Multiple Choice (1 point each): Circle the best answer from among those listed.

1. Relevant costs are best described as:
   a. Future costs
   b. Future costs that differ between competing decision alternatives
   c. Opportunity costs
   d. Sunk costs
   e. Costs that remain the same across decision alternatives but differ between decisions.

2. The external acquisition of services or components is considered in:
   a. Avoidable costs of production.
   b. Special orders decision.
   c. Make or buy decision.
   d. Value chain analysis.
   e. Equipment replacement.

3. The Chitterchat Co. manufactures and sells 25,000 telephones per year. The full manufacturing costs per telephone are as follows:
   - Direct materials: $14
   - Direct labor: $6
   - Variable manufacturing overhead: $4
   - Average fixed manufacturing overhead: $30
   - Total: $54

   The Gonguin Co. has offered to sell Chitterchat 25,000 telephones for $34 per unit. If Chitterchat accepts the offer, $180,000 of fixed overhead will be eliminated. Chitterchat should:
   a. Make the telephones; the savings is $70,000.
   b. Buy the telephones; the savings is $500,000.
   c. Buy the telephones; the savings is $320,000.
   d. Make the telephones; the savings is $250,000.
   e. Make the telephones; the savings is $180,000

4. Which of the following is not a record required for operating a job cost system?
   A) Production orders
   B) Job cost sheets
   C) Sales call sheets
   D) Materials requisition forms
   E) Direct labor time record

5. For which of the following products would job order costing be least likely to be used?
   A) Residential building
   B) Ship building
   C) Mortgage loan processing
   D) Office paper manufacturing
   E) Hospital surgery

6. How is depreciation on the manufacturing building and equipment classified in financial reporting?
   A) As an irrelevant cost because it has already been incurred
   B) As a current expense
   C) As part of the cost of the products produced
   D) As a period cost like advertising
   E) As part of general and administrative expenses
7. Brassarde Corp. manufactures a product with the following full unit costs at a volume of 10,000 units:

<table>
<thead>
<tr>
<th>Cost Component</th>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>500</td>
</tr>
<tr>
<td>Direct labor</td>
<td>180</td>
</tr>
<tr>
<td>Manufacturing overhead (30% variable)</td>
<td>200</td>
</tr>
<tr>
<td>Selling expenses (50% variable)</td>
<td>120</td>
</tr>
<tr>
<td>Administrative expenses (10% variable)</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total per unit</strong></td>
<td>$1,100</td>
</tr>
</tbody>
</table>

An international company recently approached Brassarde's management with an offer to purchase 1,000 units for $900 each. Brassarde currently sells the product to dealers for $1,300 each. Brassarde's capacity is sufficient to produce the extra 1,000 units. No selling expenses would be incurred on this special order. If Brassarde's management accepts the offer, profits will:

a. Decrease by $200,000
b. Increase by $150,000
c. Increase by $90,000
d. Decrease by $400,000
e. Decrease by $80,000

8. The most appropriate cost driver for the activity of moving luggage in an airport is:

a. The number of pilots for the airplanes.
    \[ \checkmark \]
b. The number of pieces of luggage moved.
c. The number of employees assigned to the job of moving luggage.
d. The amount of revenue generated by ticket sales.
e. The average outside temperatures.

9. Which of the following is a true characteristic of activity-based costing?

A) Activity-based costing uses a smaller number of cost pools than does traditional costing.
B) Relative to traditional costing methods, activity-based costing is more concerned with identifying processes and less concerned with causal factors of overhead costs.
C) Activity-based costing removes the use of all judgment from the allocation process.
D) Activity-based costing is commonly performed with a muted trumpet.
E) Activity-based costing assigns costs to cost objects based on usage of activity, called cost drivers.

10. Which of the following product costing methods produces the most precise product costing information?

A) Average unit costing
B) Activity-based costing
C) Departmental overhead rate methods
D) Organization-based costing
E) Plant-wide overhead rates

11. Activity-based costing's primary benefit is that it provides:

A) Absolutely accurate product costing information
B) Data for external financial reporting purposes
C) More jobs for industrial engineers and accountants
D) More precise cost data for internal decision-making purposes
E) A large increase in administrative expenses

12. The typical objective to which costs are assigned is:

a. A value chain.
    \[ \checkmark \]
b. A product or service.
c. A cost pool.
d. Overhead.
e. An activity.
13. Turtle, Inc. uses activity-based costing. The company produces X and Y. Information relating to the two products is as follows:

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units produced</td>
<td>38,000</td>
<td>50,000</td>
</tr>
<tr>
<td>Machine-hours</td>
<td>15,000</td>
<td>17,000</td>
</tr>
<tr>
<td>Direct labor-hours</td>
<td>16,000</td>
<td>24,000</td>
</tr>
<tr>
<td>Materials handling (number of moves)</td>
<td>8,000</td>
<td>12,000</td>
</tr>
<tr>
<td>Setups</td>
<td>10,000</td>
<td>14,000</td>
</tr>
</tbody>
</table>

The following costs are reported:
- Materials handling: $320,000
- Labor-related overhead: $600,000
- Setups: 480,000

Labor-related overhead costs assigned to product X are:
A) $384,000
B) $464,000
C) $576,000
D) $545,000
E) $960,000

14. Although adding more activity cost pools to an activity-based costing system may improve the precision of product costing, this increase in precision must be judged against:
   a. The price of underwater coverage.
   b. The price of the product.
   c. The cost of developing and maintaining the additional cost pools.
   d. The tax rates for income in the country.
   e. The volume of product sold.

15. Eightco, Inc. has two categories of overhead: maintenance and inspection. Costs expected for these categories for the coming year are as follows:

<table>
<thead>
<tr>
<th></th>
<th>$300,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance</td>
<td></td>
</tr>
<tr>
<td>Inspection</td>
<td>200,000</td>
</tr>
</tbody>
</table>

The practical capacity of machine-hours for all jobs during the year is 20,000, and for inspections is 1,000. These are the cost drivers for maintenance and inspection costs, respectively. The following data have been assembled for use in developing a bid for a proposed job:

<table>
<thead>
<tr>
<th></th>
<th>$3,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td></td>
</tr>
<tr>
<td>Direct labor</td>
<td>$8,000</td>
</tr>
<tr>
<td>Machine-hours</td>
<td>800 hours</td>
</tr>
<tr>
<td>Number of inspections</td>
<td>6</td>
</tr>
<tr>
<td>Direct labor-hours</td>
<td>800</td>
</tr>
</tbody>
</table>

Using the appropriate cost drivers, the total cost of the potential job is:

a. $11,000.
b. $13,200.
c. $23,000.
d. $31,000.

16. When cost-based pricing is employed and markup is based on manufacturing costs, the markup must be sufficiently large enough to:

A) Cover selling expenses, administrative expenses, and provide for the desired profit
B) Cover selling and administrative expenses
C) Be noticed on a distant horizon yet be small on close inspection
D) Provide for the desired profit
E) Cover selling expenses and provide for the desired profit
17. Which of the following is not a drawback to cost-based pricing?
   A) Cost-based pricing requires accurate cost assignments.
   B) The greater the portion of unassigned costs, the greater the likelihood of overpricing and underpricing individual products.
   C) Cost-based pricing assumes goods or services are relatively scarce, and customers are, generally, willing to pay the price.
   D) In a competitive environment, cost-based approaches increase the time and cost of bringing new products to market.
   E) Cost-based pricing rewards inefficiency.

18. Blue Mountain Company has the following budgeted costs for 10,000 units:

<table>
<thead>
<tr>
<th></th>
<th>Variable Costs</th>
<th>Fixed Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>$300,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Selling &amp; Administrative</td>
<td>100,000</td>
<td>50,000</td>
</tr>
<tr>
<td>Total</td>
<td>$400,000</td>
<td>$150,000</td>
</tr>
</tbody>
</table>

What is the markup on variable costs needed to obtain a target profit of $100,000?

A) 100.0 percent
B) 125.0 percent
C) 25.0 percent
D) 62.5 percent
E) 37.5 percent

19. Skinny Co. is considering the production of a new line of jeans. Based on preliminary market research, management has decided that each pair of jeans should be priced at $200. Furthermore, management believes that the profit margin should be 40 percent of sales revenue. The company has $100 million in assets and $60 million in current liabilities. What is the target cost?

A) $ 40
B) $ 80
C) $120
D) $160
E) $40 million

20. Which budgeting approach seeks to reduce costs periodically?
   a. The continuous improvement approach
   b. The input/output approach
   c. The activity based approach
   d. Participative budgeting approach
   e. Bombastic budgeting approach

21. Which of the following is a disadvantage of ROI as a performance measure?
   A) It encourages managers to increase the size of their operations.
   B) It discourages managers of departments with high ROIs from investing in average ROI projects.
   C) It encourages managers to pay careful attention to the relationships among sales, expenses, and investment.
   D) It encourages cost efficiency.
   E) It discourages excessive investment in operating assets.

22. Generally, the budgeting process concludes with the preparation of which of the following that is (are) acceptable to senior management:
   A) Cash budget
   B) Production budget
   C) Coffee break
   D) Selling expense budget
   E) Budgeted financial statements
23. Creekstone Company has a sales budget for June of $200,000. Cost of goods sold is expected to be 60 percent of sales. All goods are purchased in the month used and paid for in the month following purchase. The beginning inventory of merchandise is $10,000, and an ending inventory of $12,000 is desired. Beginning accounts payable is $76,000. The purchases for June are expected to be:

a. $82,000.
b. $120,000.
c. $122,000.
d. $78,000.
e. $118,000.

\[
\frac{200,000 \times 0.6}{120,000 + 12,000 - 10,000} = 120,000
\]

24. Arizona Fabrics Co. is in the process of preparing its budget for next year. Cost of goods sold has been estimated at 60 percent of sales. Fabric purchases and payments are to be made during the month preceding the month of sale. Wages are estimated at 10 percent of sales and are paid during the month of sale. Other operating costs amounting to 15 percent of sales are to be paid in the month following the month of sales. Sales revenue is forecasted as follows:

<table>
<thead>
<tr>
<th>Month</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>February</td>
<td>$440,000</td>
</tr>
<tr>
<td>March</td>
<td>$450,000</td>
</tr>
<tr>
<td>April</td>
<td>$480,000</td>
</tr>
<tr>
<td>May</td>
<td>$500,000</td>
</tr>
<tr>
<td>June</td>
<td>$510,000</td>
</tr>
</tbody>
</table>

What is the amount of fabric purchases during the month of March?

A) $480,000
B) $306,000
C) $288,000
D) $300,000
E) $450,000

25. Which of the sources listed below would a manager be LEAST likely to consider in deciding whether or not to discontinue a given segment?

A) Direct segment costs
B) An evaluation of the importance of the segment to overall operations
C) Segment contribution margin
D) Segment margin
E) Segment share of home office costs allocated on the basis of revenues

26. A balanced scorecard typically includes all of the following, EXCEPT:

A) Financial measures
B) Environment improvement measures
C) Customer satisfaction measures
D) Internal processes measures
E) Innovation measures

27. Which of the following statements is TRUE:

A) The return on investment can be obtained by multiplying return on equity times asset turnover.
B) In the long run, the best profitability number for deciding the impact of discontinuing a segment is segment income after subtracting allocated common segment costs.
C) Transfer pricing is a system used only in assigning a price to a product or service transferred between two profit centers within a company.
D) In a segment report, the profit number immediately after subtracting segment direct fixed costs is called the segment contribution margin.
E) In the short run, the best profitability number for deciding the impact of discontinuing a segment is segment income after allocated corporate headquarters costs and income taxes.
28. A responsibility center where the manager can control both revenues and expense level is referred to as:
   a. Investment center
   b. Cost center.
   c. Profit center.
   d. Revenue center.
   e. Asset center.

29. What is a transfer price?
   a. The amount charged for a product or service that one division provides another.
   b. The amount charged for goods and services offered to the government.
   c. An amount charged to cover the costs associated with import/export taxes.
   d. The amount charged to the final consumer to cover all costs incurred along the value chain.
   e. The cost of transferring from one project to another.

30. Which of the following is a legitimate disadvantage of a 100%-of-variable-cost transfer pricing?
   a. This price will not allow the selling division to make a long-run profit.
   b. This price will discourage the purchasing division from buying internally.
   c. At this price, if the selling division does not have excess capacity, the selling division will not wish to sell anything to the outside market.
   d. If the selling division has excess capacity, this transfer price will often lead the purchasing division to act inconsistently with corporate goals.

EXERCISES: Be sure to show any calculations required.

EXERCISE A (8 points) The Contrey Co. manufactures 10,000 rolls of cable each period. The cable is used as an input for producing several other products that Widen manufactures. The full manufacturing costs for a batch of 10 rolls of cable are:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>470</td>
</tr>
<tr>
<td>Direct labor</td>
<td>100</td>
</tr>
<tr>
<td>Variable manufacturing overhead</td>
<td>100</td>
</tr>
<tr>
<td>Average fixed manufacturing overhead</td>
<td>480</td>
</tr>
<tr>
<td>Total</td>
<td>1,150</td>
</tr>
</tbody>
</table>

The fixed manufacturing overhead is comprised of depreciation expenses related to prior investments in facilities and equipment that are used in the manufacturing of the cable. These assets have no other use than for the manufacturing of the cable. An outside supplier has offered to sell Contrey the 10,000 rolls of cable necessary to meet production needs this period for a lump-sum of $850,000. Contrey’s selling price is $116 per roll. Required: If Contrey accepts this outside supplier’s offer, how much better off or worse off will the company be?
EXERCISE B (10 points) The Vapor Co. produces 3 products with the following information for April 2014:

<table>
<thead>
<tr>
<th></th>
<th>Product 1</th>
<th>Product 2</th>
<th>Product 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Material Cost</td>
<td>$25,000</td>
<td>$30,000</td>
<td>$35,000</td>
<td>$90,000</td>
</tr>
<tr>
<td>Direct Labor Cost</td>
<td>$30,000</td>
<td>$40,000</td>
<td>$50,000</td>
<td>$120,000</td>
</tr>
<tr>
<td>Direct Labor Hours</td>
<td>1,500 hours</td>
<td>2,000 hours</td>
<td>2,500 hours</td>
<td>6,000 hours</td>
</tr>
<tr>
<td>Units produced</td>
<td>2,000</td>
<td>4,000</td>
<td>6,000</td>
<td>12,000</td>
</tr>
</tbody>
</table>

Factory overhead is estimated to be $150,000 and is applied based on direct labor dollars. Vapor prices their products at total manufacturing cost per unit plus 30% markup on cost.

a. The total cost for Product 2.

b. The selling price for Product 2.

Exercise C (12 points) Lubbock Machining Company has developed the following activity cost information for its manufacturing activities:
- Shaping: $40 per hour
- Assembly: $20 per hour
- Inspection: $5 per unit
- Machine setup: $300 per batch

Filling a batch order for 100 units of Product 87-XV:
- One inspection per unit.
- 0.8 hour of shaping for each unit.
- 1.2 hours of assembly per unit.

Required: Calculate the total cost to produce a batch of 100 units of Product 87-XV.

EXERCISE D (8 points) The forecasted sales pertain to Brownfield, Inc.

<table>
<thead>
<tr>
<th>Fiscal Period</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td>$600,000</td>
</tr>
<tr>
<td>July</td>
<td>$500,000</td>
</tr>
<tr>
<td>August</td>
<td>$900,000</td>
</tr>
</tbody>
</table>

Collection pattern: 60 percent in month of sale
40 percent in month following the sale

Accounts Receivable (Beginning June 1) $160,000
Number of Units in Finished Goods Inventory (Beginning June 1) 12,000

All company sales are for $10 per unit. The company plans to maintain ending inventories equal to 20 percent of the next month's sales.

Required: How many units does Brownfield, Inc. expect to produce in June and July?

June units produced 58,000
July units produced 58,000
EXERCISE E (12 points) Provide the missing amounts in the following situations:

<table>
<thead>
<tr>
<th></th>
<th>Eastern Division</th>
<th>Western Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$10,000,000</td>
<td>$10,000,000</td>
</tr>
<tr>
<td>Net operating income</td>
<td>$1,000,000</td>
<td>$400,000</td>
</tr>
<tr>
<td>Operating assets</td>
<td>$1,500,000</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Return on investment</td>
<td>25%</td>
<td>20%</td>
</tr>
<tr>
<td>Return on sales</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Investment Turnover</td>
<td>2.5</td>
<td>5.0</td>
</tr>
</tbody>
</table>

SHORT ANSWER (2 points each)

A. What is the general rule for the use of limited resources in the production of products?

B. When might a court case be involved after pricing decisions for special orders?

C. What is included in conversion costs?

D. Give two examples of resources that are used by activities.
   1. _______________________________
   2. _______________________________

E. Give two examples of non-value-added costs:
   1. _______________________________
   2. _______________________________

F. With the target costing approach, how is the target cost calculated?

G. How can minimizing after-market costs lead to a competitive advantage?

H. What is the value chain for a product?

I. What is a zero-based budget?

J. List two ways in which the EVA approach differs from “residual income”?
   1. __________________________________
   2. __________________________________