $ 9,000 |
| **Direct labor cost** | 7,400 |
| **Manufacturing overhead applied** | 14,220 |
| **Total manufacturing cost** | $30,620 |
| **Markup (50%)** | 15,310 |
| **Selling price** | $45,930 |

194) B

Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $96,900 + ($2.00 per machine-hour × 17,000 machine-hours)  
 = $96,900 + $34,000 = $130,900  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $130,900 ÷ 17,000 machine-hours = $7.70 per machine-hour

195) B

Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $65,800 + ($3.60 per direct labor-hour × 7,000 direct labor-hours)  
 = $65,800 + $25,200 = $91,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $91,000 ÷ 7,000 direct labor-hours = $13.00 per direct labor-hour

196) C

Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $96,900 + ($2.00 per machine-hour × 17,000 machine-hours)  
 = $96,900 + $34,000 = $130,900  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $130,900 ÷ 17,000 machine-hours = $7.70 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.70 per machine-hour × 80 machine-hours = $616  
 Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $65,800 + ($3.60 per direct labor-hour × 7,000 direct labor-hours)  
 = $65,800 + $25,200 = $91,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $91,000 ÷ 7,000 direct labor-hours = $13.00 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.00 per direct labor-hour × 40 direct labor-hours = $520

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Forming** | **Finishing** | **Total** |
| **Direct materials** | $840 | $ 350 | $1,190 |
| **Direct labor** | $750 | $1,000 | 1,750 |
| **Manufacturing overhead applied** | $616 | $ 520 | 1,136 |
| **Total cost of Job M381** |  |  | $4,076 |

197) C

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $136,800 + ($1.80 per machine-hour × 19,000 machine-hours)  
 = $136,800 + $34,200 = $171,000

198) B

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $136,800 + ($1.80 per machine-hour × 19,000 machine-hours)  
 = $136,800 + $34,200 = $171,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $171,000 ÷ 19,000 machine-hours = $9.00 per machine-hour

199) B

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $136,800 + ($1.80 per machine-hour × 19,000 machine-hours)  
 = $136,800 + $34,200 = $171,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $171,000 ÷ 19,000 machine-hours = $9.00 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.00 per machine-hour × 90 machine-hours = $810

200) A

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $136,800 + ($1.80 per machine-hour × 19,000 machine-hours)  
 = $136,800 + $34,200 = $171,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $171,000 ÷ 19,000 machine-hours = $9.00 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.00 per machine-hour × 90 machine-hours = $810  
 Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $69,600 + ($3.20 per direct labor-hour × 8,000 direct labor-hours)  
 = $69,600 + $25,600 = $95,200  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $95,200 ÷ 8,000 direct labor-hours = $11.90 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.90 per direct labor-hour × 50 direct labor-hours = $595  
 Overhead applied to Job K928

|  |  |
| --- | --- |
| **Machining Department** | $ 810 |
| **Finishing Department** | 595 |
| **Total** | $1,405 |

201) B

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $136,800 + ($1.80 per machine-hour × 19,000 machine-hours)  
 = $136,800 + $34,200 = $171,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $171,000 ÷ 19,000 machine-hours = $9.00 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.00 per machine-hour × 90 machine-hours = $810  
 Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $69,600 + ($3.20 per direct labor-hour × 8,000 direct labor-hours)  
 = $69,600 + $25,600 = $95,200  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $95,200 ÷ 8,000 direct labor-hours = $11.90 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.90 per direct labor-hour × 50 direct labor-hours = $595

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Finishing** | **Total** |
| **Direct materials** | $775 | $ 415 | $1,190 |
| **Direct labor** | $630 | $1,050 | 1,680 |
| **Manufacturing overhead applied** | $810 | $ 595 | 1,405 |
| **Total cost of Job K928** |  |  | $4,275 |

202) C

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $136,800 + ($1.80 per machine-hour × 19,000 machine-hours)  
 = $136,800 + $34,200 = $171,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $171,000 ÷ 19,000 machine-hours = $9.00 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.00 per machine-hour × 90 machine-hours = $810  
 Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $69,600 + ($3.20 per direct labor-hour × 8,000 direct labor-hours)  
 = $69,600 + $25,600 = $95,200  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $95,200 ÷ 8,000 direct labor-hours = $11.90 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.90 per direct labor-hour × 50 direct labor-hours = $595

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Finishing** | **Total** |
| **Direct materials** | $775 | $ 415 | $1,190 |
| **Direct labor** | $630 | $1,050 | 1,680 |
| **Manufacturing overhead applied** | $810 | $ 595 | 1,405 |
| **Total cost of Job K928** |  |  | $4,275 |

|  |  |
| --- | --- |
| **Total cost of Job K928** | $4,275.00 |
| **Markup ($4,275.00 × 20%)** | 855.00 |
| **Selling price** | $5,130.00 |

203) C

The first step is to calculate the estimated total overhead costs in the two departments.  
 Machining

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $4,800 |
| **Estimated variable manufacturing overhead**  **($1.10 per machine-hour × 1,000 machine-hours)** | 1,100 |
| **Estimated total manufacturing overhead cost** | $5,900 |

Customizing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $23,400 |
| **Estimated variable manufacturing overhead**  **($2.50 per machine-hour × 9,000 machine-hours)** | 22,500 |
| **Estimated total manufacturing overhead cost** | $45,900 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($5,900 + $45,900 = $51,800) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $51,800 |
| **Estimated total machine-hours** | 10,000 machine-hours |
| **Predetermined overhead rate** | $ 5.18 per machine-hour |

The overhead applied to Job A is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.18 per machine-hour × (700 machine-hours + 3,600 machine-hours)  
 = $5.18 per machine-hour × (4,300 machine-hours)  
 = $22,274  
 Job A’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $12,000 |
| **Direct labor cost** | 20,700 |
| **Manufacturing overhead applied** | 22,274 |
| **Total manufacturing cost** | $54,974 |

The selling price for Job A:

|  |  |
| --- | --- |
| **Total manufacturing cost** | $54,974 |
| **Markup (50%)** | 27,487 |
| **Selling price** | $82,461 |

204) B

The first step is to calculate the estimated total overhead costs in the two departments.  
 Machining

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $4,800 |
| **Estimated variable manufacturing overhead**  **($1.10 per machine-hour × 1,000 machine-hours)** | 1,100 |
| **Estimated total manufacturing overhead cost** | $5,900 |

Customizing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $23,400 |
| **Estimated variable manufacturing overhead**  **($2.50 per machine-hour × 9,000 machine-hours)** | 22,500 |
| **Estimated total manufacturing overhead cost** | $45,900 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($5,900 + $45,900 = $51,800) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $51,800 |
| **Estimated total machine-hours** | 10,000 machine-hours |
| **Predetermined overhead rate** | $ 5.18 per machine-hour |

The overhead applied to Job J is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.18 per machine-hour × (300 machine-hours + 5,400 machine-hours)  
 = $5.18 per machine-hour × (5,700 machine-hours)  
 = $29,526  
 Job J’s manufacturing cost:

|  |  |
| --- | --- |
| **Direct materials** | $7,700 |
| **Direct labor cost** | 6,400 |
| **Manufacturing overhead applied** | 29,526 |
| **Total manufacturing cost** | $43,626 |

The selling price for Job J:

|  |  |
| --- | --- |
| **Total manufacturing cost** | $43,626 |
| **Markup (50%)** | 21,813 |
| **Selling price** | $65,439 |

205) C

Machining Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $4,800 |
| **Estimated variable manufacturing overhead**  **($1.10 per machine-hour × 1,000 machine-hours)** | 1,100 |
| **Estimated total manufacturing overhead cost (a)** | $5,900 |
| **Estimated total machine-hours (b)** | 1,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 5.90 per machine-hour |

Customizing Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $23,400 |
| **Estimated variable manufacturing overhead**  **($2.50 per machine-hour × 9,000 machine-hours)** | 22,500 |
| **Estimated total manufacturing overhead cost (a)** | $45,900 |
| **Estimated total machine-hours (b)** | 9,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 5.10 per machine-hour |

Manufacturing overhead applied to Job A:

|  |  |
| --- | --- |
| **Machining ($5.90 per machine-hour × 700 machine-hours)** | $ 4,130 |
| **Customizing ($5.10 per machine-hour × 3,600 machine-hours)** | 18,360 |
| **Total manufacturing overhead applied** | $22,490 |

The selling price for Job A would be calculated as follows:

|  |  |
| --- | --- |
| **Direct materials** | $12,000 |
| **Direct labor cost** | 20,700 |
| **Manufacturing overhead applied** | 22,490 |
| **Total manufacturing cost** | $55,190 |
| **Markup (50%)** | 27,595 |
| **Selling price** | $82,785 |

206) A

Machining Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $4,800 |
| **Estimated variable manufacturing overhead**  **($1.10 per machine-hour × 1,000 machine-hours)** | 1,100 |
| **Estimated total manufacturing overhead cost (a)** | $5,900 |
| **Estimated total machine-hours (b)** | 1,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 5.90 per machine-hour |

Customizing Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $23,400 |
| **Estimated variable manufacturing overhead**  **($2.50 per machine-hour × 9,000 machine-hours)** | 22,500 |
| **Estimated total manufacturing overhead cost (a)** | $45,900 |
| **Estimated total machine-hours (b)** | 9,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 5.10 per machine-hour |

Manufacturing overhead applied to Job J:

|  |  |
| --- | --- |
| **Machining ($5.90 per machine-hour × 300 machine-hours)** | $ 1,770 |
| **Customizing ($5.10 per machine-hour × 5,400 machine-hours)** | 27,540 |
| **Total manufacturing overhead applied** | $29,310 |

The selling price for Job J would be calculated as follows:

|  |  |
| --- | --- |
| **Direct materials** | $7,700 |
| **Direct labor cost** | 6,400 |
| **Manufacturing overhead applied** | 29,310 |
| **Total manufacturing cost** | $43,410 |
| **Markup (50%)** | 21,705 |
| **Selling price** | $65,115 |

207) D

Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $113,400 + ($1.60 per machine-hour × 18,000 machine-hours)  
 = $113,400 + $28,800 = $142,200  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $142,200 ÷ 18,000 machine-hours = $7.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.90 per machine-hour × 60 machine-hours = $474

208) B

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $64,400 + ($3.90 per direct labor-hour × 7,000 direct labor-hours)  
 = $64,400 + $27,300 = $91,700  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $91,700 ÷ 7,000 direct labor-hours = $13.10 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.10 per direct labor-hour × 60 direct labor-hours = $786

209) B

Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $154,000 + ($1.70 per machine-hour × 28,000 machine-hours)  
 = $154,000 + $47,600 = $201,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $201,600 ÷ 28,000 machine-hours = $7.20 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.20 per machine-hour × 30 machine-hours = $216  
 Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $36,900 + ($3.20 per direct labor-hour × 9,000 direct labor-hours)  
 = $36,900 + $28,800 = $65,700  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $65,700 ÷ 9,000 direct labor-hours = $7.30 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.30 per direct labor-hour × 50 direct labor-hours = $365

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Milling** | **Customizing** | **Total** |
| **Direct materials** | $560 | $210 | $ 770 |
| **Direct labor** | $640 | $630 | 1,270 |
| **Manufacturing overhead applied** | $216 | $365 | 581 |
| **Total cost of Job A319** |  |  | $2,621 |

|  |  |
| --- | --- |
| **Total cost of Job A319** | $2,621 |
| **Markup ($2,621 × 20%)** | 524 |
| **Selling price** | $3,145 |

210) B

Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $113,400 + ($1.60 per machine-hour × 18,000 machine-hours)  
 = $113,400 + $28,800 = $142,200  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $142,200 ÷ 18,000 machine-hours = $7.90 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.90 per machine-hour × 60 machine-hours = $474  
 Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $64,400 + ($3.90 per direct labor-hour × 7,000 direct labor-hours)  
 = $64,400 + $27,300 = $91,700  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $91,700 ÷ 7,000 direct labor-hours = $13.10 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.10 per direct labor-hour × 60 direct labor-hours = $786

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Milling** | **Customizing** | **Total** |
| **Direct materials** | $655 | $ 305 | $ 960 |
| **Direct labor** | $400 | $1,200 | 1,600 |
| **Manufacturing overhead applied** | $474 | $ 786 | 1,260 |
| **Total cost of Job A319** |  |  | $3,820 |

|  |  |
| --- | --- |
| **Total cost of Job A319** | $3,820.00 |
| **Markup ($3,820.00 × 20%)** | 764.00 |
| **Selling price** | $4,584.00 |

211) C

Machining Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $26,500 |
| **Estimated variable manufacturing overhead**  **($2.00 per machine-hour × 5,000 machine-hours)** | 10,000 |
| **Estimated total manufacturing overhead cost (a)** | $36,500 |
| **Estimated total machine-hours (b)** | 5,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 7.30 per machine-hour |

Finishing Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $13,500 |
| **Estimated variable manufacturing overhead**  **($3.00 per machine-hour × 5,000 machine-hours)** | 15,000 |
| **Estimated total manufacturing overhead cost (a)** | $28,500 |
| **Estimated total machine-hours (b)** | 5,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 5.70 per machine-hour |

Manufacturing overhead applied to Job L:

|  |  |
| --- | --- |
| **Machining ($7.30 per machine-hour × 1,600 machine-hours)** | $11,680 |
| **Finishing ($5.70 per machine-hour × 3,000 machine-hours)** | 17,100 |
| **Total manufacturing overhead applied** | $28,780 |

212) D

Machining Department predetermined overhead rate:

|  |  |  |
| --- | --- | --- |
| **Estimated fixed manufacturing overhead** | $ 26,500 |  |
| **Estimated variable manufacturing overhead ($2.00 per MH × 5,000 MHs)** | 10,000 |  |
| **Estimated total manufacturing overhead cost (a)** | $ 36,500 |  |
| **Estimated total machine-hours (b)** | 5,000 | MHs |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 7.30 | per MH |

Finishing Department predetermined overhead rate:

|  |  |  |
| --- | --- | --- |
| **Estimated fixed manufacturing overhead** | $ 13,500 |  |
| **Estimated variable manufacturing overhead ($3.00 per MH × 5,000 MHs)** | 15,000 |  |
| **Estimated total manufacturing overhead cost (a)** | $ 28,500 |  |
| **Estimated total machine-hours (b)** | 5,000 | MHs |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 5.70 | per MH |

Manufacturing overhead applied to Job C:

|  |  |
| --- | --- |
| **Machining ($7.30 per MH × 3,400 MHs)** | $ 24,820 |
| **Finishing ($5.70 per MH × 2,000 MHs)** | 11,400 |
| **Total manufacturing overhead applied** | $ 36,220 |

The selling price for Job C would be calculated as follows:

|  |  |
| --- | --- |
| **Direct materials** | $ 12,500 |
| **Direct labor cost** | 20,200 |
| **Manufacturing overhead applied** | 36,220 |
| **Total manufacturing cost** | $ 68,920 |
| **Markup (20%)** | 13,784 |
| **Selling price** | $ 82,704 |

213) D

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour ×  
 Total machine-hours in the department)  
 = $102,000 + ($1.70 per machine-hour × 17,000 machine-hours)  
 = $102,000 + $28,900 = $130,900  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation  
 base incurred = $130,900 ÷ 17,000 machine-hours = $7.70 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.70 per machine-hour × 80 machine-hours = $616  
 Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct  
 labor-hour × Total direct labor-hours in the department)  
 = $61,200 + ($4.10 per direct labor-hour × 6,000 direct labor-hours) = $61,200 + $24,600 = $85,800  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $85,800 ÷ 6,000 direct labor-hours = $14.30 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $14.30 per direct labor-hour × 50 direct labor-hours = $715  
 Overhead applied to Job T268

|  |  |
| --- | --- |
| **Machining Department** | $ 616 |
| **Customizing Department** | 715 |
| **Total** | $1,331 |

214) C

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $102,000 + ($1.70 per machine-hour × 17,000 machine-hours)  
 = $102,000 + $28,900 = $130,900  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $130,900 ÷ 17,000 machine-hours = $7.70 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.70 per machine-hour × 80 machine-hours = $616  
 Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $61,200 + ($4.10 per direct labor-hour × 6,000 direct labor-hours)  
 = $61,200 + $24,600 = $85,800  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $85,800 ÷ 6,000 direct labor-hours = $14.30 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $14.30 per direct labor-hour × 50 direct labor-hours = $715

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Customizing** | **Total** |
| **Direct materials** | $720 | $ 380 | $1,100 |
| **Direct labor** | $900 | $1,500 | 2,400 |
| **Manufacturing overhead applied** | $616 | $ 715 | 1,331 |
| **Total cost of Job T268** |  |  | $4,831 |

215) B

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $102,000 + ($1.70 per machine-hour × 17,000 machine-hours)  
 = $102,000 + $28,900 = $130,900  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $130,900 ÷ 17,000 machine-hours = $7.70 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.70 per machine-hour × 80 machine-hours = $616  
 Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $61,200 + ($4.10 per direct labor-hour × 6,000 direct labor-hours)  
 = $61,200 + $24,600 = $85,800  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $85,800 ÷ 6,000 direct labor-hours = $14.30 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $14.30 per direct labor-hour × 50 direct labor-hours = $715

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Machining** | **Customizing** | **Total** |
| **Direct materials** | $720 | $ 380 | $1,100 |
| **Direct labor** | $900 | $1,500 | 2,400 |
| **Manufacturing overhead applied** | $616 | $ 715 | 1,331 |
| **Total cost of Job T268** |  |  | $4,831 |

|  |  |
| --- | --- |
| **Total cost of Job T268** | $4,831.00 |
| **Markup ($4,831.00 × 40%)** | 1,932.40 |
| **Selling price** | $6,763.40 |

216) A

The first step is to calculate the estimated total overhead costs in the two departments.  
 Forming

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $16,500 |
| **Estimated variable manufacturing overhead ($1.70 per machine-hour × 3,000 machine-hours)** | 5,100 |
| **Estimated total manufacturing overhead cost** | $21,600 |

Customizing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $20,300 |
| **Estimated variable manufacturing overhead ($2.50 per machine-hour × 7,000 machine-hours)** | 17,500 |
| **Estimated total manufacturing overhead cost** | $37,800 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($21,600 + $37,800 = $59,400) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $59,400 |
| **Estimated total machine hours** | 10,000 machine-hours |
| **Predetermined overhead rate** | $5.94 per machine-hour |

The overhead applied to Job A is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.94 per machine-hour × (2,000 machine-hours + 2,800 machine-hours)  
 = $5.94 per machine-hour × (4,800 machine-hours)  
 = $28,512

217) C

The first step is to calculate the estimated total overhead costs in the two departments.  
 Forming

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $16,500 |
| **Estimated variable manufacturing overhead ($1.70 per machine-hour × 3,000 machine-hours)** | 5,100 |
| **Estimated total manufacturing overhead cost** | $21,600 |

Customizing

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $20,300 |
| **Estimated variable manufacturing overhead ($2.50 per machine-hour × 7,000 machine-hours)** | 17,500 |
| **Estimated total manufacturing overhead cost** | $37,800 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($21,600 + $37,800 = $59,400) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $59,400 |
| **Estimated total machine hours** | 10,000 machine-hours |
| **Predetermined overhead rate** | $ 5.94 per machine-hour |

The overhead applied to Job H is calculated as follows:  
 Overhead applied to a particular job = Predetermined overhead rate × Machine-hours incurred by the job  
 = $5.94 per machine-hour × (1,000 machine-hours + 4,200 machine-hours)  
 = $5.94 per machine-hour × (5,200 machine-hours)  
 = $30,888

218) D

Forming Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $16,500 |
| **Estimated variable manufacturing overhead ($1.70 per machine-hour × 3,000 machine-hours)** | 5,100 |
| **Estimated total manufacturing overhead cost (a)** | $21,600 |
| **Estimated total machine-hours (b)** | 3,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $7.20 per machine-hour |

Customizing Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $20,300 |
| **Estimated variable manufacturing overhead ($2.50 per machine-hour × 7,000 machine-hours)** | 17,500 |
| **Estimated total manufacturing overhead cost (a)** | $37,800 |
| **Estimated total machine-hours (b)** | 7,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $5.40 per machine-hour |

Manufacturing overhead applied to Job A:

|  |  |
| --- | --- |
| **Forming ($7.20 per machine-hour × 2,000 machine-hours)** | $14,400 |
| **Customizing ($5.40 per machine-hour × 2,800 machine-hours)** | 15,120 |
| **Total manufacturing overhead applied** | $29,520 |

219) C

Forming Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $16,500 |
| **Estimated variable manufacturing overhead ($1.70 per machine-hour × 3,000 machine-hours)** | 5,100 |
| **Estimated total manufacturing overhead cost (a)** | $21,600 |
| **Estimated total machine-hours (b)** | 3,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $7.20 per machine-hour |

Customizing Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $20,300 |
| **Estimated variable manufacturing overhead ($2.50 per machine-hour × 7,000 machine-hours)** | 17,500 |
| **Estimated total manufacturing overhead cost (a)** | $37,800 |
| **Estimated total machine-hours (b)** | 7,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $5.40 per machine-hour |

Manufacturing overhead applied to Job H:

|  |  |
| --- | --- |
| **Forming ($7.20 per machine-hour × 1,000 machine-hours)** | $ 7,200 |
| **Customizing ($5.40 per machine-hour × 4,200 machine-hours)** | 22,680 |
| **Total manufacturing overhead applied** | $29,880 |

220) A

Casting Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $129,200 + ($1.80 per machine-hour × 17,000 machine-hours)  
 = $129,200 + $30,600 = $159,800  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $159,800 ÷ 17,000 machine-hours = $9.40 per machine-hour

221) D

Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $46,500 + ($3.80 per direct labor-hour × 5,000 direct labor-hours)  
 = $46,500 + $19,000 = $65,500  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $65,500 ÷ 5,000 direct labor-hours = $13.10 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.10 per direct labor-hour × 60 direct labor-hours = $786

222) A

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $135,000 + ($1.20 per machine-hour × 25,000 machine-hours)  
 = $135,000 + $30,000 = $165,000

223) A

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $104,000 + ($2.10 per machine-hour × 16,000 machine-hours)  
 = $104,000 + $33,600 = $137,600

224) D

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $56,400 + ($3.30 per direct labor-hour × 6,000 direct labor-hours)  
 = $56,400 + $19,800 = $76,200

225) D

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $104,000 + ($2.10 per machine-hour × 16,000 machine-hours)  
 = $104,000 + $33,600 = $137,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $137,600 ÷ 16,000 machine-hours = $8.60 per machine-hour

226) B

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $56,400 + ($3.30 per direct labor-hour × 6,000 direct labor-hours)  
 = $56,400 + $19,800 = $76,200  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $76,200 ÷ 6,000 direct labor-hours = $12.70 per direct labor-hour

227) C

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $104,000 + ($2.10 per machine-hour × 16,000 machine-hours)  
 = $104,000 + $33,600 = $137,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $137,600 ÷ 16,000 machine-hours = $8.60 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.60 per machine-hour × 60 machine-hours = $516

228) B

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $56,400 + ($3.30 per direct labor-hour × 6,000 direct labor-hours)  
 = $56,400 + $19,800 = $76,200  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $76,200 ÷ 6,000 direct labor-hours = $12.70 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.70 per direct labor-hour × 60 direct labor-hours = $762

229) C

Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $138,000 + ($2.30 per machine-hour × 20,000 machine-hours)  
 = $138,000 + $46,000 = $184,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $184,000 ÷ 20,000 machine-hours = $9.20 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.20 per machine-hour × 80 machine-hours = $736

230) C

Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $58,100 + ($3.00 per direct labor-hour × 7,000 direct labor-hours)  
 = $58,100 + $21,000 = $79,100  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $79,100 ÷ 7,000 direct labor-hours = $11.30 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.30 per direct labor-hour × 50 direct labor-hours = $565

231) C

Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $52,800 + ($3.80 per direct labor-hour × 6,000 direct labor-hours)  
 = $52,800 + $22,800 = $75,600  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $75,600 ÷ 6,000 direct labor-hours = $12.60 per direct labor-hour

232) A

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $138,700 + ($1.90 per machine-hour × 19,000 machine-hours)  
 = $138,700 + $36,100 = $174,800  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $174,800 ÷ 19,000 machine-hours = $9.20 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.20 per machine-hour × 90 machine-hours = $828

233) D

Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $102,400 + ($2.30 per machine-hour × 16,000 machine-hours)  
 = $102,400 + $36,800 = $139,200

234) C

Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $55,200 + ($4.50 per direct labor-hour × 6,000 direct labor-hours)  
 = $55,200 + $27,000 = $82,200

235) A

Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $102,400 + ($2.30 per machine-hour × 16,000 machine-hours)  
 = $102,400 + $36,800 = $139,200  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $139,200 ÷ 16,000 machine-hours = $8.70 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.70 per machine-hour × 70 machine-hours = $609  
 Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $55,200 + ($4.50 per direct labor-hour × 6,000 direct labor-hours)  
 = $55,200 + $27,000 = $82,200  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $82,200 ÷ 6,000 direct labor-hours = $13.70 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.70 per direct labor-hour × 40 direct labor-hours = $548  
 Overhead applied to Job T924

|  |  |
| --- | --- |
| **Forming Department** | $ 609 |
| **Assembly Department** | 548 |
| **Total** | $1,157 |

236) B

Forming Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $28,000 |
| **Estimated variable manufacturing overhead ($1.80 per machine-hour × 5,000 machine-hours)** | 9,000 |
| **Estimated total manufacturing overhead cost (a)** | $37,000 |
| **Estimated total machine-hours (b)** | 5,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 7.40 per machine-hour |

237) B

Assembly Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $10,500 |
| **Estimated variable manufacturing overhead ($2.60 per machine-hour × 5,000 machine-hours)** | 13,000 |
| **Estimated total manufacturing overhead cost (a)** | $23,500 |
| **Estimated total machine-hours (b)** | 5,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 4.70 per machine-hour |

238) D

Forming Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $28,000 |
| **Estimated variable manufacturing overhead ($1.80 per machine-hour × 5,000 machine-hours)** | 9,000 |
| **Estimated total manufacturing overhead cost (a)** | $37,000 |
| **Estimated total machine-hours (b)** | 5,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 7.40 per machine-hour |

Assembly Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $10,500 |
| **Estimated variable manufacturing overhead ($2.60 per machine-hour × 5,000 machine-hours)** | 13,000 |
| **Estimated total manufacturing overhead cost (a)** | $23,500 |
| **Estimated total machine-hours (b)** | 5,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 4.70 per machine-hour |

Manufacturing overhead applied to Job B:

|  |  |
| --- | --- |
| **Forming ($7.40 per machine-hour × 3,400 machine-hours)** | $25,160 |
| **Assembly ($4.70 per machine-hour × 2,000 machine-hours)** | 9,400 |
| **Total manufacturing overhead applied** | $34,560 |

239) C

Forming Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $28,000 |
| **Estimated variable manufacturing overhead ($1.80 per machine-hour × 5,000 machine-hours)** | 9,000 |
| **Estimated total manufacturing overhead cost (a)** | $37,000 |
| **Estimated total machine-hours (b)** | 5,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 7.40 per machine-hour |

Assembly Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $10,500 |
| **Estimated variable manufacturing overhead ($2.60 per machine-hour × 5,000 machine-hours)** | 13,000 |
| **Estimated total manufacturing overhead cost (a)** | $23,500 |
| **Estimated total machine-hours (b)** | 5,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 4.70 per machine-hour |

Manufacturing overhead applied to Job L:

|  |  |
| --- | --- |
| **Forming ($7.40 per machine-hour × 1,600 machine-hours)** | $11,840 |
| **Assembly ($4.70 per machine-hour × 3,000 machine-hours)** | 14,100 |
| **Total manufacturing overhead applied** | $25,940 |

240) A

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $42,000 + ($4.30 per direct labor-hour × 5,000 direct labor-hours)  
 = $42,000 + $21,500 = $63,500

241) D

Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $119,000 + ($1.60 per machine-hour × 17,000 machine-hours)  
 = $119,000 + $27,200 = $146,200  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $146,200 ÷ 17,000 machine-hours = $8.60 per machine-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.60 per machine-hour × 90 machine-hours = $774

242) B

Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $112,200 + ($1.70 per machine-hour × 17,000 machine-hours)  
 = $112,200 + $28,900 = $141,100

243) C

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $81,000 + ($4.30 per direct labor-hour × 9,000 direct labor-hours)  
 = $81,000 + $38,700 = $119,700  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $119,700 ÷ 9,000 direct labor-hours = $13.30 per direct labor-hour  
 Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.30 per direct labor-hour × 50 direct labor-hours = $665

244) D

Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $148,000 + ($1.90 per machine-hour × 20,000 machine-hours)  
 = $148,000 + $38,000 = $186,000

245) D

Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $88,000 + ($3.60 per direct labor-hour × 8,000 direct labor-hours)  
 = $88,000 + $28,800 = $116,800  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $116,800 ÷ 8,000 direct labor-hours = $14.60 per direct labor-hour

246) C

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $30,100 + ($4.70 per direct labor-hour × 7,000 direct labor-hours)  
 = $30,100 + $32,900 = $63,000

247) C

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $68,600 + ($4.30 per direct labor-hour × 7,000 direct labor-hours)  
 = $68,600 + $30,100 = $98,700

248) A

Casting Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $152,000 + ($2.10 per machine-hour × 20,000 machine-hours)  
 = $152,000 + $42,000 = $194,000  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $194,000 ÷ 20,000 machine-hours = $9.70 per machine-hour

249) B

Casting Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $105,400 + ($1.70 per machine-hour × 17,000 machine-hours)  
 = $105,400 + $28,900 = $134,300

250) A

Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $52,000 + ($3.90 per direct labor-hour × 5,000 direct labor-hours)  
 = $52,000 + $19,500 = $71,500

251) D

Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)  
 = $100,700 + ($2.00 per machine-hour × 19,000 machine-hours)  
 = $100,700 + $38,000 = $138,700  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $138,700 ÷ 19,000 machine-hours = $7.30 per machine-hour

252) D

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)  
 = $63,000 + ($3.90 per direct labor-hour × 6,000 direct labor-hours)  
 = $63,000 + $23,400 = $86,400  
 Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $86,400 ÷ 6,000 direct labor-hours = $14.40 per direct labor-hour

253) C

The first step is to calculate the estimated total overhead costs in the two departments.  
 Casting

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $17,700 |
| **Estimated variable manufacturing overhead ($1.50 per machine-hour × 3,000 machine-hours)** | 4,500 |
| **Estimated total manufacturing overhead cost** | $22,200 |

Assembly

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $ 5,800 |
| **Estimated variable manufacturing overhead ($2.20 per machine-hour × 2,000 machine-hours)** | 4,400 |
| **Estimated total manufacturing overhead cost** | $10,200 |

The second step is to combine the estimated manufacturing overhead costs in the two departments ($22,200 + $10,200 = $32,400) to calculate the plantwide predetermined overhead rate as follow:

|  |  |
| --- | --- |
| **Estimated total manufacturing overhead cost** | $32,400 |
| **Estimated total machine hours** | 5,000 machine-hours |
| **Predetermined overhead rate** | $ 6.48 per machine-hour |

254) B

Casting Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $17,700 |
| **Estimated variable manufacturing overhead ($1.50 per machine-hour × 3,000 machine-hours)** | 4,500 |
| **Estimated total manufacturing overhead cost (a)** | $22,200 |
| **Estimated total machine-hours (b)** | 3,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 7.40 per machine-hour |

255) C

Assembly Department predetermined overhead rate:

|  |  |
| --- | --- |
| **Estimated fixed manufacturing overhead** | $5,800 |
| **Estimated variable manufacturing overhead ($2.20 per machine-hour × 2,000 machine-hours)** | 4,400 |
| **Estimated total manufacturing overhead cost (a)** | $10,200 |
| **Estimated total machine-hours (b)** | 2,000 machine-hours |
| **Departmental predetermined overhead rate (a) ÷ (b)** | $ 5.10 per machine-hour |

256) Estimated total manufacturing overhead = $1,533,180 + ($8.41 per labor-hour × 66,000 labor-hours) = $2,088,240  
 Predetermined overhead rate = $2,088,240 ÷ 66,000 labor-hours = $31.64 per labor-hour

257) Estimated total manufacturing overhead = $705,220 + ($4.43 per labor-hour × 37,000 labor-hours) = $869,130  
 Predetermined overhead rate = $869,130 ÷ 37,000 labor-hours = $23.49 per labor-hour

258) Estimated total manufacturing overhead = $985,920 + ($9.99 per labor-hour × 78,000 labor-hours) = $1,765,140  
 Predetermined overhead rate = $1,765,140 ÷ 78,000 labor-hours = $22.63 per labor-hour

259) Estimated total manufacturing overhead = $1,077,000 + ($8.82 per machine-hour × 50,000 machine-hours) = $1,518,000  
 Predetermined overhead rate = $1,518,000 ÷ 50,000 machine-hours = $30.36 per machine-hour

260) Cost Summary

|  |  |
| --- | --- |
| **Direct materials** | $48,870 |
| **Direct labor ($13 per direct labor-hour × 405 direct labor-hours)** | 5,265 |
| **Manufacturing overhead ($11 per machine-hour × 486 machine-hours)** | 5,346 |
| **Total product cost** | $59,481 |
| **Unit product cost** | $ 22.03 |

261) Cost Summary

|  |  |
| --- | --- |
| **Direct materials** | $59,400 |
| **Direct labor ($15 per direct labor-hour × 1,224 direct labor-hours)** | 18,360 |
| **Manufacturing overhead ($35 per Direct labor-hour × 1,224 Direct labor-hours)** | 42,840 |
| **Total product cost** | $120,600 |
| **Unit product cost** | $ 33.50 |