**Managerial Accounting Exercise:**

**1.** (TCO A) Wages paid to the factory manager are considered an example of:
       Direct Labor - yes,    Period Cost - yes
       Direct Labor - yes,     Period Cost - No
       Direct Labor - no ,    Period Cost - yes
       Direct Labor - no ,    Period Cost - no

**2.** (TCO A) Machinery Depreciation on a manufacturing plant is an element of:
       Conversion cost - yes, period cost - no
       Conversion cost - yes, period cost - yes
       Conversion cost - no, period cost - yes
       Conversion cost - no, period cost - no

**3.** (TCO B)  Evergreen Corp. has provided the following data:

Sales per period                                                     1,000 units
Selling price                                                          $40 per unit
Variable manufacturing cost                                  $12 per unit
Selling expenses                        $5,100 plus 5% of selling price
Administrative expenses          $3,000 plus 20% of selling price

The number of units needed to achieve a target net operating income of $63,900 would be:

       4,000 units
       3,950 units
       4,150 units
       4,050 units

**4.** (TCO B)   Garth Company sells a single product. If the selling price per unit and the variable expense per unit both increase by 15% and fixed expenses do not change, then:

       Contribution Margin Per Unit - Increases, Contribution Margin Ratio - Increases, Break-Even in Units - Decreases
       Contribution Margin Per Unit - No Change, Contribution Margin Ratio - No Change, Break-Even in Units - No Change
       Contribution Margin Per Unit - No Change, Contribution Margin Ratio - Increases, Break-Even in Units - No Change
       Contribution Margin Per Unit - Increases, Contribution Margin Ratio - No Change,  Break-Even in Units - Decreases

**5.** (TCO E) Rebel Company manufactures a single product and has the following cost structure:

Variable costs per unit:
Production................................................. $5
Selling and administrative........................... $3
Fixed costs in total:
Production................................................. $32,000
Selling and administrative........................... $16,000

Last year there were no beginning inventories, 8,000 units were produced, and 7,800 units were sold.

Under variable costing, the unit product cost would be:

       $5
       $8
       $9
       $11

**6.**  (TCO F) Tragon Corporation has provided data concerning the company's Manufacturing Overhead account for the month of September. Prior to the closing of the overapplied or underapplied balance to Cost of Goods Sold, the total of the debits to the Manufacturing Overhead account was $76,000 and the total of the credits to the account was $75,000. Which of the following statements is true? (Points: 5)
       Manufacturing overhead transferred from Finished Goods to Cost of Goods Sold during the month was $76,000
       Actual manufacturing overhead incurred during the month was $66,000
       Manufacturing overhead applied to Work in Process for the month was $76,000
       Manufacturing overhead for the month was underapplied by $1,000

**7.** (TCO G) The net present value (NPV) method of investment project analysis assumes that the project's cash flows are reinvested at the

       internal rate of return.
       discount rate used in the NPV calculation.
       firm's simple rate of return.
       firm's average ROI.

**8.** (TCO G) The Gomez Company is considering two projects, T and V. The following information has been gathered on these projects:

                                                                  Project T       Project V
Initial investment needed..............................$112,500        $75,000
Present value of future cash inflows.............. $168,000      $107,000
Useful life.................................................... 10 years      10 years

Based on this information, which of the following statements is (are) true?

I.     Project T has the highest ranking according to the project profitability index criterion.
II.     Project V has the highest ranking according to the net present value criterion.

       Only I
       Only II
       Both I and II
       Neither I nor II

**9.** (TCO B) Variable expenses for Alpha Company are 25% of sales. What are sales at the break-even point, assuming that fixed expenses total $150,000 per year:
       $200,000
       $375,000
       $600,000
       $150,000

**10.**  (TCO F) Boulevard Company uses a predetermined overhead rate based on machine-hours to apply manufacturing overhead to jobs. The company manufactures tools to customer specifications. The following data pertain to Job 1501:

Direct materials used: $5,200

Direct labor hours worked: 350

Direct labor rate per hour: $9.00

Machine hours used: 220

Predetermined overhead rate per machine hour: $15.00

What is the total manufacturing cost recorded on Job 1501?

       $8,800
       $11,650
       $10,300
       $11,100

**1.** (TCO C) The following overhead data are for a department of a large company.

                                                    Actual costs             Static
                                                    Incurred                    budget

Activity level (in units)                     500                          450

Variable costs:
             Indirect materials              $5,950                      $5,382
             Electricity                        $1,112                      $1,008
Fixed costs:
             Administration                  $2,770                      $2,800
             Rent                                $5,120                      $5,100

Required:  Construct a flexible budget performance report that would be useful in assessing how well costs were controlled in this department.

**2.** (TCO D)  Lindon Company uses 5,000 units of Part X each year as a component in the assembly of one of its products.  The company is presently producing Part X internally at a total cost of $80,000 as follows:

Direct Materials...............................................$18,000

Direct Labor......................................................20,000

Variable Manufacturing Overhead...................     12,000

Fixed Manufacturing Overhead.......................     30,000

Total Costs.......................................................80,000

An outside supplier has offered to provide Part X at a price of $13 per unit.  If Lindon stops producing the part internally, one-third of the manufacturing overhead would be eliminated.

Required:  Prepare a make or buy analysis showing the annual advantage or disadvantage of accepting the outside supplier's offer.

**3.** (TCO E) Hanks Company produces a single product. Operating data for the company and its absorption costing income statement for the last year is presented below:

Units in beginning inventory...................................0
Units produced...............................................9,000
Units sold......................................................8,000
Sales.........................................................$80,000
Less cost of goods sold:
Beginning inventory.............................................. 0
Add cost of goods manufactured..................54,000
Goods available for sale...............................54,000
Less ending inventory....................................6,000
Cost of goods sold......................................48,000
Gross margin..............................................32,000
Less selling & admin. expenses....................28,000
Net operating income................................$  4,000

Variable manufacturing costs are $4 per unit. Fixed factory overhead totals $18,000 for the year. This overhead was applied at a rate of $2 per unit. Variable selling and administrative expenses were $1 per unit sold.

Required:  Prepare a new income statement for the year using variable costing. Comment on the differences between the absorption costing and the variable costing income statements.

**4.** (TCO A) The following data (in thousands of dollars) have been taken from the accounting records of Karmana Corporation for the just completed year.

Sales ................................................................$950
Raw materials inventory, beginning ......................$10
Raw materials inventory, ending ..........................$30
Purchases of raw materials ...............................$120
Direct labor ......................................................$180
Manufacturing overhead ...................................$230
Administrative expenses ...................................$100
Selling expenses ...............................................$140
Work in process inventory, beginning ..................$70
Work in process inventory, ending ......................$40
Finished goods inventory, beginning ..................$100
Finished goods inventory, ending ........................$80

Use these data to prepare (in thousands of dollars) a schedule of Cost of Goods Manufactured and a Schedule of Cost of Goods Sold for the year. In addition, elaborate on the relationship between these schedules as they relate to the flow of product costs in a manufacturing company.

**1.** (TCO F) Maverick Corporation uses the weighted-average method in its process costing system. Data concerning the first processing department for the most recent month are listed below:

 Work in process, beginning:

Units in beginning work in process inventory 400

Materials costs $6,900

Conversion costs $2,500

Percent complete for materials 80%

Percent complete for conversion 15%

Units started into production during the month 6,000

Units transferred to the next department during the month 5,600

Materials costs added during the month $112,500

Conversion costs added during the month $210,300

Ending work in process:

Units in ending work in process inventory 800

Percent complete for materials 70%

Percent complete for conversion 30%

 Required: calculate the equivalent units for materials for the month in the first processing department.

**2.** (TCO F) Cavalerio Corporation uses the weighted-average method in its process costing system. This month, the beginning inventory in the first processing department consisted of 700 units. The costs and percentage completion of these units in beginning inventory were:

Materials costs $9,100 -- 80% complete

Conversion costs $5,400 -- 25% complete

A total of 7,200 units were started, and 6,400 units were transferred to the second processing department during the month. The following costs were incurred in the first processing department during the month:

Materials costs $96,700

Conversion costs $180,700

The ending inventory was 80% completed for materials and 70% completed for conversion costs.

Required: Calculate the equivalent units for conversion costs for the month in the first processing department.

**3.** (TCO G) - (Ignore income taxes in this problem.) Axillar Beauty Products Corporation is considering the production of a new conditioning shampoo which will require the purchase of new mixing machinery. The machinery will cost $375,000, is expected to have a useful life of 10 years, and is expected to have a salvage value of $50,000 at the end of 10 years. The machinery will also need a $35,000 overhaul at the end of year 6. A $40,000 increase in working capital will be needed for this investment project. The working capital will be released at the end of the 10 years. The new shampoo is expected to generate net cash inflows of $85,000 per year for each of the 10 years. Axillar's discount rate is 16%.

Required:

a.       What is the net present value of this investment opportunity?

b.      Based on your answer to (a) above, should Axillar go ahead with the new conditioning shampoo?