Core 2 Self-Assessed Entrance Exam - Answers

1. MA480:
Which of the following is a valid reason to allocate the cost of a support department, such as engineering services, to the products manufactured in an operating department?

*a. To determine the net margin of the products.
b. To reprimand the manager of a poorly performing operating department.
c. To earn additional profits by inflating the cost of products manufactured for a potential client.
d. Allocating support costs allows management to make the decision to abandon one of the products manufactured in the operating department.

Feedback:
*a) Answer a) is correct. Net margins should be determined based on a product’s full cost, including the allocation of indirect costs, so this is a valid reason for the allocation.

b) Answer b) is incorrect. Through the process of indirect cost allocation, managers of operating departments receive information on the share of the indirect resources that their department consumes. Such information can influence their behaviour, resulting in a reduction in the consumption of that resource; however, cost allocations should never be applied as punitive measures. Answer a) is correct. Net margins should be determined based on a product’s full cost, including the allocation of indirect costs, so this is a valid reason for the allocation.

c) Answer c) is incorrect. In establishing the full cost of a product, all costs, including indirect costs, must be considered; however, the aim is not to inflate costs beyond what is actually incurred in order to charge higher prices. Answer a) is correct. Net margins should be determined based on a product’s full cost, including the allocation of indirect costs, so this is a valid reason for the allocation.

d) Answer d) is incorrect. Allocated costs should not be used in decision-making. Often, the allocation will include costs that would be unaffected whether a product was abandoned or not. Answer a) is correct. Net margins should be determined based on a product’s full cost, including the allocation of indirect costs, so this is a valid reason for the allocation.
2. MA495:
Omega Co. manufactures two chemicals in a joint process. The manufacturing cost of the joint process is $60,000. The chemicals can be sold in their unrefined form immediately after the split-off point or they can be further refined before they are sold.

What is the main reason why Omega would want to allocate the manufacturing cost of the joint process to products A and B?

a. It allows Omega to rank products A and B in terms of their respective profitability.
*b. It allows Omega to determine the inventory value for products A and B.
c. It provides the basis for deciding whether products A and B should be refined further.
d. It provides the basis for deciding whether product A or B should be abandoned.

Feedback:

a) Answer a) is incorrect. Although cost allocations can be quite detailed, the methods of allocating joint costs remain arbitrary. It is ill advised to compare the profitability of two distinct products using arbitrarily allocated costs. Answer b) is correct. Allocating joint costs allows Omega to calculate the full cost for both products. This is required to determine inventory values under GAAP.

*b) Answer b) is correct. Allocating joint costs allows Omega to calculate the full cost for both products. This is required to determine inventory values under GAAP.

c) Answer c) is incorrect. Allocation methods are irrelevant in sell-or-process-further decisions. Relevant costs are those that differ across alternatives. By definition, a joint cost is the result of a process that is shared by several products. Answer b) is correct. Allocating joint costs allows Omega to calculate the full cost for both products. This is required to determine inventory values under GAAP.

d) Answer d) is incorrect. Allocation methods are irrelevant in abandonment decisions that involve joint products. In considering the abandonment of a joint product, the effect on total operating earnings, across all joint products, before and after the proposed abandonment, must be taken into account. Answer b) is correct. Allocating joint costs allows Omega to calculate the full cost for both products. This is required to determine inventory values under GAAP.
3. MA482:
Orange Ltd. manufactures juice with two different ingredients: 100% of ingredient A is added at the beginning of the production process; 100% of Ingredient B is added when the juice is 60% complete. Conversion costs are added uniformly throughout the entire production process.

Quality testing is conducted at the 60% conversion point, prior to adding ingredient B. Rejected units at quality testing are accounted for as spoilage, and spoilage is included in equivalent units of output. Production data for May, Year 5, are as follows:

| WIP inventory, May 1 (25% converted) | 40,250 units |
| Started in production                | 85,000 units |
| Spoiled                              | 300 units    |
| Completed production                 | 90,000 units |
| WIP inventory, May 31 (80% converted) | 34,950 units |

For May, direct material costs incurred and in beginning WIP inventory totalled $220,000 for ingredient A and $350,000 for ingredient B. Using the weighted average method, what is the cost per equivalent unit (EU) for ingredient A and ingredient B?

a. $2.59 and $2.80
*b. $1.76 and $2.80
  c. $2.59 and $3.89
  d. $2.44 and $3.89

Feedback:

a) Answer a) is incorrect. It excludes beginning WIP in the calculation for A. Answer b) is correct. EU of work done in May:

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning WIP (25% converted)</td>
<td>40,250</td>
<td>40,250</td>
<td>40,250</td>
</tr>
<tr>
<td>Units started and completed</td>
<td>49,750</td>
<td>49,750</td>
<td>49,750</td>
</tr>
<tr>
<td>Spoiled units</td>
<td>300</td>
<td>300</td>
<td>0</td>
</tr>
<tr>
<td>Ending WIP (80% converted)</td>
<td>34,950</td>
<td>34,950</td>
<td>34,950</td>
</tr>
<tr>
<td>Total units accounted for</td>
<td>125,250</td>
<td>125,250</td>
<td>124,950</td>
</tr>
</tbody>
</table>

Cost per EU of A: $220,000 / 125,250 = $1.76
Cost per EU of B: $350,000 / 124,950 = $2.80
Answer b) is correct. EU of work done in May:

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
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<td>Beginning WIP (25% converted)</td>
<td>40,250</td>
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<td>40,250</td>
</tr>
<tr>
<td>Units started and completed</td>
<td>49,750</td>
<td>49,750</td>
<td>49,750</td>
</tr>
<tr>
<td>Spoiled units</td>
<td>300</td>
<td>300</td>
<td>0</td>
</tr>
<tr>
<td>Ending WIP (80% converted)</td>
<td>34,950</td>
<td>34,950</td>
<td>34,950</td>
</tr>
<tr>
<td>Total units accounted for</td>
<td>125,250</td>
<td>125,250</td>
<td>124,950</td>
</tr>
</tbody>
</table>

Cost per EU of A: $220,000 / 125,250 = $1.76
Cost per EU of B: $350,000 / 124,950 = $2.80

c) Answer c) is incorrect. It excludes beginning WIP in the calculation for A and ignores ending WIP for B:

<table>
<thead>
<tr>
<th></th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning WIP (25% converted)</td>
<td>40,250</td>
</tr>
<tr>
<td>Units started and completed</td>
<td>49,750</td>
</tr>
<tr>
<td>Spoiled units</td>
<td>0</td>
</tr>
<tr>
<td>Ending WIP (80% converted)</td>
<td>0</td>
</tr>
<tr>
<td>Total units accounted for</td>
<td>90,000</td>
</tr>
</tbody>
</table>

Cost per EU of B: $350,000 / 90,000 = $3.89
Answer b) is correct. EU of work done in May:

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning WIP (25% converted)</td>
<td>40,250</td>
<td>40,250</td>
<td>40,250</td>
</tr>
<tr>
<td>Units started and completed</td>
<td>49,750</td>
<td>49,750</td>
<td>49,750</td>
</tr>
<tr>
<td>Spoiled units</td>
<td>300</td>
<td>300</td>
<td>0</td>
</tr>
<tr>
<td>Ending WIP (80% converted)</td>
<td>34,950</td>
<td>34,950</td>
<td>34,950</td>
</tr>
<tr>
<td>Total units accounted for</td>
<td>125,250</td>
<td>125,250</td>
<td>124,950</td>
</tr>
</tbody>
</table>

Cost per EU of A: $220,000 / 125,250 = $1.76
Cost per EU of B: $350,000 / 124,950 = $2.80

d) Answer d) is incorrect. It uses units completed as the denominator:
Cost per EU of A: $220,000 / 90,000 = $2.44
Cost per EU of B: $350,000 / 90,000 = $3.89

Answer b) is correct. EU of work done in May:

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
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<td>Beginning WIP (25% converted)</td>
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<td>0</td>
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</tr>
<tr>
<td>Total units accounted for</td>
<td>125,250</td>
<td>125,250</td>
<td>124,950</td>
</tr>
</tbody>
</table>

Cost per EU of A: $220,000 / 125,250 = $1.76
Cost per EU of B: $350,000 / 124,950 = $2.80
4. MA483:
DBS Ltd. produces a single product. For the current year, budgeted sales volume is 90,000 units and budgeted production volume is 100,000 units. The following standards were used in preparing the current year’s budget:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling price</td>
<td>$200 per unit</td>
</tr>
<tr>
<td>Variable direct material costs</td>
<td>$127 per unit</td>
</tr>
<tr>
<td>Variable direct labour costs</td>
<td>$6 per unit</td>
</tr>
<tr>
<td>Fixed manufacturing overhead</td>
<td>$2,800,000 per year</td>
</tr>
<tr>
<td>Fixed selling and administration</td>
<td>$300,000 per year</td>
</tr>
</tbody>
</table>

Assuming DBS Ltd. uses variable costing, what is its budgeted net profit for the current year?

a. $1,600,000
*b. $2,930,000
 c. $3,240,000
d. $3,600,000

Feedback:

a) Answer a) is incorrect. It uses 90,000 units for sales and 100,000 units for manufacturing variable costs (that is, no items remaining in inventory). Answer b) is correct. Budgeted profit = [(200 – 127 – 6) × 90,000] – (2,800,000 + 300,000) = $2,930,000.

*b) Answer b) is correct. Budgeted profit = [(200 – 127 – 6) × 90,000] – (2,800,000 + 300,000) = $2,930,000.

c) Answer c) is incorrect. It allocates all the costs, including fixed selling and administration costs, to the product. Answer b) is correct. Budgeted profit = [(200 – 127 – 6) × 90,000] – (2,800,000 + 300,000) = $2,930,000.

d) Answer d) is incorrect. It uses 100,000 units instead of 90,000 units for sales. Answer b) is correct. Budgeted profit = [(200 – 127 – 6) × 90,000] – (2,800,000 + 300,000) = $2,930,000.
5. MA498:
Deejay Co. uses a process costing system. In Department 2, direct materials are added at the 50% stage of completion of the process, and conversion costs are added uniformly throughout the process.

For the month of March, Department 2 had:

<table>
<thead>
<tr>
<th>Description</th>
<th>Units</th>
<th>Percentage Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning WIP</td>
<td>6,000 units</td>
<td>60%</td>
</tr>
<tr>
<td>Transferred in</td>
<td>42,000 units</td>
<td></td>
</tr>
<tr>
<td>Ending WIP</td>
<td>3,000 units</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>5,000 units</td>
<td>80%</td>
</tr>
</tbody>
</table>

No spoilage was reported during March.

In computing the equivalent units (EU) of production for direct materials for the month of March, how would the calculation of the weighted average method differ from that of the FIFO method?

- a. It would be 8,000 higher under the weighted average method than under the FIFO method.
- b. It would be 6,000 higher under the weighted average method than under the FIFO method.
- c. It would be 6,000 lower under the weighted average method than under the FIFO method.
- d. It would be the same under the weighted average method as under the FIFO method.

Feedback:

- a) Answer a) is incorrect. The difference between the FIFO method and the weighted average method of process costing in computing EUs of production is attributed to the work done in the beginning WIP inventory. This answer assumes that it is the ending WIP that causes the difference and the weighted average calculation would be higher, as these items would be included. Answer b) is correct. There were 6,000 units in beginning WIP inventory; therefore, the EU of production for transferred-in costs under the weighted average method would be 6,000 higher than that of the FIFO method of process costing.

- b) Answer b) is correct. The difference between the FIFO method and the weighted average method of process costing in computing EU of production is attributed to the work done in the beginning WIP inventory. There were 6,000 units in beginning WIP inventory; therefore, the EU of production for transferred-in costs under the weighted average method would be 6,000 higher than that of the FIFO method of process costing.

- c) Answer c) is incorrect. The difference between the FIFO method and the weighted average method of process costing in computing EU of production is attributed to the work done in the beginning WIP inventory. However, it will be higher under the weighted
average method because of these units, not lower. Answer b) is correct. There were 6,000 units in beginning WIP inventory; therefore, the EU of production for transferred-in costs under the weighted average method would be 6,000 higher than that of the FIFO method of process costing.

d) Answer d) is incorrect. The difference between the FIFO method and the weighted average method of process costing in computing EU of production is attributed to the work done in the beginning WIP inventory. This answer does not consider the 6,000 units in beginning inventory. Answer b) is correct. There were 6,000 units in beginning WIP inventory; therefore, the EU of production for transferred-in costs under the weighted average method would be 6,000 higher than that of the FIFO method of process costing.
6. MA503:
Deejay Co. uses a process costing system. In Department 2, direct materials are added at the 50% stage of completion of the process and conversion costs are added uniformly throughout the process.

For the month of March, Department 2 had:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beginning WIP</strong></td>
<td>6,000 units, 60% completed as to conversion costs</td>
</tr>
<tr>
<td><strong>Transferred in</strong></td>
<td>42,000 units</td>
</tr>
<tr>
<td><strong>Ending WIP</strong></td>
<td>3,000 units 40% completed as to conversion costs</td>
</tr>
<tr>
<td></td>
<td>5,000 units 80% completed as to conversion costs</td>
</tr>
</tbody>
</table>

No spoilage was reported during March.

Using the weighted average method, the number of equivalent units of production for conversion costs would be:

a. 39,200  
b. 40,000  
c. 44,000  
*d. 45,200  

Feedback:

a) Answer a) is incorrect. It does not account for the beginning inventory. Answer d) is correct.

\[
\text{Conversion costs equivalent units} = 6,000 + 42,000 - (3,000 \times 0.6) - (5,000 \times 0.2) \\
= 6,000 + 42,000 - 1,800 - 1,000 \\
= 45,200
\]

b) Answer b) is incorrect. It does not account for the ending WIP at the completion percentages (it uses all 8,000 units). Answer d) is correct.

\[
\text{Conversion costs equivalent units} = 6,000 + 42,000 - (3,000 \times 0.6) - (5,000 \times 0.2) \\
= 6,000 + 42,000 - 1,800 - 1,000 \\
= 45,200
\]

c) Answer c) is incorrect. It does not account for the ending WIP correctly — it ignores the 3,000 units and calculates the 5,000 at 80%, not 20%. Answer d) is correct.

\[
\text{Conversion costs equivalent units} = 6,000 + 42,000 - (3,000 \times 0.6) - (5,000 \times 0.2) \\
= 6,000 + 42,000 - 1,800 - 1,000 \\
= 45,200
\]
**d) Answer d) is correct.**

<table>
<thead>
<tr>
<th>Conversion costs equivalent units</th>
<th>$= 6,000 + 42,000 – (3,000 \times 0.6) – (5,000 \times 0.2)$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$= 6,000 + 42,000 – 1,800 – 1,000$</td>
</tr>
<tr>
<td></td>
<td>$= 45,200$</td>
</tr>
</tbody>
</table>
7. MA850:
Which of the following statements about balanced scorecards is true?

a. Balanced scorecards always have four perspectives.
b. Balanced scorecards are only for organization-wide performance management.
*c. Balanced scorecards can be used in not-for-profit organizations.
d. Balanced scorecards must be updated annually.

Feedback:
   a) Answer a) is incorrect. A balanced scorecard is tailored to each organization, and while many organizations use the four perspectives, the balanced scorecards are more about the process rather than the number of perspectives. Answer c) is correct. A balanced scorecard can be used in many organizations and is not just a tool for profit-oriented organizations.
   b) Answer b) is incorrect. A balanced scorecard can be drafted for individual employees as well. Answer c) is correct. A balanced scorecard can be used in many organizations and is not just a tool for profit-oriented organizations.
   *c) Answer c) is correct. A balanced scorecard can be used in many organizations and is not just a tool for profit-oriented organizations.
   d) Answer d) is incorrect. While it is recommended that balanced scorecards be reviewed on a regular basis, there is no requirement to update them annually. Answer c) is correct. A balanced scorecard can be used in many organizations and is not just a tool for profit-oriented organizations.
8. MA629:
A manufacturer has the following data:

<table>
<thead>
<tr>
<th>Department</th>
<th>Available annual machine hours</th>
<th>Hours required per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly</td>
<td>10,000</td>
<td>Widget A 3, Widget B 4</td>
</tr>
<tr>
<td>Packaging</td>
<td>4,000</td>
<td>Widget A 1, Widget B 2</td>
</tr>
</tbody>
</table>

The contribution margin (CM) per unit for Widget A is $12 and for Widget B is $14. Current market demand for Widget A is limited to 2,500 units per year. What is the yearly product mix that maximizes profitability?

a. 0 Widget A, 2,000 Widget B  
b. 2,000 Widget A, 1,000 Widget B  
*c. 2,500 Widget A, 625 Widget B  
d. 0 Widget A, 2,500 Widget B

Feedback:

a) Answer a) is incorrect. This calculation maximizes Widget B based on the packaging constraint (contributes $28,000). Answer c) is correct. Confirm using trial and error:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2,000</td>
<td>$28,000</td>
</tr>
<tr>
<td>2,500</td>
<td>625</td>
<td>$38,750</td>
</tr>
</tbody>
</table>

Therefore, the optimal product mix is the maximum number of Widget A (2,500) and using the remaining available machine hours to produce 625 units of Widget B.

b) Answer b) is incorrect. This calculation uses the point of intersection, even though it does not maximize CM (contributes $38,000).

3A + 4B = 10,000  
A + 2B = 4,000  
Substituting: 3A + 4[(4,000 / 2) − A / 2] = 10,000  
3A + 4(2,000 − 1 / 2A) = 10,000; A = 2,000  
3(2,000) + 4B = 10,000; B = 1,000  
The total CM is $12(2,000) + $14(1,000) = $38,000.
Answer c) is correct. Confirm using trial and error:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2,000</td>
<td>$28,000</td>
</tr>
<tr>
<td>2,500</td>
<td>625</td>
<td>$38,750</td>
</tr>
</tbody>
</table>

Therefore, the optimal product mix is the maximum number of Widget A (2,500) and using the remaining available machine hours to produce 625 units of Widget B.

*c) Answer c) is correct. Confirm using trial and error:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2,000</td>
<td>$28,000</td>
</tr>
<tr>
<td>2,500</td>
<td>625</td>
<td>$38,750</td>
</tr>
</tbody>
</table>

Therefore, the optimal product mix is the maximum number of Widget A (2,500) and using the remaining available machine hours to produce 625 units of Widget B.

d) Answer d) is incorrect. This calculation maximizes Widget B based on the assembly constraint (contributes $35,000).

Answer c) is correct. Confirm using trial and error:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2,000</td>
<td>$28,000</td>
</tr>
<tr>
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<td>625</td>
<td>$38,750</td>
</tr>
</tbody>
</table>

Therefore, the optimal product mix is the maximum number of Widget A (2,500) and using the remaining available machine hours to produce 625 units of Widget B.
9. MA476:
Russ has developed a new device that he hopes to produce and market on a large scale. Russ will rent a production space for $500 per month and production equipment for $800 per month. Russ estimates the material cost per unit will be $5 and the labour cost per unit will be $3. Advertising and promotion will cost $900 per month. He will hire workers so he can spend his time promoting the product.

In this context, the production space rental is a:

a. Fixed period cost  
b. Variable period cost  
c. Variable product cost  
*d. Fixed product cost

Feedback:

a) Answer a) is incorrect. Period costs are not related to manufacturing, and production space is a manufacturing cost. Answer d) is correct because the production space is a fixed monthly amount regardless of the activity. It is also used in the manufacturing process; therefore, it is a product cost.

b) Answer b) is incorrect. A variable cost is a cost that varies proportionately with activity. The production space does not vary with activity. Period costs are not related to manufacturing, and production space is a manufacturing cost. Answer d) is correct because the production space rental is a fixed monthly amount regardless of the activity. It is also used in the manufacturing process; therefore, it is a product cost.

c) Answer c) is incorrect. A variable cost is a cost that varies proportionately with activity. The production space does not vary with activity. Answer d) is correct because the production space rental is a fixed monthly amount regardless of the activity. It is also used in the manufacturing process; therefore, it is a product cost.

*d) Answer d) is correct. The production space rental is a fixed monthly amount regardless of the activity. It is also used in the manufacturing process; therefore, it is a product cost.
10. MA485:
The following is information from the records of SKT Inc. for the month of June:

<table>
<thead>
<tr>
<th></th>
<th>Opening inventory</th>
<th>Ending inventory</th>
<th>Purchased in June</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>June 1</td>
<td>June 30</td>
<td></td>
</tr>
<tr>
<td>Direct materials</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$920,000</td>
</tr>
<tr>
<td>Indirect materials</td>
<td>$20,000</td>
<td>$15,000</td>
<td>$40,000</td>
</tr>
<tr>
<td>Work-in-progress</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Other expenses:
- Direct labour: $680,000
- Rent and utilities: $200,000
- Administrative salaries and benefits: $36,000

The rent and utilities covers the factory and the head office. SKT Inc. allocates 60% of rent and utilities to manufacturing and 40% to selling and administration.

What amount of indirect manufacturing costs would be charged to the cost of goods manufactured in June?

a. $160,000
*b. $165,000

Feedback:

a) Answer a) is incorrect. It includes the cost of indirect materials purchased instead of the cost of indirect materials used. Answer b) is correct.
Indirect materials used = $20,000 + $40,000 − $15,000 = $45,000
Rent and utilities allocated to manufacturing = 60% × $200,000 = $120,000
Indirect manufacturing costs = $165,000

*b) Answer b) is correct.
Indirect materials used = $20,000 + $40,000 − $15,000 = $45,000
Rent and utilities allocated to manufacturing = 60% × $200,000 = $120,000
Indirect manufacturing costs = $165,000

Feedback:

a) Answer a) is incorrect. It includes the cost of indirect materials purchased instead of the cost of indirect materials used. Answer b) is correct.
Indirect materials used = $20,000 + $40,000 − $15,000 = $45,000
Rent and utilities allocated to manufacturing = 60% × $200,000 = $120,000
Indirect manufacturing costs = $165,000

*b) Answer b) is correct.
Indirect materials used = $20,000 + $40,000 − $15,000 = $45,000
Rent and utilities allocated to manufacturing = 60% × $200,000 = $120,000
Indirect manufacturing costs = $165,000

c) Answer c) is incorrect. This includes all manufacturing costs, instead of just the indirect manufacturing costs. Answer b) is correct.
Indirect materials used = $20,000 + $40,000 − $15,000 = $45,000
Rent and utilities allocated to manufacturing = 60% × $200,000 = $120,000
Indirect manufacturing costs = $165,000
d) Answer d) is incorrect. The incorrectly includes direct materials. Answer b) is correct. Indirect materials used = $20,000 + $40,000 – $15,000 = $45,000
Rent and utilities allocated to manufacturing = 60% × $200,000 = $120,000
Indirect manufacturing costs = $165,000
11. MA506:
HWW Inc. has a job-order costing system. The company uses predetermined overhead rates in applying manufacturing overhead costs to individual jobs. The predetermined overhead rate in Department A is based on machine hours, and the rate in Department B is based on direct materials cost. HWW has the following estimates for the year:

<table>
<thead>
<tr>
<th></th>
<th>Department A</th>
<th>Department B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine hours</td>
<td>50,000</td>
<td>68,000</td>
</tr>
<tr>
<td>Direct labour hours</td>
<td>45,000</td>
<td>60,000</td>
</tr>
<tr>
<td>Direct materials cost</td>
<td>$250,000</td>
<td>$220,000</td>
</tr>
<tr>
<td>Direct labour cost</td>
<td>$300,000</td>
<td>$280,000</td>
</tr>
<tr>
<td>Manufacturing overhead cost</td>
<td>$395,000</td>
<td>$455,000</td>
</tr>
</tbody>
</table>

What are the predetermined overhead rates for Department A and Department B?

a. $7.20 and 1.81
b. $8.78 and 2.07
c. $7.20 and 1.62
*d. $7.90 and 2.07

Feedback:

a) Answer a) is incorrect. Answer d) is correct. The estimated departmental overhead/estimated drivers for the departments are calculated as follows:
A: $395,000 / 50,000 machine hours = $7.90/machine hour
B: $455,000 / $220,000 = 2.07 times direct material cost

b) Answer b) is incorrect. Answer d) is correct. The estimated departmental overhead/estimated drivers for the departments are calculated as follows:
A: $395,000 / 50,000 machine hours = $7.90/machine hour
B: $455,000 / $220,000 = 2.07 times direct material cost

c) Answer c) is incorrect. Answer d) is correct. The estimated departmental overhead/estimated drivers for the departments are calculated as follows:
A: $395,000 / 50,000 machine hours = $7.90/machine hour
B: $455,000 / $220,000 = 2.07 times direct material cost

*d) Answer d) is correct. The estimated departmental overhead/estimated drivers for the departments are calculated as follows:
A: $395,000 / 50,000 machine hours = $7.90/machine hour
B: $455,000 / $220,000 = 2.07 times direct material cost
12. MA502:
Deejay Co. uses an actual process costing system. In Department 2, direct materials are added at the 50% stage of completion of the process, and conversion costs are added uniformly throughout the process.

<table>
<thead>
<tr>
<th>Date</th>
<th>Units</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 1</td>
<td>6,000 units</td>
<td>60% complete for conversion costs</td>
</tr>
<tr>
<td>Started in March</td>
<td>42,000 units</td>
<td></td>
</tr>
<tr>
<td>March 31</td>
<td>8,000 units</td>
<td>3,000 units were 40% complete as to conversion costs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5,000 were 80% complete as to conversion costs</td>
</tr>
</tbody>
</table>

No spoilage was reported during March.

Using the first in, first out (FIFO) method, what is the number of equivalent units of production for the direct materials for March?

*a. 39,000
b. 40,000
c. 42,000
d. 45,000

Feedback:
*a) Answer a) is correct.
Direct materials equivalent units
= Completed beginning WIP + Started and completed + Ending WIP
= 0 + 34,000 + 5,000
= 39,000

- Beginning WIP: Already complete for materials, as conversion costs were at greater than 50%.
- Started and completed: 34,000 units in the period (42,000 – 8,000); these had 100% of materials added in this period.
- Ending WIP: 5,000 units at greater than 50% completion for conversion costs; these units would be 100% complete for direct materials.

Alternative calculation = 42,000 – 3,000 = 39,000

*b) Answer b) is incorrect. It adds the beginning inventory and deducts the ending WIP for all of the units in that count. Answer a) is correct.

Direct materials equivalent units
= Completed beginning WIP + Started and completed + Ending WIP
= 0 + 34,000 + 5,000
= 39,000
o Beginning WIP: Already complete for materials, as conversion costs were at greater than 50%.
o Started and completed: 34,000 units in the period (42,000 – 8,000); these had 100% of materials added in this period.
o Ending WIP: 5,000 units at greater than 50% completion for conversion costs; these units would be 100% complete for direct materials.
Alternative calculation = 42,000 – 3,000 = 39,000

c) Answer c) is incorrect. It does not include the ending WIP. Answer a) is correct.
Direct materials equivalent units
= Completed beginning WIP + Started and completed + Ending WIP
= 0 + 34,000 + 5,000
= 39,000

o Beginning WIP: Already complete for materials, as conversion costs were at greater than 50%.
o Started and completed: 34,000 units in the period (42,000 – 8,000); these had 100% of materials added in this period.
o Ending WIP: 5,000 units at greater than 50% completion for conversion costs; these units would be 100% complete for direct materials.
Alternative calculation = 42,000 – 3,000 = 39,000

d) Answer d) is incorrect. It includes the beginning inventory, which, using the FIFO method, would be gone. Answer a) is correct.
Direct materials equivalent units
= Completed beginning WIP + Started and completed + Ending WIP
= 0 + 34,000 + 5,000
= 39,000

o Beginning WIP: Already complete for materials, as conversion costs were at greater than 50%.
o Started and completed: 34,000 units in the period (42,000 – 8,000); these had 100% of materials added in this period.
o Ending WIP: 5,000 units at greater than 50% completion for conversion costs; these units would be 100% complete for direct materials.
Alternative calculation = 42,000 – 3,000 = 39,000
13. MA492:
A product is being produced that requires manufacturing space costing $1,000 per month and the lease of equipment for $700 per month. The material cost will be $12 per unit and the labour cost will be $13 per unit. Advertising and promotion will cost $2,000 per month.

Advertising and promotion is a:

a. Variable product cost
b. Fixed product cost
*c. Fixed period cost
d. Variable period cost

Feedback:

a) Answer a) is incorrect. A variable cost is a cost that varies proportionately with activity, and advertising and promotion costs do not vary with activity. Further, advertising and promotion is not attributable to the manufacturing process and therefore is not a product cost. Answer c) is correct because advertising and promotion is not attributable to the manufacturing process and therefore is a period cost. Advertising and promotion does not vary with activity and is therefore fixed.

b) Answer b) is incorrect because advertising and promotion is not attributable to the manufacturing process and therefore is not a product cost. Answer c) is correct because advertising and promotion is not attributable to the manufacturing process and therefore is a period cost. Advertising and promotion does not vary with activity and is therefore fixed.

*c) Answer c) is correct because advertising and promotion is not attributable to the manufacturing process and therefore is a period cost. Advertising and promotion does not vary with activity and is therefore fixed.

d) Answer d) is incorrect. A variable cost is a cost that varies proportionately with activity, and advertising and promotion costs do not vary with activity. Answer c) is correct because advertising and promotion is not attributable to the manufacturing process and therefore is a period cost. Advertising and promotion does not vary with activity and is therefore fixed.
14. MA491:
A factory manager’s salary is a:

a. Variable product cost
*b. Fixed product cost
  c. Variable period cost
  d. Fixed period cost

Feedback:

a) Answer a) is incorrect. The factory manager’s salary is fixed for the period and is not variable. Answer b) is correct because the factory manager’s salary is related to the manufacturing process and thus is a product cost. Also, it is fixed for the period.

*b) Answer b) is correct. The factory manager’s salary is related to the manufacturing process and thus is a product cost. Also, it is fixed for the period.

c) Answer c) is incorrect. The factory manager’s salary is fixed for the period and is not variable. In addition, the cost is related to the manufacturing process and thus is not a period cost. Answer b) is correct because the factory manager’s salary is related to the manufacturing process and thus is a product cost. Also, it is fixed for the period.

d) Answer d) is incorrect. The factory manager’s salary is related to the manufacturing process and thus is not a period cost. Answer b) is correct because the factory manager’s salary is related to the manufacturing process and thus is a product cost. Also, it is fixed for the period.
15. MA477:
Matilda Ma Home Accessories has determined that for its Floorina model of lamp, the direct materials cost is $5 per unit and the direct labour cost is $4 per unit. Based on 20 monthly observations, the company ran a regression that projected the overhead associated with this model of lamp as follows:

Overhead = $16,500 + $0.75X, where X is the direct labour cost.

The selling price for the Floorina lamp is $17 per unit. What is the expected gross margin from sales of the Floorina lamp next month if sales volume is estimated to be 5,000 units?

*a. $8,500
b. $19,750
c. $23,500
d. $36,250

Feedback:

*a) Answer a) is correct.
Variable cost per unit: $5 + $4 + ($0.75 × $4) = $12
Total contribution margin = ($17 – $12) × 5,000 = $25,000
Gross margin = $25,000 – $16,500 = $8,500

b) Answer b) is incorrect. Answer a) is correct, calculated as follows:
Variable cost per unit: $5 + $4 + ($0.75 × $4) = $12
Total contribution margin = ($17 – $12) × 5,000 = $25,000
Gross margin = $25,000 – $16,500 = $8,500

c) Answer c) is incorrect. Answer a) is correct, calculated as follows:
Variable cost per unit: $5 + $4 + ($0.75 × $4) = $12
Total contribution margin = ($17 – $12) × 5,000 = $25,000
Gross margin = $25,000 – $16,500 = $8,500

d) Answer d) is incorrect. Answer a) is correct, calculated as follows:
Variable cost per unit: $5 + $4 + ($0.75 × $4) = $12
Total contribution margin = ($17 – $12) × 5,000 = $25,000
Gross margin = $25,000 – $16,500 = $8,500
16. MA478:
A company has the following machine hours and production costs for the last six months of last year:

<table>
<thead>
<tr>
<th>Month</th>
<th>Machine hours</th>
<th>Production cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>15,000</td>
<td>$12,330</td>
</tr>
<tr>
<td>August</td>
<td>13,500</td>
<td>10,300</td>
</tr>
<tr>
<td>September</td>
<td>11,500</td>
<td>9,580</td>
</tr>
<tr>
<td>October</td>
<td>15,500</td>
<td>12,080</td>
</tr>
<tr>
<td>November</td>
<td>14,800</td>
<td>11,692</td>
</tr>
<tr>
<td>December</td>
<td>12,100</td>
<td>9,922</td>
</tr>
</tbody>
</table>

If the company expects to incur 14,000 machine hours in January, what will be the total production cost estimate using the high-low method?

a. $8,750
*b. $11,143
c. $11,544
d. $13,049

Feedback:

a) Answer a) is incorrect. Answer b) is correct, calculated as follows:
Variable costs = ($12,080 – $9,580) / (15,500 – 11,500) = $0.625
Fixed costs = $12,080 – ($0.625 × 15,500) = $2,392.50
$2,392.50 + (14,000 × $0.625) = $11,142.50

*b) Answer b) is correct. The highest and lowest values of the independent variable (machine hours) are used:
Variable costs = ($12,080 – $9,580) / (15,500 – 11,500) = $0.625
Fixed costs = $12,080 – ($0.625 × 15,500) = $2,392.50
$2,392.50 + (14,000 × $0.625) = $11,142.50

C) Answer c) is incorrect. It uses the highest value of the dependent variable (production cost). Answer b) is correct, calculated as follows:
Variable costs = ($12,080 – $9,580) / (15,500 – 11,500) = $0.625
Fixed costs = $12,080 – ($0.625 × 15,500) = $2,392.50
$2,392.50 + (14,000 × $0.625) = $11,142.50

d) Answer d) is incorrect. Answer b) is correct, calculated as follows:
Variable costs = ($12,080 – $9,580) / (15,500 – 11,500) = $0.625
Fixed costs = $12,080 – ($0.625 × 15,500) = $2,392.50
$2,392.50 + (14,000 × $0.625) = $11,142.50
17. MA578:
Which of the following statements regarding the organizational performance measurement tool Six Sigma is true?

a. It applies only to reducing manufacturing defects.
b. It uses statistical quality control and measurement methods to drive improvements in key strategic processes.
c. It translates the company strategy into four balanced measurement perspectives.
d. It is focused on several categories, including leadership, strategic planning, and results.

Feedback:

a) Answer a) is incorrect. Six Sigma goes beyond just improving manufacturing processes. Answer b) is correct. Six Sigma involves measuring and analyzing business processes to improve quality for the customer through reduced cycle time, reduced defects, and improved customer satisfaction.

*b) Answer b) is correct. Six Sigma involves measuring and analyzing business processes to improve quality for the customer through reduced cycle time, reduced defects, and improved customer satisfaction.

c) Answer c) is incorrect. This is a description of the Balanced Scorecard tool. Answer b) is correct. Six Sigma involves measuring and analyzing business processes to improve quality for the customer through reduced cycle time, reduced defects, and improved customer satisfaction.

d) Answer d) is incorrect. These categories are specifically for application to the Baldrige Award. Answer b) is correct. Six Sigma involves measuring and analyzing business processes to improve quality for the customer through reduced cycle time, reduced defects, and improved customer satisfaction.
18. MA577:
Which of the following activities is most likely an example of a non-value-added activity?

a. Putting a motor in an automobile in an automobile factory
*b. Moving work-in-process inventories from one part of the factory to another
c. Delivering finished goods to the customer
d. Adding spices to a cooked meal in a restaurant

Feedback:

a) Answer a) is incorrect. The most important characteristic of a non-value-added activity is that it adds delay and cost to the production process without adding value. As it is an essential part of the automobile, installing the motor definitely adds value to the product. Answer b) is correct. Moving work-in-process inventories in the factory is an operation that has no impact on the value that the customer attributes to the product, and therefore it does not add value. Furthermore, such moves are likely to increase production delays, something that could actually have a negative impact on value.

*b) Answer b) is correct. The most important characteristic of a non-value-added activity is that it adds delay and cost to the production process without adding value. Moving work-in-process inventories in the factory is an operation that has no impact on the value that the customer attributes to the product, and therefore it does not add value. Furthermore, such moves are likely to increase production delays, something that could actually have a negative impact on value.

c) Answer c) is incorrect. The most important characteristic of a non-value-added activity is that it adds delay and cost to the production process without adding value. If a product is delivered, the customer saves the time and resources necessary to get access to the product and should therefore attach some value to the delivery process. Answer b) is correct. Moving work-in-process inventories in the factory is an operation that has no impact on the value that the customer attributes to the product, and therefore it does not add value. Furthermore, such moves are likely to increase production delays, something that could actually have a negative impact on value.

d) Answer d) is incorrect. The most important characteristic of a non-value-added activity is that it adds delay and cost to the production process without adding value. Adding spices to a meal is likely to improve the meal’s taste and that should increase the value of the meal to the customer. Answer b) is correct. Moving work-in-process inventories in the factory is an operation that has no impact on the value that the customer attributes to the product, and therefore it does not add value. Furthermore, such moves are likely to increase production delays, something that could actually have a negative impact on value.
19. MA484:

DBS Ltd. produces a single product. For the current year, budgeted sales volume is 90,000 units and budgeted production volume is 100,000 units. The following standards were used in preparing the current year’s budget:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling price</td>
<td>$200 per unit</td>
</tr>
<tr>
<td>Variable direct material costs</td>
<td>$127 per unit</td>
</tr>
<tr>
<td>Variable direct labour costs</td>
<td>$6 per unit</td>
</tr>
<tr>
<td>Fixed manufacturing overhead</td>
<td>$2,800,000 per year</td>
</tr>
<tr>
<td>Fixed selling and administration</td>
<td>$300,000 per year</td>
</tr>
</tbody>
</table>

Assuming DBS uses absorption costing, what is its budgeted net profit for the current year?

a. $1,600,000  
b. $2,930,000  
c. $3,210,000  
d. $3,240,000

Feedback:

a) Answer a) is incorrect. It uses 90,000 units for sales and 100,000 units for manufacturing variable costs (that is, no items remaining in inventory). Answer c) is correct.

Fixed cost per unit = $2,800,000 / 100,000 units = $28 per unit
Budgeted profit = [($200 – $127 – $6 – $28) × 90,000] – $300,000 = $3,210,000

b) Answer b) is incorrect. This calculation represents profits using variable costing. Answer c) is correct.

Fixed cost per unit = $2,800,000 / 100,000 units = $28 per unit
Budgeted profit = [($200 – $127 – $6 – $28) × 90,000] – $300,000 = $3,210,000

*c) Answer c) is correct.

Fixed cost per unit = $2,800,000 / 100,000 units = $28 per unit
Budgeted profit = [($200 – $127 – $6 – $28) × 90,000] – $300,000 = $3,210,000

d) Answer d) is incorrect. It allocates the fixed selling and administrative costs to the product. Answer c) is correct.

Fixed cost per unit = $2,800,000 / 100,000 units = $28 per unit
Budgeted profit = [($200 – $127 – $6 – $28) × 90,000] – $300,000 = $3,210,000
20. MA494:
A manufacturer processes 100,000 kilograms of direct materials to produce two products: Product X and Product Z.

<table>
<thead>
<tr>
<th></th>
<th>Production (kg) at split-off</th>
<th>Selling price at split-off</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product X</td>
<td>15,000</td>
<td>$70</td>
</tr>
<tr>
<td>Product Z</td>
<td>40,000</td>
<td>$90</td>
</tr>
<tr>
<td>Waste</td>
<td>45,000</td>
<td>$0</td>
</tr>
</tbody>
</table>

The total costs incurred in the joint manufacturing process were $1,000,000.

Using the physical measures method, what are the joint costs allocated to products X and Z (rounding to the nearest dollar)?

a. Product X: $437,500; Product Z: $562,500
b. Product X: $225,806; Product Z: $774,194
c. Product X: $500,000; Product Z: $500,000
*d. Product X: $272,727; Product Z: $727,273

Feedback:

a) Answer a) is incorrect. It uses unit selling price to determine the cost allocation ratios. Answer d) is correct. It uses relative production volume to determine the ratios.

Product X: \((1,000,000 \times 15 / 55) = \$272,727\)
Product Z: \((1,000,000 \times 40 / 55) = \$727,273\)

b) Answer b) is incorrect. It uses the relative sales value at split-off method. Answer d) is correct. It uses relative production volume to determine the ratios.

Product X: \((1,000,000 \times 15 / 55) = \$272,727\)
Product Z: \((1,000,000 \times 40 / 55) = \$727,273\)

c) Answer c) is incorrect. It simply allocates half the joint costs to each product. Using the physical measure method, the products that are produced in greater quantity should bear more costs. Answer d) is correct. It uses relative production volume to determine the ratios.

Product X: \((1,000,000 \times 15 / 55) = \$272,727\)
Product Z: \((1,000,000 \times 40 / 55) = \$727,273\)

*d) Answer d) is correct. It uses relative production volume to determine the ratios.

Product X: \((1,000,000 \times 15 / 55) = \$272,727\)
Product Z: \((1,000,000 \times 40 / 55) = \$727,273\)
21. MA644:
Which of the following statements about a well-designed performance measurement system is true?

*a. It includes measures that are related to the goals of the organization.
b. It includes measures that primarily focus on immediate short-term concerns.
c. It includes measures that are mostly qualitative and require judgment.
d. It includes measures that are easily attainable to allow for positive morale.

Feedback:

*a) Answer a) is correct. A performance measurement system should relate to the goals of the organization, be reasonably objective, and be easily quantifiable.

b) Answer b) is incorrect. Performance measures should be designed to balance managers' attention on both short- and long-term goals. Otherwise, managers may make decisions that result in higher current-year profit, for example, at the expense of investments that would result in even greater profits in future years. Answer a) is correct. A performance measurement system should relate to the goals of the organization, be reasonably objective, and be easily quantifiable.

c) Answer c) is incorrect. Performance measures in a well-designed performance measurement system should be reasonably objective and easily quantified. Answer a) is correct. A performance measurement system should relate to the goals of the organization, be reasonably objective, and be easily quantifiable.

d) Answer d) is incorrect. Performance measurement systems should measure objectives that are attainable and are within control, but they should not be based on ease of attainability. A challenging yet achievable goal should be the target for the performance measure. Answer a) is correct. A performance measurement system should relate to the goals of the organization, be reasonably objective, and be easily quantifiable.
22. MA642:
ZIL Inc. operates two divisions, which are treated as investment centres. Data for each division are as follows (in '000s):

<table>
<thead>
<tr>
<th></th>
<th>Division A</th>
<th>Division B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net earnings</td>
<td>$65,000</td>
<td>$140,000</td>
</tr>
<tr>
<td>Total assets</td>
<td>$400,000</td>
<td>$850,000</td>
</tr>
</tbody>
</table>

The company’s required rate of return is 15%. The president wishes to evaluate the performance of these divisions relative to one another and is unsure what the return on investment or residual income would be for each division.

Based on the return on investment and residual income performance measures, which of the following statements is true?

a. Division A performed better, because its residual income is higher than that of Division B.
   *b. Division B performed better, because its return on investment and residual income are higher than those of Division A.
   c. Division A performed better, because its return on investment is higher than that of Division B.
   d. The divisions performed equally.

Feedback:

a) Answer a) is incorrect. Division A does not have higher residual income than Division B.

Answer b) is correct.
Return on investment Division A = $65,000 / $400,000 = 16.3%
Return on investment Division B = $140,000 / $850,000 = 16.5%
Residual income Division A = $65,000 − ($400,000 × 0.15) = $5,000
Residual income Division B = $140,000 − ($850,000 × 0.15) = $12,500
Division B has a higher return on investment and residual income.

*b) Answer b) is correct.
Return on investment Division A = $65,000 / $400,000 = 16.3%
Return on investment Division B = $140,000 / $850,000 = 16.5%
Residual income Division A = $65,000 − ($400,000 × 0.15) = $5,000
Residual income Division B = $140,000 − ($850,000 × 0.15) = $12,500
Division B has a higher return on investment and residual income.
c) Answer c) is incorrect.
Division A does not have higher return on investment than Division B.

Answer b) is correct.
Return on Investment Division A = $65,000 / $400,000 = 16.3%
Return on Investment Division B = $140,000 / $850,000 = 16.5%
Residual Income Division A = $65,000 – ($400,000 × 0.15) = $5,000
Residual Income Division B = $140,000 – ($850,000 × 0.15) = $12,500
Division B has a higher return on investment and residual income.

d) Answer d) is incorrect.
The divisions did not perform equally.

Answer b) is correct.
Return on investment Division A = $65,000 / $400,000 = 16.3%
Return on investment Division B = $140,000 / $850,000 = 16.5%
Residual income Division A = $65,000 – ($400,000 × 0.15) = $5,000
Residual income Division B = $140,000 – ($850,000 × 0.15) = $12,500
Division B has a higher return on investment and residual income.
23. MA643:
After an analysis of an organization’s operations, it was evident that department performance varied and that every department worked independently to achieve departmental objectives. The organization would like to improve overall product output, which would require improvement from all departments.

To achieve this improvement, the organization should do which of the following?

a. Introduce cost savings as financial departmental performance measures.
b. Develop a wage structure.
c. Increase the rewards offered to employees in well-performing departments.
*d. Launch a plant-wide incentive pay plan.

Feedback:

a) Answer a) is incorrect. Introducing cost savings as financial departmental performance measures addresses neither the differences between departments nor the need for overall improvement. It may increase the gaps in departmental performance. Answer d) is correct. Plant-wide incentive pay plans generally reward an increase in organization-wide outcomes that directly affect the cost and/or profit picture of the organization. Usually these plans reward increases in productivity of the organization as measured by reduction of organizational costs, in comparison with industry benchmarks.

b) Answer b) is incorrect. Although a wage structure creates a logical hierarchy of wages, it does not address the overall goal of output improvement. Answer d) is correct. Plant-wide incentive pay plans generally reward an increase in organization-wide outcomes that directly affect the cost and/or profit picture of the organization. Usually these plans reward increases in productivity of the organization as measured by reduction of organizational costs, in comparison with industry benchmarks.

c) Answer c) is incorrect. Increasing the reward offered to employees in well-performing departments addresses neither the differences between departments nor the need for overall improvement. It may increase the gaps in departmental performance. Answer d) is correct. Plant-wide incentive pay plans generally reward an increase in organization-wide outcomes that directly affect the cost and/or profit picture of the organization. Usually these plans reward increases in productivity of the organization as measured by reduction of organizational costs, in comparison with industry benchmarks.

*d) Answer d) is correct. Plant-wide incentive pay plans generally reward an increase in organization-wide outcomes that directly affect the cost and/or profit picture of the organization. Usually these plans reward increases in productivity of the organization as measured by reduction of organizational costs, in comparison with industry benchmarks.
24. MA595:
OEM Co. consists of several divisions. Each division operates as a profit centre with full autonomy. Division A decided to purchase component EX1 outside the company when Division B increased the transfer price from $156 to $164 per unit.

Information for Division A with respect to component EX1 is as follows:

<table>
<thead>
<tr>
<th>Price from external supplier</th>
<th>$160</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual purchases</td>
<td>10,000 units</td>
</tr>
</tbody>
</table>

Information for Division B with respect to component EX1 is as follows:

| Selling price to external customers | $160 per unit |
| Variable manufacturing cost         | $120 per unit |
| Variable selling cost for sales to external customers | $7 per unit |
| Fixed manufacturing cost             | $1,000,000    |
| Production capacity                  | 50,000 units  |
| Capacity utilization                 | 100%          |

All units of component EX1 produced by Division B can be sold in the open market.

Which of the following statements is true?

a. Division A should purchase 10,000 units of component EX1 from the outside supplier at a price of $160, because this would save the company $40,000 in costs.

b. Division B should sell 10,000 units of component EX1 to Division A at $164 each, because this would increase the company’s income by $110,000.

c. Division A should purchase 10,000 units of component EX1 from Division B because Division B would have idle capacity if Division A purchased the component externally.

*d. Division A should purchase 10,000 units of component EX1 from Division B at $164 each, because this would increase the company’s income by $70,000.

Feedback:

a) Answer a) is incorrect. There is a cost saving of $40,000 [($164 – $160) × 10,000 units] to Division A if Division A purchases the 10,000 units from an external supplier. However, the company’s profit decreases by the amount of the external selling costs for those units, that is, 10,000 units × $7 = $70,000. Answer d) is correct. Division A should purchase 10,000 units from Division B at $164 each because there is an increase in income of 10,000 units × $7 avoidable selling cost per unit = $70,000 for the company as a whole.
b) Answer b) is incorrect. There is an increase in income of $110,000 \{[\$164 - (\$160 - \$7)] \times 10,000 \text{ units}\} = \$110,000 to Division B if Division B sells the 10,000 units to Division A. However, Division A's profit decreases by 10,000 units $\times (\$164 - \$160) = \$40,000; the overall company income increases by $110,000 - \$40,000 = \$70,000. Answer d) is correct. Division A should purchase 10,000 units from Division B at \$164 each because there is an increase in income of 10,000 units \times \$7 avoidable selling cost per unit = \$70,000 for the company as a whole.

c) Answer c) is incorrect. There is no idle capacity in Division B when Division A purchases the 10,000 units from an external supplier because Division B can sell all units produced (50,000 units) in the market. Answer d) is correct. Division A should purchase 10,000 units from Division B at \$164 each because there is an increase in income of 10,000 units \times \$7 avoidable selling cost per unit = \$70,000 for the company as a whole.

*d) Answer d) is correct. Division A should purchase 10,000 units from Division B at \$164 each because there is an increase in income of 10,000 units \times \$7 avoidable cost per unit = \$70,000 for the company as a whole.
25. MA630:
A company manufactures two products, Y and Q. Each product requires the following processing:

<table>
<thead>
<tr>
<th></th>
<th>Process I</th>
<th>Process II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>2 hours</td>
<td>1 hour</td>
</tr>
<tr>
<td>Q</td>
<td>4 hours</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

The available time for processing the two products is 100 hours per week in Process I and 90 hours per week in Process II. The CM is $5 per unit of Y and $7 per unit of Q. The company would like to maximize profits, but the time availability of these two processes have constrained the number of units that can be produced.

Applying the linear programming technique, how would the objective function be expressed?

a. Maximize CM = 5 / 3Y + 7 / 7Q
b. Maximize CM = 100 / (2Y + 4Q) + 90 / (Y + 3Q)
*c. Maximize CM = 5Y + 7Q
d. Maximize CM = (2Y × 5) + (4Q × 7) + (4Y × 5) + (3Q × 7)

Feedback:

a) Answer a) is incorrect. This calculation divides the CM by total hours of processing. Answer c) is correct. The objective function would be to maximize the CM, which is correctly expressed as CM = 5Y + 7Q.

b) Answer b) is incorrect. This calculation combines the two processing constraints. Answer c) is correct. The objective function would be to maximize the CM, which is correctly expressed as CM = 5Y + 7Q.

*c) Answer c) is correct. The objective function would be to maximize the CM, which is correctly expressed as CM = 5Y + 7Q.

d) Answer d) is incorrect. This calculation incorrectly applies the CM to the number of units processed in each process and then sums them. Answer c) is correct. The objective function would be to maximize the CM, which is correctly expressed as CM = 5Y + 7Q.
26. MA634:
Deatter Co. is a manufacturer of office furniture. It sells two products: X and Y. Cost information is listed below:

<table>
<thead>
<tr>
<th></th>
<th>Product X</th>
<th>Product Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling price</td>
<td>$490</td>
<td>$560</td>
</tr>
<tr>
<td>Variable costs</td>
<td>280</td>
<td>420</td>
</tr>
<tr>
<td>Contribution</td>
<td>$210</td>
<td>$140</td>
</tr>
<tr>
<td>Machine hours to produce one unit</td>
<td>0.8</td>
<td>0.4</td>
</tr>
<tr>
<td>Maximum unit sales per month</td>
<td>525</td>
<td>700</td>
</tr>
</tbody>
</table>

The company presently operates the machine for a single eight-hour shift for 23 working days each month. Management is thinking about operating the machine for two shifts, which will increase the machine’s availability by another eight hours per day for 23 days per month. This change would require additional fixed costs of $5,000 per month.

If the company decides to set up the new shift, what is the objective formula for the month?

a. $262.5X + 350Y – 5,000 = profit
b. $0.8X + 0.4Y ≤ 8 hours
   *c. $210X + 140Y – 5,000 = profit
d. $0.8X + 0.4Y ≤ 368 hours

Feedback:

a) Answer a) is incorrect. The profit maximization formula does not factor in constraints, such as machine hours per unit. The above formula highlights the hourly CM per product. Machine hours to produce a unit would be used to assist in concluding on which unit is more profitable, and would be produced first.

Answer c) is correct. The objective formula focuses on profit maximization. The constraints are not part of this equation, as it is strictly focused on CM per unit, per product, less monthly fixed costs.

b) Answer b) is incorrect. The above formula is a daily constraint on hours, and while this is valuable information, this is not the objective of the analysis. The objective is commonly profit maximization.

Answer c) is correct. The objective formula focuses on profit maximization. The constraints are not part of this equation, as it is strictly focused on CM per unit, per product, less monthly fixed costs.

*c) Answer c) is correct. The objective formula focuses on profit maximization. The constraints are not part of this equation, as it is strictly focused on CM per unit, per product, less monthly fixed costs.
d) Answer d) is incorrect. The above formula is a monthly constraint on hours, and while this is valuable information, this is not the objective of the analysis. The objective is commonly profit maximization.

Answer c) is correct. The objective formula focuses on profit maximization. The constraints are not part of this equation, as it is strictly focused on CM per unit, per product, less monthly fixed costs.
27. MA636:
A company manufactures two types of plastic-covered steel fencing: standard and heavy duty. Both types of fencing pass through the processes involving steel forming and plastic bonding.

The standard fencing sells for $15 per roll and the heavy-duty fencing sells for $20 per roll. There is an unlimited market for the heavy-duty fencing, but outlets of the standard fencing are limited to 13,000 rolls per year. The factory operations of each process are limited to 24,000 hours per year. Direct labour at $10 per hour is based on forming hours. Variable overhead is applied based on total processing hours at $1 per hour. Direct materials cost $5 and $7 per roll for standard and heavy-duty fencing, respectively. Processing hours per roll are as follows:

<table>
<thead>
<tr>
<th></th>
<th>Forming</th>
<th>Bonding</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>0.6</td>
<td>0.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Heavy duty</td>
<td>0.8</td>
<td>1.2</td>
<td>2.0</td>
</tr>
</tbody>
</table>

In determining the production mix that would maximize total contribution, which one of the following would be an appropriate constraint?

*a. 0.6 standard + 0.8 heavy duty £ 24,000
b. 1.0 standard + 2.0 heavy duty £ 24,000
c. 1.0 standard + 2.0 heavy duty £ 48,000
d. 15 standard + 20 heavy duty £ 13,000

Feedback:

*a) Answer a) is correct. This function accurately describes the forming hours constraint.

b) Answer b) is incorrect. This could be a constraint definition, but the hours are 24,000 for each process so the number of available hours is actually 48,000. Also, this calculation will not provide sufficient detail to determine which half of the entire process — forming or bonding — is the actual constraining factor. It is likely that one or the other will actually be the constraint and will in turn affect the amount of the other used. The factory will likely use all 24,000 hours of one and not all 24,000 of the other.

Answer a) is correct. This function accurately describes the forming hours constraint.

c) Answer c) is incorrect. This could be a constraint definition but it will not provide sufficient detail to determine which half of the entire process — forming or bonding — is the actual constraining factor. It is likely that one or the other will actually be the constraint and will in turn affect the amount of the other used. The factory will likely use all 24,000 hours of one and not all 24,000 of the other, or use a maximum of all 24,000 for both — factory operations will always be at or under 48,000 total hours.

Answer a) is correct. This function accurately describes the forming hours constraint.
d) Answer d) is incorrect. This does not describe an appropriate constraint because it is mixing dollars and a sales count. $15 and $20 are the prices of the products, and 13,000 rolls is the limit for the number of rolls the company can sell of its standard fencing. The factory is not constrained by either of these things in terms of its ability to produce.

Answer a) is correct. This function accurately describes the forming hours constraint.
28. MA800:
Growit, a seed packing and distribution company, has just completed its first year of operations and has started to compile its three-year operational budget. Growit is using regression analysis in its business planning and has come up with four scenarios.

Which of the following represents the strongest relationship between the two variables, based on the regression analysis summary output?

a. Biweekly maintenance costs and machine hours

SUMMARY OUTPUT

<table>
<thead>
<tr>
<th>Regression Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
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<tr>
<td>R Square</td>
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<tr>
<td>Adjusted R Square</td>
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<tr>
<td>Standard Error</td>
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<td>Observations</td>
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ANOVA

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b. Monthly labour hours and overhead costs

SUMMARY OUTPUT

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<tr>
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<td>Total</td>
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<td>6839689367</td>
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Coefficients

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<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
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<th>Upper 95%</th>
<th>Lower 95.0%</th>
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<td>Labour-hours</td>
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<td>13.47982576</td>
<td>5.424453445</td>
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</table>
"c. Monthly number of units produced and distribution costs

SUMMARY OUTPUT

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<th>Regression Statistics</th>
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<td>11</td>
<td>152110667</td>
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Coefficients

<table>
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<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
<th>Lower 95.0%</th>
<th>Upper 95.0%</th>
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<tr>
<td>Intercept</td>
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<td>0.369884826</td>
<td>0.695968156</td>
<td>0.369884826</td>
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</tbody>
</table>

Feedback:

a) Answer a) is incorrect. While the $r^2$ is a reasonably high figure with 65% of the points falling close to the linear line, the standard error is extremely high. The P-value for the t stat is < 0.05, and therefore significant. However, the upper and lower 95% values are negative, which suggests that as machine hours increase, the biweekly maintenance decreases.

Answer c) is correct. The $r^2$ shows a clear relationship between the two variables with 84% of the points falling close to the linear line, but the standard error is high, which is a cause for concern. The P-value for the number of units t stat is < 0.05, suggesting a significant cause-and-effect relationship, and the upper and lower 95% values are both positive. While this data set is the strongest provided, with a sample size of 12, the results could be misleading, so it is recommended that Growit expand its data set as the company obtains more information.
b) Answer b) is incorrect. While the $r^2$ is a reasonably high figure with 73% of the points falling close to the linear line, the standard error is extremely high. The P-value for the labour hours t stat is < 0.05, and the upper and lower 95% values are both positive, suggesting that as labour hours increase, so do overhead costs. The small sample size of 12 leads to a large standard error, suggesting that the results could be misleading. Thus, while there is a trend, it would be better to expand the data set before relying on this information.

Answer c) is correct. The $r^2$ shows a clear relationship between the two variables with 84% of the points falling close to the linear line, but the standard error is high, which is a cause for concern. The P-value for the number of units t stat is < 0.05, suggesting a significant cause-and-effect relationship, and the upper and lower 95% values are both positive. While this data set is the strongest provided, with a sample size of 12, the results could be misleading, so it is recommended that Growit expand its data set as the company obtains more information.

*c) Answer c) is correct. The $r^2$ shows a clear relationship between the two variables with 84% of the points falling close to the linear line, but the standard error is high, which is a cause for concern. The P-value for the number of units t stat is < 0.05, suggesting a significant cause-and-effect relationship, and the upper and lower 95% values are both positive. While this data set is the strongest provided, with a sample size of 12, the results could be misleading, so it is recommended that Growit expand its data set as the company obtains more information.

d) Answer d) is incorrect. While the $r^2$ shows some relationship between the inputs, as 53% of the points are close to the linear line, the standard error is high. The P-value for the number of shipments t stat is < 0.05. The upper and lower 95% values are both positive, but represent a very wide spread due to the small sample size and large standard error. With a sample size of 12, the results could be misleading, so while there is a trend, it would be better to expand the data set before relying on this information.

Answer c) is correct. The $r^2$ shows a clear relationship between the two variables with 84% of the points falling close to the linear line, but the standard error is high, which is a cause for concern. The P-value for the number of units t stat is < 0.05, suggesting a significant cause-and-effect relationship, and the upper and lower 95% values are both positive. While this data set is the strongest provided, with a sample size of 12, the results could be misleading, so it is recommended that Growit expand its data set as the company obtains more information.
29. MA596:
Which of the following statements about transfer pricing is true?

a. Division managers favour cost-based transfer pricing because it typically yields an equitable share of profits.
b. A cost-based transfer price typically leads to optimal decisions by both the internal seller and the internal buyer.
*c. A negotiated transfer price promotes autonomy among division managers, but it can be time-consuming.
d. Use of market-based transfer pricing motivates managers to deal with customers and suppliers in the external market.

Feedback:

a) Answer a) is incorrect. Cost-based pricing may not lead to the most equitable share of profits because there is little motivation to improve production efficiency. This is because costs are transferred to the buyer with a set markup so their margin is guaranteed. Answer c) is correct. A negotiated transfer price allows division managers to come to an agreeable price as if they were unrelated parties, thereby promoting autonomy among subunit managers. However, negotiation can be time-consuming, as in any business dealings with unrelated parties.

b) Answer b) is incorrect. A cost-based transfer price often encourages suboptimal decisions by either the internal seller or the internal buyer. This is because when the selling division has excess capacity, the company should purchase internally at cost plus markup, even if it can purchase the product for less than that from an external company, as it still benefits the company as a whole. It should be noted that if the company can buy it cheaper than cost externally, it should temporarily cease production and purchase it externally. Answer c) is correct. A negotiated transfer price allows division managers to come to an agreeable price as if they were unrelated parties, thereby promoting autonomy among subunit managers. However, negotiation can be time-consuming, as in any business dealings with unrelated parties.

*c) Answer c) is correct. A negotiated transfer price allows division managers to come to an agreeable price as if they were unrelated parties, thereby promoting autonomy among subunit managers. However, negotiation can be time-consuming, as in any business dealings with unrelated parties.

d) Answer d) is incorrect. The use of market-based transfer pricing motivates managers to deal internally because they are no worse off than when dealing with external suppliers or customers. Answer c) is correct. A negotiated transfer price allows division managers to come to an agreeable price as if they were unrelated parties, thereby promoting autonomy among subunit managers. However, negotiation can be time-consuming, as in any business dealings with unrelated parties.
30. MA597:
Bartok Motors Inc. operates as a decentralized multidivisional company. The Cantata Division purchases most of its motors from the Concerto Division.

The Concerto Division:
- has variable costs of $620 per motor
- has sufficient excess capacity to satisfy the Cantata Division’s motor requirements
- can sell motors to external customers for $890

Which of the following statements BEST describes acceptable transfer pricing at Bartok Motors Inc.?

a. The minimum transfer price the Concerto Division is willing to accept on sales to the Cantata Division is $620.
b. The minimum transfer price the Concerto Division is willing to accept on sales to the Cantata Division is $890.
c. The maximum transfer price the Cantata Division is willing to pay on purchases from the Concerto Division is $890.
d. Both a) and c) above.

Feedback:

a) Answer a) is incorrect. It is not the only true statement. Answer a) is true because the Concerto Division is not operating at capacity so there is no opportunity cost. Answer c) is true because the Cantata Division can purchase the motors for $890 in the market, and so this is the maximum transfer price the Cantata Division is willing to pay. Therefore, because answers a) and c) are both true statements, answer d) is the correct option.

b) Answer b) is incorrect. Because the Concerto Division has excess capacity, there is no opportunity cost for transferring the motors to the Cantata Division up to full capacity. Therefore, the Concerto Division would be willing to accept less than $890. The minimum transfer price acceptable to them is the incremental costs for manufacturing the motors, or $620 per motor. Answers a) and c) above are both true statements. And because the Cantata Division can purchase the motors for $890 in the market, this is the maximum transfer price the Cantata Division is willing to pay. Therefore, because answers a) and c) are both true statements, answer d) is the correct option.

c) Answer c) is incorrect. It is not the only true statement. Answer a) is true because the Concerto Division has excess capacity, and so there is no opportunity cost for transferring the motors to the Cantata Division up to full capacity. Thus, the minimum transfer price acceptable to the Concerto Division is the incremental costs for manufacturing the motors, or $620 per motor. Answer c) is true because the Cantata Division would be willing to pay as much as market value, $890, for the motor. Therefore, because answers a) and c) are both true statements, answer d) is the correct option.
*d) Answer d) is correct. Answers a) and c) are both true statements. Because the Concerto Division has excess capacity, there is no opportunity cost for transferring the motors to the Cantata Division up to full capacity. Thus, the minimum transfer price acceptable to the Concerto Division is the incremental costs for manufacturing the motors, or $620 per motor. The Cantata Division can purchase the motors for $890 in the market, so this is the maximum transfer price the Cantata Division is willing to pay.
31. MA670:
The customer service department of Conglomerate Co. provides services for several other divisions and to external customers. One of the internal customers is Online and Catalogue Sales (OCS). The OCS division recently received an offer from an external customer service company to provide services at a price of $5.00 per customer service call.

The internal customer service department currently sells services to external customers for $5.50 per call and has excess capacity. All of the customer service department costs are fixed, and the allocated costs per call are as follows:

<table>
<thead>
<tr>
<th>Labour cost</th>
<th>$2.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer, telephone, and other office overhead</td>
<td>1.00</td>
</tr>
<tr>
<td>Total cost per call</td>
<td>$3.00</td>
</tr>
</tbody>
</table>

Which of the following transfer prices would most likely lead to a suboptimal decision by the customer service department and/or the OCS division?

*a. Market-based price of $5.50 per call  
b. Cost-based price of $3.00 per call  
c. Cost-based price of $0.00 per call  
d. Negotiated price of $4.00 per call

Feedback:  
*a) Answer a) is correct. It would be in the best interests of the company as a whole to use internal services because the customer service department has excess capacity and the internal incremental cost per call is $0.00. However, the OCS division has received an offer from an external company for $5.00 per call, so it might be unwilling to purchase the customer services internally at $5.50 per call.  
b) Answer b) is incorrect. The OCS division would be willing to pay the full absorption cost of $3.00 per call, which is less than the price from the external vendor. Answer a) is correct. It would be in the best interests of the company as a whole to use internal services because the customer service department has excess capacity and the internal incremental cost per call is $0.00. However, the OCS division has received an offer from an external company for $5.00 per call, so it might be unwilling to purchase the customer services internally at $5.50 per call.
c) Answer c) is incorrect. OCS division would certainly be willing to pay the variable cost of $0.00 per call. However, the customer service department would probably be unhappy about providing services at a transfer price of $0.00 per call, even though this arrangement would allow it to use some of its excess capacity with no increase in cost. Answer a) is correct. It would be in the best interests of the company as a whole to use internal services because the customer service department has excess capacity, and the internal incremental cost per call is $0.00. However, the OCS division has received an offer from an external company for $5.00 per call, so it might be unwilling to purchase the customer services internally at $5.50 per call.

d) Answer d) is incorrect. The OCS division would be willing to pay $4.00 per call, which is less than the price from the external vendor. The customer service department would be willing to receive $4.00 per call because this transfer price would allow it to earn an incremental profit of $4.00 per call for the services provided. Answer a) is correct. It would be in the best interests of the company as a whole to use internal services because the customer service department has excess capacity and the internal incremental cost per call is $0.00. However, the OCS division has received an offer from an external company for $5.00 per call, so it might be unwilling to purchase the customer services internally at $5.50 per call.
32. MA571:
Which of the following statements about a company’s transfer price is true?

a. It is the price charged externally by one subunit of an organization.
b. It should include opportunity cost when there is excess capacity.
c. It is a negotiated price where the seller sets the price.
*d. It should discourage suboptimal decisions.

Feedback:

a) Answer a) is incorrect. A company’s transfer price is the price charged *internally* by one subunit of an organization to another subunit. Answer d) is correct. Negotiated transfer prices are less likely to encourage suboptimal decisions compared to cost-based or market-based transfer prices.

b) Answer b) is incorrect. Transfer prices should not consider opportunity cost when there is excess capacity, because the division should accept any price that is equal to or greater than variable cost. Answer d) is correct. Negotiated transfer prices are less likely to encourage suboptimal decisions compared to cost-based or market-based transfer prices.

c) Answer c) is incorrect. Under a negotiated transfer price, the seller and purchaser work together to come up with an internal transfer price. Answer d) is correct. Negotiated transfer prices are less likely to encourage suboptimal decisions compared to cost-based or market-based transfer prices.

*d) Answer d) is correct. Negotiated transfer prices are less likely to encourage suboptimal decisions compared to cost-based or market-based transfer prices.
33. MA600:
The levelling and initial decrease in sales growth of a product take place in which stage of the product life cycle?

a. The decline stage
*b. The maturity stage
 c. The growth stage
d. The product introduction stage

Feedback:

a) Answer a) is incorrect. In the decline stage, the overall level of sales declines, resulting in a negative growth rate.
Answer b) is correct. At the maturity stage, sales growth will begin to level off. The company will look to maximize cash flow from the product and achieve economies of scale. (Note that the question specified a decrease in sales growth — the flattening of the curve — and not a decrease in sales level.)

*b) Answer b) is correct. At the maturity stage, sales growth will begin to level off. The company will look to maximize cash flow from the product and achieve economies of scale. (Note that the question specified a decrease in sales growth — the flattening of the curve — and not a decrease in sales level.)

c) Answer c) is incorrect. In the growth stage, the market has accepted the product, and sales growth is steep relative to the other stages of the product life cycle.
Answer b) is correct. At the maturity stage, sales growth will begin to level off. The company will look to maximize cash flow from the product and achieve economies of scale. (Note that the question specified a decrease in sales growth — the flattening of the curve — and not a decrease in sales level.)

d) Answer d) is incorrect. In the introduction stage, product sales are the lowest and growth is slow until the market has accepted the product.
Answer b) is correct. At the maturity stage, sales growth will begin to level off. The company will look to maximize cash flow from the product and achieve economies of scale. (Note that the question specified a decrease in sales growth — the flattening of the curve — and not a decrease in sales level.)
34. MA601:
Which of the following best describes a target-pricing approach?

*a. Setting a price that focuses management on achieving a specific cost
b. Adding a desired markup to a predetermined cost to set a price
c. Charging a low price to enter the marketplace
d. Charging a higher price during high-demand periods

Feedback:

*a) Answer a) is correct. This is the most appropriate description of target pricing.

b) Answer b) is incorrect. This is a description of cost-plus pricing. Answer a) is correct. This is the most appropriate description of target pricing.

c) Answer c) is incorrect. This is a demand-based or penetration-pricing strategy. Answer a) is correct. This is the most appropriate description of target pricing.

d) Answer d) is incorrect. This is a description of peak-load pricing. Answer a) is correct. This is the most appropriate description of target pricing.
35. MA602:
ABC sells consumer electronics and personal computers. Each year, ABC is first to release an innovative tech gadget unparalleled by its competitors.

What is the best pricing strategy for ABC to maximize profits?

a. Penetration pricing  
* b. Skimming  
 c. Full absorption cost  
 d. Value-based pricing

Feedback:

a) Answer a) is incorrect. Penetration pricing is used when a firm wants to increase market share. It does so by setting a low price. Products in the tech industry become obsolete very quickly. As new products are introduced annually, ABC will not want to produce a high volume of inventory needed to support the demand from a low price.

Answer b) is correct. Skimming is a market-based pricing strategy. With this pricing strategy, the firm will set a high price with the goal of high profit margins on low volumes over low profit margins on high volumes. It is successful when there are early adopters of the technology with a low price sensitivity. The firm must capitalize immediately upon release of the product because of the short product life cycle.

*b) Answer b) is correct. Skimming is a market-based pricing strategy. With this pricing strategy, the firm will set a high price with the goal of high profit margins on low volumes over low profit margins on high volumes. It is successful when there are early adopters of the technology with a low price sensitivity. The firm must capitalize immediately upon release of the product because of the short product life cycle.

Answer c) is incorrect. Full absorption includes the variable and fixed costs over the life of the product but ignores competition. Although the product is currently the market leader, it will not take long for competitors to notice and introduce a similar product into the marketplace. The price of the product needs to adjust for the change in competition.

c) Answer c) is incorrect. Full absorption includes the variable and fixed costs over the life of the product but ignores competition. Although the product is currently the market leader, it will not take long for competitors to notice and introduce a similar product into the marketplace. The price of the product needs to adjust for the change in competition. Answer b) is correct. Skimming is a market-based pricing strategy. With this pricing strategy, the firm will set a high price with the goal of high profit margins on low volumes over low profit margins on high volumes. It is successful when there are early adopters of the technology with a low price sensitivity. The firm must capitalize immediately upon release of the product because of the short product life cycle.
d) Answer d) is incorrect. Value-based pricing would be appropriate if there were other firms releasing competitive products at the same time as ABC. Then ABC would need to consider how customers perceive the value of its product against its competitors’ products when determining its pricing strategy.

Answer b) is correct. Skimming is a market-based pricing strategy. With this pricing strategy, the firm will set a high price with the goal of high profit margins on low volumes over low profit margins on high volumes. It is successful when there are early adopters of the technology with a low price sensitivity. The firm must capitalize immediately upon release of the product because of the short product life cycle.
36. MA603:
Which of the following factors would be most relevant to a cost-based pricing strategy?

a. Price sensitivity  
b. Industry structure  
c. Product life cycle  
*d. Product cost markup

Feedback:

a) Answer a) is incorrect. Sensitivity of customers will determine whether a firm should employ a model of high volume with low price or low volume with high price. Answer d) is correct. Product cost, research, marketing, and distribution are all important costs that influence pricing under a cost-based pricing strategy. Product cost markup is the formula applied to the product cost in a cost-based pricing strategy.

b) Answer b) is incorrect. Industry structure involves the number of other competitors. This will influence how much power a firm has in setting market prices. Answer d) is correct. Product cost, research, marketing, and distribution are all important costs that influence pricing under a cost-based pricing strategy. Product cost markup is the formula applied to the product cost in a cost-based pricing strategy.

c) Answer c) is incorrect. The life cycle of a product will influence the price that customers are willing to pay. Answer d) is correct. Product cost, research, marketing, and distribution are all important costs that influence pricing under a cost-based pricing strategy. Product cost markup is the formula applied to the product cost in a cost-based pricing strategy.

*d) Answer d) is correct. Product cost, research, marketing, and distribution are all important costs that influence pricing under a cost-based pricing strategy. Product cost markup is the formula applied to the product cost in a cost-based pricing strategy.
37. MA604:
Which of the following occurs in the mature stage of the product life cycle?

a. Sales are increasing.
   *b. Competition is increasing.
   c. Cost are increasing
   d. Profits are increasing

Feedback:

a) Answer a) is incorrect. This is not a typical description of the maturity stage.

Answer b) is correct. The maturity stage is characterized by many competitors that consume a portion of the market share, leading to slowing sales growth.

*b) Answer b) is correct. The maturity stage is characterized by many competitors that consume a portion of the market share, leading to slowing sales growth.

c) Answer c) is incorrect. Costs are relatively flat during the maturity stage.

Answer b) is correct. The maturity stage is characterized by many competitors that consume a portion of the market share, leading to slowing sales growth.

d) Answer d) is incorrect. This describes the growth stage.

Answer b) is correct. The maturity stage is characterized by many competitors that consume a portion of the market share, leading to slowing sales growth.
38. MA855:
Pro forma financial statements are used for which of the following?

a. To show what the financial results will be if targets set by a company are achieved
b. To show the financial results that a company will likely achieve
*c. To show the financial results of a change or event for a company
d. To show a retrospective analysis of a company’s past performance

Feedback:

a) Answer a) is incorrect. This describes a budget and not a pro forma statement. Answer c) is correct. Pro forma statements are used to assess the impact on financial results due to specific changes or events.

b) Answer b) is incorrect. This describes a forecast and not a pro forma statement. Answer c) is correct. Pro forma statements are used to assess the impact on financial results due to specific changes or events.

*c) Answer c) is correct. Pro forma statements are used to assess the impact on financial results due to specific changes or events.

d) Answer d) is incorrect. Pro forma statements are prospective in nature. Answer c) is correct. Pro forma statements are used to assess the impact on financial results due to specific changes or events.
39. MA856:
Which of the following is a limitation of a pro forma statement?

a. Pro forma statements are only prepared for one year.
b. Pro forma statements only focus on the income statement.
c. Pro forma statements must align with the expectations stated in the budget.
*d. Pro forma statements require assumptions to be made about a planned transaction or strategy that may or may not be realistic.

Feedback:

a) Answer a) is incorrect. Pro forma statements may be prepared for as many years as required and are not limited to just one year. Answer d) is correct. As with any estimates, the risk is that the assumptions used to prepare the pro forma statements could be unrealistic and result in a wrong decision if these statements are relied upon.

b) Answer b) is incorrect. Pro forma statements can include the income statement, balance sheet, and cash flow statement. Answer d) is correct. As with any estimates, the risk is that the assumptions used to prepare the pro forma statements could be unrealistic and result in a wrong decision if these statements are relied upon.

c) Answer c) is incorrect. The purpose of a pro forma statement is to highlight differences from the budget. Answer d) is correct. As with any estimates, the risk is that the assumptions used to prepare the pro forma statements could be unrealistic and result in a wrong decision if these statements are relied upon.

*d) Answer d) is correct. As with any estimates, the risk is that the assumptions used to prepare the pro forma statements could be unrealistic and result in a wrong decision if these statements are relied upon.
40. MA857:
Which of the following statements is true?

a. A forecast represents the company’s plan, and a pro forma statement captures assumptions for a significant event.
b. A budget represents the company’s plan, and a forecast captures assumptions for a significant event.
*c. A budget represents the company’s plan, and a forecast describes the expected outcomes.
d. A budget describes the expected outcomes, and a forecast represents the company’s plan.

Feedback:

a) Answer a) is incorrect. A forecast is a current forward-looking projection of the company’s expected outcomes. Answer c) is correct. A budget contains the company’s planned outcomes, whereas a forecast is a current forward-looking projection of the company’s expected outcomes, which considers actual results and current trends.

b) Answer b) is incorrect. A forecast is a current forward-looking projection of the company’s expected outcomes. Answer c) is correct. A budget contains the company’s planned outcomes, whereas a forecast is a current forward-looking projection of the company’s expected outcomes, which considers actual results and current trends.

*c) Answer c) is correct. A budget contains the company’s planned outcomes, whereas a forecast is a current forward-looking projection of the company’s expected outcomes, which considers actual results and current trends.

d) Answer d) is incorrect. A budget represents the company’s plan, and the forecast describes the expected outcomes. Answer c) is correct. A budget contains the company’s planned outcomes, whereas a forecast is a current forward-looking projection of the company’s expected outcomes, which considers actual results and current trends.
41. MA454:
What is the basic difference between a static budget and a flexible budget?

a. A static budget is based on rigid goals, whereas a flexible budget allows management latitude in meeting goals.
b. A static budget is for an entire organization, whereas a flexible budget is applicable to individual departments.
c. A static budget is based on standard costing, whereas a flexible budget is based on absorption costing.
*d. A static budget is based on one level of output, whereas a flexible budget can be adjusted for any level of output within the relevant range.

Feedback:

a) Answer a) is incorrect. The difference between static and flexible budgets is not influenced by the rigidity or latitude in meeting goals. Answer d) is correct. The static budget is based on one level of output and is not adjusted after it is finished, regardless of changes in output or input prices, quantities, or costs. The flexible budget can be adjusted to the actual level of output achieved or expected to be achieved during the budget period.

b) Answer b) is incorrect. Both can be applied to an entire organization and its subunits. Answer d) is correct. The static budget is based on one level of output and is not adjusted after it is finished, regardless of changes in output or input prices, quantities, or costs. The flexible budget can be adjusted to the actual level of output achieved or expected to be achieved during the budget period.

c) Answer c) is incorrect. Both types of budget can use standard and/or absorption costing. Answer d) is correct. The static budget is based on one level of output and is not adjusted after it is finished, regardless of changes in output or input prices, quantities, or costs. The flexible budget can be adjusted to the actual level of output achieved or expected to be achieved during the budget period.

*d) Answer d) is correct. The static budget is based on one level of output and is not adjusted after it is finished, regardless of changes in output or input prices, quantities, or costs. The flexible budget can be adjusted to the actual level of output achieved or expected to be achieved during the budget period.
42. MA469:
In a factory that uses a standard cost system, which of the following could be the cause of a favourable production volume variance related to fixed overhead?

a. There is a decrease in fixed overhead expenses.
b. There is an increase in fixed overhead accompanied by a decrease in variable overhead expenses.
c. The actual activity level in the factory is less than what was predicted for budgeting purposes.
*d. The actual activity level in the factory is greater than what was predicted for budgeting purposes.

Feedback:

a) Answer a) is incorrect. The production volume variance related to fixed overhead is not affected by actual overhead expenses.
Answer d) is correct. In calculating the production volume variance for fixed costs, total budgeted fixed overhead cost is compared to the total amount of fixed costs applied to production. If fixed costs have been overapplied due to more units being produced than foreseen in the master budget, then the variance is favourable, as the extra costs applied are credited to the profit and loss statement. If overhead is underapplied, then there will be a variance charged (debited) to the profit and loss statement.

b) Answer b) is incorrect. The production volume variance related to fixed overhead is not affected by actual overhead expenses.
Answer d) is correct. In calculating the production volume variance for fixed costs, total budgeted fixed overhead cost is compared to the total amount of fixed costs applied to production. If fixed costs have been overapplied due to more units being produced than foreseen in the master budget, then the variance is favourable, as the extra costs applied are credited to the profit and loss statement. If overhead is underapplied, then there will be a variance charged (debited) to the profit and loss statement.

c) Answer c) is incorrect. In calculating the production volume variance for fixed costs, total budgeted fixed overhead cost is compared to the total amount of fixed costs applied to production. If fixed costs have been underapplied due to fewer units being produced than foreseen in the master budget, then the variance is unfavourable, as there will be a variance charged (debited) to the profit and loss statement. If overhead is overapplied, the extra costs applied are credited to the profit and loss statement Answer d) is correct. In calculating the production volume variance for fixed costs, total budgeted fixed overhead cost is compared to the total amount of fixed costs applied to production. If fixed costs have been overapplied due to more units being produced than foreseen in the master budget, then the variance is favourable, as the extra costs applied are credited to the profit and loss statement. If overhead is underapplied, then there will be a variance charged (debited) to the profit and loss statement.
*d) Answer d) is correct. In calculating the production volume variance for fixed costs, total budgeted fixed overhead cost is compared to the total amount of fixed costs applied to production. If fixed costs have been overapplied due to more units being produced than foreseen in the master budget, then the variance is favourable, as the extra costs applied are credited to the profit and loss statement. If overhead is underapplied, then there will be a variance charged (debited) to the profit and loss statement.
43. MA466:
A company had monthly sales of $612,000 with a favourable static budget variance of $50,000 and a favourable selling price variance of $10,000. If the sales volume variance was $60,000 favourable, what was the flexible budget variance?

a. $70,000 favourable
b. $110,000 favourable
c. $20,000 unfavourable
*d. $10,000 unfavourable

Feedback:

a) Answer a) is incorrect.
Selling price variance + Sales volume variance = $70,000

Answer d) is correct.
Static budget variance = Flexible budget variance + Sales volume variance
Flexible budget variance = $50,000(F) – $60,000(F) = $10,000(U)

b) Answer b) is incorrect.
Sales volume variance + Static budget variance = $110,000

Answer d) is correct.
Static budget variance = Flexible budget variance + Sales volume variance
Flexible budget variance = $50,000(F) – $60,000(F) = $10,000(U)

c) Answer c) is incorrect.
Efficiency variance = Static budget variance – [(Sales volume variance + selling price variance)]
Efficiency variance = $50,000(F) – [$60,000(F) + $10,000(F)] = $20,000(U)

Answer d) is correct.
Static budget variance = Flexible budget variance + Sales volume variance
Flexible budget variance = $50,000(F) – $60,000(F) = $10,000(U)

*d) Answer d) is correct.
Static budget variance = Flexible budget variance + Sales volume variance
Flexible budget variance = $50,000(F) – $60,000(F) = $10,000(U)
44. MA457:
Which of the following is the most appropriate explanation for a company that experienced a favourable material price/rate variance and an unfavourable material quantity/efficiency variance?

a. Materials were purchased at a discount and workers were well trained.
b. The price of materials has decreased and demand for the product has decreased.
c. The actual quantity of materials purchased was less than the estimated budgeted amount.
*d. Lower-quality materials that resulted in excessive waste were purchased at a discount.

Feedback:

a) Answer a) is incorrect. A discount in the price and more-productive workers would result in a favourable price/rate and quantity/efficiency variance. Answer d) is correct. If lower-grade materials resulted in excessive waste, then more materials were used than anticipated. Materials purchased at a discount would explain a favourable price/rate variance.

b) Answer b) is incorrect. A decrease in the price of materials and a decrease in demand would result in a favourable price/rate variance but would not explain an unfavourable quantity/efficiency variance. Answer d) is correct. If lower-grade materials resulted in excessive waste, then more materials were used than anticipated. Materials purchased at a discount would explain a favourable price/rate variance.

c) Answer c) is incorrect. The price/rate variance relates to price paid, and the quantity/efficiency variance relates to quantity used. This explanation doesn’t adequately address either variance. Answer d) is correct. If lower-grade materials resulted in excessive waste, then more materials were used than anticipated. Materials purchased at a discount would explain a favourable price/rate variance.

*d) Answer d) is correct. If lower-grade materials resulted in excessive waste, then more materials were used than anticipated. Materials purchased at a discount would explain a favourable price/rate variance.
45. MA645:
A company’s reward system is most effective at achieving the desired business outcomes if it does which of the following?

a. It links incentives to factors that go beyond the strategic plan.
*b. It includes both monetary and non-monetary rewards linked to both individual and corporate performance.
c. It bases the incentives and rewards of all employees on achieving departmental annual objectives.
d. It is closely tied to the growth of the company’s stock price.

Feedback:

a) Answer a) is incorrect. Rewards should be tightly linked to achieving only those performance targets in the strategic plan. Including factors outside of the strategic plan signals that either the strategic plan is incomplete or that management’s real agenda is something other than what was stated in the strategic plan. Answer b) is correct. When used properly, money is a great motivator, but there are potential advantages to be gained from praise, special recognition, handing out plum assignments, and so on. As well, basing rewards on both individual performance and corporate performance provides individual motivation and aligns the rewards to achieving desired business outcomes.

*b) Answer b) is correct. When used properly, money is a great motivator, but there are potential advantages to be gained from praise, special recognition, handing out plum assignments, and so on. As well, basing rewards on both individual performance and corporate performance provides individual motivation and aligns the rewards to achieving desired business outcomes.

c) Answer c) is incorrect. An incentive plan should be linked to both short-term (for example, annual) and long-term performance targets, which should be tied to both individual and overall corporate performance. Answer b) is correct. When used properly, money is a great motivator, but there are potential advantages to be gained from praise, special recognition, handing out plum assignments, and so on. As well, basing rewards on both individual performance and corporate performance provides individual motivation and aligns the rewards to achieving desired business outcomes.

d) Answer d) is incorrect. A reward system solely based on the company’s stock price is one-dimensional and might induce behaviour focused on short-term objectives. Answer b) is correct. When used properly, money is a great motivator, but there are potential advantages to be gained from praise, special recognition, handing out plum assignments, and so on. As well, basing rewards on both individual performance and corporate performance provides individual motivation and aligns the rewards to achieving desired business outcomes.
46. MA661:
Measuring individual performance using both financial and non-financial measures is crucial to accomplish which of the following?

a. Ensuring compliance with the company’s pre-established plan
b. Demonstrating the importance of financial measures
c. Ensuring that employees exercise full control over the performance measures
*d. Better aligning individual goals with the company objectives and strategies

Feedback:

a) Answer a) is incorrect. Measurements are intended to communicate, inform, and teach, not to ensure compliance, which is more related to control. Answer d) is correct. Using both financial and non-financial measures informs the employee about the drivers of current and future success, which helps align the employee goals with the company mission and strategy. Answer d) is correct. Using both financial and non-financial measures informs the employee about the drivers of current and future success, which helps align the employee goals with the company mission and strategy.

b) Answer b) is incorrect. Financial measures are a critical measurement of performance. However, an integrated set of measurements that include non-financial measures links the customer, internal processes, and employee performance to long-term financial success. Including non-financial measures ensures a comprehensive assessment of performance. Answer d) is correct. Using both financial and non-financial measures informs the employee about the drivers of current and future success, which helps align the employee goals with the company mission and strategy.

c) Answer c) is incorrect. Although ensuring that employees exercise some degree of control over the measures is crucial for employee motivation, including financial and non-financial measures in a performance measurement system provides no guarantee that the employees will exercise full control over the measures. Answer d) is correct. Using both financial and non-financial measures informs the employee about the drivers of current and future success, which helps align the employee goals with the company mission and strategy.

*d) Answer d) is correct. Using both financial and non-financial measures informs the employee about the drivers of current and future success, which helps align the employee goals with the company mission and strategy.
47. MA660:
Mary is the manager of Division A, which makes widgets. Division A is classified as a cost centre. Which of the following would be the most appropriate performance measurement for Mary?

a. Residual income of Division A
*b. Direct material costs of the widgets
c. Gross margin of the widgets
d. Return on assets of Division A

Feedback:

a) Answer a) is incorrect. As Mary is not responsible for sales, residual income is not a meaningful measurement. Answer b) is correct. A cost centre manager is responsible for controlling and reporting costs only. Direct material costs would be a typical cost that needs to be monitored and controlled.

*b) Answer b) is correct. A cost centre manager is responsible for controlling and reporting costs only. Direct material costs would be a typical cost that needs to be monitored and controlled.

c) Answer c) is incorrect. As Mary is not responsible for sales, gross margin is not a meaningful measurement. Answer b) is correct. A cost centre manager is responsible for controlling and reporting costs only. Direct material costs would be a typical cost that needs to be monitored and controlled.

d) Answer d) is incorrect. This is not a reasonable measurement because Mary does not control investment. Answer b) is correct. A cost centre manager is responsible for controlling and reporting costs only. Direct material costs would be a typical cost that needs to be monitored and controlled.
48. MA663:
An electrician is working on a new building alongside various other tradespeople and is paid an individual bonus based on the number of fixtures installed within a specified period of time. Which of the following is the primary benefit of including this incentive based on individual performance?

*a. Improved individual output  
b. Increased cooperation among employees  
c. Higher quality of installation  
d. Less risk imposed on the employee

Feedback:

*a) Answer a) is correct. Individual incentives encourage employees to exceed the standard in order to achieve their bonus. This leads to improved output.

b) Answer b) is incorrect. Individual incentives lead to the pursuit of individual goals and away from improved teamwork/cooperation. Answer a) is correct. Individual incentives encourage employees to exceed the standard in order to achieve their bonus. This leads to improved output.

c) Answer c) is incorrect. Given a prescribed period of time to complete the task, the electrician is under time constraints, which may lead to cutting corners in order to meet the time constraints and achieve the incentive. Answer a) is correct. Individual incentives encourage employees to exceed the standard in order to achieve their bonus. This leads to improved output.

d) Answer d) is incorrect. Including a variable component such as a bonus in the compensation imposes more risk on the employee and less risk on the employer. Answer a) is correct. Individual incentives encourage employees to exceed the standard in order to achieve their bonus. This leads to improved output.
49. MA851:
In which of the four balanced scorecard perspectives would “increase employee morale” likely appear as a goal?

a. Financial
b. Internal business process
c. Customer
*d. Learning and growth

Feedback:

a) Answer a) is incorrect. Answer d) is correct. Because learning and growth focuses on skills and development, which include corporate culture, increasing employee morale would be found in the learning and growth perspective.

b) Answer b) is incorrect. Answer d) is correct. Because learning and growth focuses on skills and development, which include corporate culture, increasing employee morale would be found in the learning and growth perspective.

c) Answer c) is incorrect. Answer d) is correct. Because learning and growth focuses on skills and development, which include corporate culture, increasing employee morale would be found in the learning and growth perspective.

*d) Answer d) is correct. Because learning and growth focuses on skills and development, which include corporate culture, increasing employee morale would be found in the learning and growth perspective.
50. MA852:
What is strategy mapping as it relates to the balanced scorecard?

*a. Identifying causal links between the four perspectives
b. Mapping the business processes that will be measured
c. The process of quantifying the four perspectives
d. Setting specific, measurable, attainable, realistic, and timely goals

Feedback:

*a) Answer a) is correct. Strategy mapping is what creates a connection between strategy and the goals within the four perspectives.

b) Answer b) is incorrect. Answer a) is correct. Strategy mapping is what creates a connection between strategy and the goals within the four perspectives.

c) Answer c) is incorrect. Answer a) is correct. Strategy mapping is what creates a connection between strategy and the goals within the four perspectives.

d) Answer d) is incorrect. Answer a) is correct. Strategy mapping is what creates a connection between strategy and the goals within the four perspectives.
51. MA853:
MoneyCo, an e-bank that prides itself on offering great customer service, is reviewing the measures of its balanced scorecard. Under internal business process, which one of the following measures would be a good fit?

*a. Website maintenance downtime
b. Employee training hours
c. Supplier satisfaction
d. Client retention

Feedback:

*a) Answer a) is correct. Because MoneyCo is an e-bank, ensuring that the website is consistently available is critical to pleasing customers. The website should be serviced to have minimal downtime.

b) Answer b) is incorrect. While employee training hours would be good for MoneyCo to measure, it would be captured in the learning and growth perspective. Answer a) is correct. Because MoneyCo is an e-bank, ensuring that the website is consistently available is critical to pleasing customers. The website should be serviced to have minimal downtime.

c) Answer c) is incorrect. While supplier satisfaction is important for any business, there is no indication that this is a key focus for MoneyCo. Answer a) is correct. Because MoneyCo is an e-bank, ensuring that the website is consistently available is critical to pleasing customers. The website should be serviced to have minimal downtime.

d) Answer d) is incorrect. Client retention is very important for MoneyCo, but this would fall under the customer perspective. Answer a) is correct. Because MoneyCo is an e-bank, ensuring that the website is consistently available is critical to pleasing customers. The website should be serviced to have minimal downtime.
52. MA854:
Farm Table is a not-for-profit organization that supports local farmers by hosting galas in different communities within the region. The meal at each gala is prepared by a local chef and highlights the local produce, meats, and cheeses of the host community. Farm Table’s mandate is to put a spotlight on the goods offered in the community, and any net proceeds from these events go into advertising for the local farmers. The organization is supported by proceeds raised from galas and external donations. Farm Table is interested in implementing a balanced scorecard to ensure it is headed toward success. Which of the following is the best measure for Farm Table to implement?

a. Effective utilization of volunteers
*b. Funds raised spent on their intended purpose

c. Reduced spending on marketing to minimize administrative costs
d. Launch of new programs

Feedback:

a) Answer a) is incorrect. While volunteers are critical for any not-for-profit, there is no indication that this is a key focus for Farm Table or that Farm Table uses volunteers at all. Answer b) is correct. As Farm Table has a very specific goal of advertising local farmers, donors should be able to notice an impact of the events; to keep donors engaged, Farm Table must demonstrate progress toward this goal.

*b) Answer b) is correct. As Farm Table has a very specific goal of advertising local farmers, donors should be able to notice an impact of the events; to keep donors engaged, Farm Table must demonstrate progress toward this goal.

c) Answer c) is incorrect. Since Farm Table is engaged in promoting local farmers, marketing costs may be an important expenditure that the organization would not want to minimize. Answer b) is correct. As Farm Table has a very specific goal of advertising local farmers, donors should be able to notice an impact of the events; to keep donors engaged, Farm Table must demonstrate progress toward this goal.

d) Answer d) is incorrect. Farm Table does not have plans to expand its programs. With many not-for-profits, diversification is not a goal because they need to ensure their existing donors/clients are satisfied. Answer b) is correct. As Farm Table has a very specific goal of advertising local farmers, donors should be able to notice an impact of the events; to keep donors engaged, Farm Table must demonstrate progress toward this goal.
53. MA891:
Which of the following is a likely result when a company encounters a data breach?

a. No impact to the company because those affected will not be notified  
*b. Decrease in net profits  
c. Decrease in lawsuits  
d. Decrease in expenses  

Feedback:

a) Answer a) is incorrect. Canadian law mandates that both the affected individuals and the Privacy Commissioner be notified of a data breach. Answer b) is correct because net company profits are likely to decrease due to both the lawsuits brought by those affected by the breach as well as lost future revenues resulting from a decrease in consumer confidence.

*b) Answer b) is correct. Net company profits are likely to decrease due to both the lawsuits brought by those affected by the breach as well as lost future revenues resulting from a decrease in consumer confidence.

c) Answer c) is incorrect. Lawsuits would likely increase from a data breach. Answer b) is correct because net company profits are likely to decrease due to both the lawsuits brought by those affected by the breach as well as lost future revenues resulting from a decrease in consumer confidence.

d) Answer d) is incorrect. Expenses are likely to increase as a result of a data breach from subsequent settlements to impacted parties and costs to avoid future breaches. Answer b) is correct because net company profits are likely to decrease due to both the lawsuits brought by those affected by the breach as well as lost future revenues resulting from a decrease in consumer confidence.
54. MA507:
HWW Inc. has a job-order costing system. The company uses predetermined overhead rates (POHRs) in applying manufacturing overhead costs to individual jobs. The POHR in Department A is based on machine hours, and the rate in Department B is based on direct materials cost. HWW has the following estimates for the year:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine hours</td>
<td>50,000</td>
<td>68,000</td>
</tr>
<tr>
<td>Direct labour hours</td>
<td>45,000</td>
<td>60,000</td>
</tr>
<tr>
<td>Direct materials cost</td>
<td>$250,000</td>
<td>$220,000</td>
</tr>
<tr>
<td>Direct labour cost</td>
<td>$300,000</td>
<td>$280,000</td>
</tr>
<tr>
<td>Manufacturing overhead cost</td>
<td>$395,000</td>
<td>$455,000</td>
</tr>
</tbody>
</table>

Job 2013 was completed on May 31 with the following cost information:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine hours</td>
<td>500</td>
<td>550</td>
</tr>
<tr>
<td>Direct materials cost</td>
<td>$27,000</td>
<td>$20,000</td>
</tr>
<tr>
<td>Direct labour cost</td>
<td>$31,000</td>
<td>$32,000</td>
</tr>
</tbody>
</table>

Assume the POHR for Department A is $8 and the POHR for Department B is 2.15. What is the total cost applied to job 2013?

a. $172,450
*b. $157,000
 c. $118,400
d. $105,000

Feedback:

a) Answer a) is incorrect. It applies Department A’s POHR to Department B and Department B’s POHR to Department A. Answer b) is correct.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Department A overhead: $8 \times 500</td>
<td>$ 4,000</td>
</tr>
<tr>
<td>Department B overhead: 2.15 \times $20,000</td>
<td>43,000</td>
</tr>
<tr>
<td>Direct materials: $27,000 + $20,000</td>
<td>47,000</td>
</tr>
<tr>
<td>Direct labour cost: $31,000 + $32,000</td>
<td>63,000</td>
</tr>
<tr>
<td>Total cost</td>
<td>$157,000</td>
</tr>
</tbody>
</table>
**b) Answer b) is correct.**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Department A overhead: $8 \times 500</td>
<td>$ 4,000</td>
</tr>
<tr>
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<td>43,000</td>
</tr>
<tr>
<td>Direct materials: $27,000 + $20,000</td>
<td>47,000</td>
</tr>
<tr>
<td>Direct labour cost: $31,000 + $32,000</td>
<td>63,000</td>
</tr>
<tr>
<td><strong>Total cost</strong></td>
<td><strong>$157,000</strong></td>
</tr>
</tbody>
</table>

**c) Answer c) is incorrect. It uses machine hours for both departments. Answer b) is correct.**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Department A overhead: $8 \times 500</td>
<td>$ 4,000</td>
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</tr>
<tr>
<td>Direct labour cost: $31,000 + $32,000</td>
<td>63,000</td>
</tr>
<tr>
<td><strong>Total cost</strong></td>
<td><strong>$157,000</strong></td>
</tr>
</tbody>
</table>

**d) Answer d) is incorrect. It omits direct materials and labour for Department B. Answer b) is correct.**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Department A overhead: $8 \times 500</td>
<td>$ 4,000</td>
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<td>63,000</td>
</tr>
<tr>
<td><strong>Total cost</strong></td>
<td><strong>$157,000</strong></td>
</tr>
</tbody>
</table>
55. MA509:
Given the following information for the manufacturing operations of REW Ltd. what is the cost of goods manufactured for 20X9?

<table>
<thead>
<tr>
<th></th>
<th>Opening inventory January 1, 20X9</th>
<th>Ending inventory December 31, 20X9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>$260,000</td>
<td>$235,000</td>
</tr>
<tr>
<td>WIP</td>
<td>$95,000</td>
<td>$75,000</td>
</tr>
<tr>
<td>Finished goods</td>
<td>$350,000</td>
<td>$360,000</td>
</tr>
</tbody>
</table>

Direct materials purchased $350,000
Direct labour payroll $160,000
Direct labour hours 6,500
Factory overhead rate per direct labour hour (DLH) $10

a. $600,000
b. $595,000
c. $555,000
*d. $620,000

Feedback:
a) Answer a) is incorrect. It ignores the change in work-in-process. Answer d) is correct.

- Direct materials used ($260,000 – $235,000 + $350,000) $375,000
- Direct labour used $160,000
- Factory overhead applied (6,500 × $10 per DLH) 65,000
- Total manufacturing costs incurred $600,000
- WIP inventory, January 1 95,000
- WIP inventory, December 31 (75,000)
- Cost of goods manufactured $620,000
b) Answer b) is incorrect. It ignores the change in direct material inventories. Answer d) is correct.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials used ($260,000 – $235,000 + $350,000)</td>
<td>$375,000</td>
</tr>
<tr>
<td>Direct labour used</td>
<td>160,000</td>
</tr>
<tr>
<td>Factory overhead applied (6,500 × $10 per DLH)</td>
<td>65,000</td>
</tr>
<tr>
<td>Total manufacturing costs incurred</td>
<td>600,000</td>
</tr>
<tr>
<td>WIP inventory, January 1</td>
<td>95,000</td>
</tr>
<tr>
<td>WIP inventory, December 31</td>
<td>(75,000)</td>
</tr>
<tr>
<td>Cost of goods manufactured</td>
<td>$620,000</td>
</tr>
</tbody>
</table>

c) Answer c) is incorrect. It does not apply factory overhead. Answer d) is correct.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials used ($260,000 – $235,000 + $350,000)</td>
<td>$375,000</td>
</tr>
<tr>
<td>Direct labour used</td>
<td>160,000</td>
</tr>
<tr>
<td>Factory overhead applied (6,500 × $10 per DLH)</td>
<td>65,000</td>
</tr>
<tr>
<td>Total manufacturing costs incurred</td>
<td>600,000</td>
</tr>
<tr>
<td>WIP inventory, January 1</td>
<td>95,000</td>
</tr>
<tr>
<td>WIP inventory, December 31</td>
<td>(75,000)</td>
</tr>
<tr>
<td>Cost of goods manufactured</td>
<td>$620,000</td>
</tr>
</tbody>
</table>

*d) Answer d) is correct.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials used ($260,000 – $235,000 + $350,000)</td>
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<td>(75,000)</td>
</tr>
<tr>
<td>Cost of goods manufactured</td>
<td>$620,000</td>
</tr>
</tbody>
</table>
56. MA510:
Ink-it produces two high-end executive-focused pens. The first model, the “Office Buddy,” is designed for office use with a desktop penholder, while the other model, the “Travel Buddy,” is geared toward on-the-road executives, as it is lightweight and can go through airport security without issues. Data regarding the two model lines are shown below:

<table>
<thead>
<tr>
<th></th>
<th>Office Buddy</th>
<th>Travel Buddy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected production</td>
<td>35,000</td>
<td>115,000</td>
</tr>
<tr>
<td>Direct materials cost</td>
<td>$17.00</td>
<td>$9.25</td>
</tr>
<tr>
<td>Direct labour cost</td>
<td>$3.75</td>
<td>$4.10</td>
</tr>
</tbody>
</table>

Ink-it is considering implementing an activity-based costing system in its facility and has identified three primary activities:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Office Buddy</th>
<th>Travel Buddy</th>
<th>Budgeted overhead cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly</td>
<td>3,000 labour hours</td>
<td>4,100 labour hours</td>
<td>$110,000</td>
</tr>
<tr>
<td>Quality assurance</td>
<td>190 inspection hours</td>
<td>150 inspection hours</td>
<td>$370,000</td>
</tr>
<tr>
<td>Packaging</td>
<td>125 boxes</td>
<td>265 boxes</td>
<td>$34,000</td>
</tr>
</tbody>
</table>

What is the overhead cost per unit for the Office Buddy pens?

a. $28.30
b. $14.69
*c. $7.55
d. $3.42

Feedback:
a) Answer a) is incorrect. The direct materials and direct labour are not part of overhead. Answer c) is correct. You need to multiply the activity rate by the driver of that activity on a per-product basis.
b) Answer b) is incorrect. Adding up the budgeted costs and dividing them by the Office Buddy units produced won’t attribute them on a line-by-line basis to the correct product. Answer c) is correct. You need to multiply the activity rate by the driver of that activity on a per-product basis.

### Activity Details

<table>
<thead>
<tr>
<th>Activity</th>
<th>Budgeted overhead cost</th>
<th>Budgeted cost driver</th>
<th>Activity rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly</td>
<td>$110,000</td>
<td>7,100 labour hours</td>
<td>$15.49 per labour hour</td>
</tr>
<tr>
<td>Quality assurance</td>
<td>$370,000</td>
<td>340 inspection hours</td>
<td>$1,088.24 per inspection hour</td>
</tr>
<tr>
<td>Packaging</td>
<td>$34,000</td>
<td>390 boxes</td>
<td>$87.179 per box</td>
</tr>
</tbody>
</table>

### Office Buddy Costs

<table>
<thead>
<tr>
<th>Office Buddy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly: 3,000 × $15.493</td>
</tr>
<tr>
<td>Quality assurance: 190 × $1,088.235</td>
</tr>
<tr>
<td>Packaging: 125 × $87.179</td>
</tr>
<tr>
<td>Total allocated overhead</td>
</tr>
<tr>
<td>Number of units produced</td>
</tr>
<tr>
<td>Per-unit overhead cost</td>
</tr>
</tbody>
</table>
*c) Answer c) is correct. You need to multiply the activity rate by the driver of that activity on a per-product basis.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Budgeted overhead cost</th>
<th>Budgeted cost driver</th>
<th>Activity rate</th>
</tr>
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<td>Assembly</td>
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<td>Packaging</td>
<td>$34,000</td>
<td>390 boxes</td>
<td>$87.179 per box</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Office Buddy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly: 3,000 × $15.493</td>
<td>$46,479</td>
</tr>
<tr>
<td>Quality assurance: 190 × $1,088.235</td>
<td>206,765</td>
</tr>
<tr>
<td>Packaging: 125 × $87.179</td>
<td>10,897</td>
</tr>
<tr>
<td>Total allocated overhead</td>
<td>$264,141</td>
</tr>
<tr>
<td>Number of units produced</td>
<td>35,000</td>
</tr>
<tr>
<td>Per-unit overhead cost</td>
<td>$7.55</td>
</tr>
</tbody>
</table>
d) Answer d) is incorrect. Adding up the budgeted costs and dividing them by the total units produced won’t attribute them on a line-by-line basis to the correct product. Answer c) is correct. You need to multiply the activity rate by the driver of that activity on a per-product basis.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Budgeted overhead cost</th>
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<td>Per-unit overhead cost</td>
<td>$7.55</td>
</tr>
</tbody>
</table>
57. MA418:
RS Inc. is considering implementing a new information system. One of the key steps in this process is establishing an internal steering committee. Which one of the following parties would LEAST likely be included in this committee?

a. The purchasing department  
   *b. The vendor of the proposed system  
   c. Senior management of RS  
   d. RS’s in-house programmer

Feedback:

a) Answer a) is incorrect. The steering committee guides the systems development life cycle. User departments such as the purchasing department must be represented on the committee. Answer b) is correct. Although the vendor of the system may participate in the system implementation as determined in a service level agreement, the vendor should not be included in the internal steering committee.

*b) Answer b) is correct. Although the vendor of the system may participate in the system implementation as determined in a service level agreement, the vendor should not be included in the internal steering committee.

C) Answer c) is incorrect. The steering committee guides the systems development life cycle. The senior management of RS is ultimately responsible to the board and shareholders for the system adopted. Answer b) is correct. Although the vendor of the system may participate in the system implementation as determined in a service level agreement, the vendor should not be included in the internal steering committee.

d) Answer d) is incorrect. The steering committee guides the systems development life cycle. Input from the in-house programmers will be required on the committee to determine how the system can be tailored to meet RS’s needs and how the new system will interact with existing systems. Answer b) is correct. Although the vendor of the system may participate in the system implementation as determined in a service level agreement, the vendor should not be included in the internal steering committee.
58. MA419: Which one of the following is a phase of the systems development life cycle (SDLC)?

*a. Initial feasibility study
b. Current state analysis and implementation planning
c. Post-implementation testing
d. Requirements evaluation

Feedback:

*a) Answer a) is correct. The initial feasibility study is the first phase of the SDLC.

b) Answer b) is incorrect. The current state analysis is completed as part of the preliminary survey and feasibility study. The implementation planning is completed in all of the stages prior to the actual implementation. Answer a) is correct. The initial feasibility study is the first phase of the SDLC.

c) Answer c) is incorrect. Testing is done before the system is implemented; it is evaluated after it is implemented. Answer a) is correct. The initial feasibility study is the first phase of the SDLC.

d) Answer d) is incorrect. Requirements are defined and analyzed as a part of phase 2; the system as a whole is evaluated post-implementation. Answer a) is correct. The initial feasibility study is the first phase of the SDLC.
59. MA479:
The following information is available for the manufacturing operations of ABC Ltd. for the month of March:

| Direct materials purchased | $82,000 |
| Direct labour payroll | $60,000 |
| Direct labour hours | 8,000 |
| POHR per direct labour hour | $10 |

<table>
<thead>
<tr>
<th>Direct materials</th>
<th>Opening inventory March 1</th>
<th>Ending inventory March 31</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>$38,000</td>
<td>$30,000</td>
</tr>
<tr>
<td>WIP</td>
<td>$18,000</td>
<td>$12,000</td>
</tr>
<tr>
<td>Finished goods</td>
<td>$54,000</td>
<td>$72,000</td>
</tr>
</tbody>
</table>

What is the cost of goods sold for the month of March?

a. $290,000  
b. $236,000  
c. $230,000  
*d. $218,000

Feedback:
a) Answer a) is incorrect. It calculates the cost of goods available for sale but omits adjusting for finished goods inventory on March 31. Answer d) is correct because it captures the manufacturing costs incurred, the WIP accounts, and the finished costs accounts.

| Direct materials used ($38,000 + $82,000 – $30,000) | $ 90,000 |
| Direct labour used | 60,000 |
| Factory overhead applied (8,000 × $10) | 80,000 |
| Total manufacturing costs incurred | 230,000 |
| WIP inventory, March 1 | 18,000 |
| WIP inventory, March 31 | (12,000) |
| Cost of goods manufactured | 236,000 |
| Finished goods inventory, March 1 | 54,000 |
| Finished goods inventory, March 31 | (72,000) |
| Cost of goods sold | $218,000 |
b) Answer b) is incorrect. This calculates the cost of goods manufactured but ignores the adjustment for beginning and ending finished goods inventory. Answer d) is correct because it captures the manufacturing costs incurred, the WIP accounts, and the finished costs accounts.

<table>
<thead>
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<th>Amount</th>
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<tbody>
<tr>
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<tr>
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<tr>
<td>Cost of goods manufactured</td>
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<td>Finished goods inventory, March 1</td>
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<td>Finished goods inventory, March 31</td>
<td>(72,000)</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>$218,000</td>
</tr>
</tbody>
</table>

c) Answer c) is incorrect. It calculates the total manufacturing costs of $230,000, but fails to consider the effect of the change in WIP and finished goods inventories. Answer is d) is correct because it captures the manufacturing costs incurred, the WIP accounts, and the finished costs accounts.

<table>
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</table>
*d) Answer d) is correct. It captures the manufacturing costs incurred, the WIP accounts, and the finished costs accounts.

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</tr>
</tbody>
</table>
60. MA497:
ABC Co. manufactures widgets and uses a standard process costing system. During production, two different types of materials are used: 100% of material XY is added at the beginning of the production process; 60% of material RT is added halfway through the production process while the remaining 40% is added at the end of process. Conversion costs are added uniformly throughout the entire production process.

For 20X9, the standard costs per equivalent unit (EU) for material XY, material RT, and conversion costs are $15, $21, and $9, respectively. Production data for May 20X9 are as follows:

<table>
<thead>
<tr>
<th>WIP inventory, May 1 (95% converted)</th>
<th>5,500 units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Started in production</td>
<td>8,800 units</td>
</tr>
<tr>
<td>Completed production</td>
<td>9,100 units</td>
</tr>
<tr>
<td>WIP inventory, May 31 (50% converted)</td>
<td>5,000 units</td>
</tr>
</tbody>
</table>

What is the value of WIP inventory at May 31?

*a. $160,500  
b. $183,000  
c. $207,000.  
d. $225,000

Feedback:
*a) Answer a) is correct.

<table>
<thead>
<tr>
<th>Material</th>
<th>Actual units</th>
<th>Percentage complete</th>
<th>Cost per EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material XY</td>
<td>5,000</td>
<td>100%</td>
<td>$15</td>
</tr>
<tr>
<td>Material RT</td>
<td>5,000</td>
<td>60%</td>
<td>$21</td>
</tr>
<tr>
<td>Conversion</td>
<td>5,000</td>
<td>50%</td>
<td>$9</td>
</tr>
<tr>
<td>Total value</td>
<td></td>
<td></td>
<td>$160,500</td>
</tr>
</tbody>
</table>

b) Answer b) is incorrect. It assumes 100% of conversion costs are complete. Answer a) is correct.
c) Answer c) is incorrect. It assumes 100% of material RT has been added. Answer a) is correct.

<table>
<thead>
<tr>
<th></th>
<th>Actual units</th>
<th>Percentage complete</th>
<th>Cost per EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material XY</td>
<td>5,000</td>
<td>100%</td>
<td>$15</td>
</tr>
<tr>
<td>Material RT</td>
<td>5,000</td>
<td>60%</td>
<td>$21</td>
</tr>
<tr>
<td>Conversion costs</td>
<td>5,000</td>
<td>50%</td>
<td>$9</td>
</tr>
<tr>
<td>Total value</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


d) Answer d) is incorrect. It assumes 100% of costs are complete in inventory. Answer a) is correct.

<table>
<thead>
<tr>
<th></th>
<th>Actual units</th>
<th>Percentage complete</th>
<th>Cost per EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material XY</td>
<td>5,000</td>
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</tr>
<tr>
<td>Total value</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
61. SG607:
Joe Newbie quit his job with an accounting firm to start his own bookkeeping business. His strategy is to provide highly personal, low-cost, flat-rate service. His goal is to be the largest bookkeeping firm in the city. Despite a growing business and the addition of several assistants, his company remains unprofitable. His employees are too slow and, although he has tried to motivate them, they cannot deliver the services quickly enough. Even with Joe’s careful budgeting, significant employee time overruns are the norm. To make matters worse, his clients often complain about costs and threaten to go elsewhere.

What is the most likely cause of Joe’s lack of profitability?

*a. His generic competitive position strategy is to be the lowest-cost provider and to provide personal service.

b. He needs to screen employees more carefully to ensure efficiency.

c. His strategic goal is to be the largest bookkeeping firm in the city.

d. His performance management system tracks employee time by customer and by job.

Feedback:

*a) Answer a) is correct. His goal to undercut the competition has backfired. To be successful, he has to choose between being a low-cost provider and differentiating his company based on customer intimacy. He attracts clients who do not value his expertise or service. They put continued pressure on him to lower his costs (while still expecting personalized service), making it difficult to make a fair profit. Customer intimacy comes with a cost.

b) Answer b) is incorrect. The continued employee time overruns are a symptom of the problem. The correct answer is a). Joe has tried to combine personal service with low costs. He attracts clients who do not value his expertise or service. They put continued pressure on him to lower his costs (while still expecting personalized service), making it difficult to make a fair profit.

c) Answer c) is incorrect. There is nothing wrong with this goal and there are many ways to achieve it. However, by giving in to his customer’s pressure to lower his rates, he may become the largest bookkeeping firm operating at a loss. Answer a) is correct. His goal to undercut the competition has backfired. He attracts clients who do not value his expertise or service. They put continued pressure on him to lower his costs (while still expecting personalized service), making it difficult to make a fair profit.
d) Answer d) is incorrect. This seems to be an appropriate and useful feedback system, as it highlights the problem. However, Joe seems to misinterpret what it is telling him. He wants his employees to speed up, but the fact may be that he cannot provide this level of service for what he charges. Answer a) is correct. His goal to undercut the competition has backfired. He attracts clients who do not value his expertise or service. They put continued pressure on him to lower his costs (while still expecting personalized service), making it difficult to make a fair profit.
62. SG635:
A values statement supports the mission and vision statements by identifying the core beliefs, principles, and philosophies that are intended to influence the organizational culture. Which of the following is the best example of a values statement?

*a. We know it takes people with different ideas, strengths, interests, and cultural backgrounds to make our company succeed. We encourage healthy debate and differences of opinion.
b. We strive to minimize our negative impact on the environment.
c. We strive to be the global leader in the sporting goods industry with brands built on a passion for sports and a sporting lifestyle!
d. To be the preferred provider of targeted financial service in our communities based on strong customer relationships.

Feedback:

*a) Answer a) is correct. The values statement describes how an organization will conduct itself based on its beliefs and norms. It does not express the purpose of the organization.
b) Answer b) is incorrect. This is a mission statement. By definition, the mission statement describes the purpose of the organization and is broadly disseminated to communicate that purpose to the world. Answer a) is correct. A values statement describes how an organization will conduct itself based on its beliefs and norms. It does not express the purpose of the organization.
c) Answer c) is incorrect. This is a mission statement. By definition, the mission statement describes the purpose of the organization and is broadly disseminated to communicate that purpose to the world. Answer a) is correct. A values statement describes how an organization will conduct itself based on its beliefs and norms. It does not express the purpose of the organization.
d) Answer d) is incorrect. This is a mission statement. By definition, the mission statement describes the purpose of the organization and is broadly disseminated to communicate that purpose to the world. Answer a) is correct. A values statement describes how an organization will conduct itself based on its beliefs and norms. It does not express the purpose of the organization.
63. SG651:
What is the role of the board of directors in a not-for-profit’s strategic planning process?

a. The board does not have a role. Strategic planning is the responsibility of management.
*b. The board should meet to (re)assess the organization’s strategy and make changes, if needed.
c. The board must develop the strategic plan and carry out the resulting action plan.
d. The board must read the plan prepared by management and make no changes.

Feedback:

a) Answer a) is incorrect. Answer b) is correct. The board is responsible for the oversight of the organization and should meet at least annually to (re)assess the organization’s strategy and make changes, if needed.

*b) Answer b) is correct.

c) Answer c) is incorrect. The board must participate in the strategic planning process, but it is not wholly responsible for the plan. Other stakeholders must also be consulted. Management and staff are responsible for implementing the action plan. Answer b) is correct. The board is responsible for the oversight of the organization and should meet at least annually to (re)assess the organization’s strategy and make changes, if needed.

d) Answer d) is incorrect. The board must participate in the strategic planning process, rather than simply accepting what management has presented. Answer b) is correct. The board is responsible for the oversight of the organization and should meet at least annually to (re)assess the organization’s strategy and make changes, if needed.
64. SG653:
Yes You Can! is an after-school program for 12- to 18-year-olds that allows students to create and implement different community projects. It is run by a group of retired business professionals and student volunteers during the school year. The majority of funding comes from the provincial government. The board of directors is composed of teachers, parents, and a business professional.

Recently, one of the board members learned that the implementation of performance measures is a not-for-profit best practice. There are four categories of measures to consider: financial measures, internal business measures, learning and growth measures, and social impact measures.

Which of the following would be a good social impact measure?

a. Cost per student enrolled
b. The number of training sessions offered to volunteers
*c. The number of hours spent on community projects
d. Number of returning volunteers

Feedback:

a) Answer a) is incorrect. This is a financial measure. The correct answer is c) The number of hours spent on community projects.

b) Answer b) is incorrect. This is a learning and growth measure. It is internal to the organization. The correct answer is c) The number of hours spent on community projects.

*c) Answer c) is correct. This is a social impact measure, as we are trying to assess the students’ impact on the community.

d) Answer d) is incorrect. This is an internal business measure (equivalent to employee turnover). The correct answer is c) The number of hours spent on community projects.
65. SG431:
Which of the following statements describes what the organization wants to become?

a. Mission statement  
b. Values statement  
*c. Vision statement  
d. Overall objective

Feedback:

a) Answer a) is incorrect. The mission statement describes the purpose of the organization and is broadly disseminated to communicate that purpose to the world. A purpose is different from a desired future state. Answer c) is correct because the vision statement paints a picture of what the organization wants to become. Its intended audience is the internal organization and it is useful for formulating a common goal for employees to work toward.

b) Answer b) is incorrect. The value statement describes how an organization will conduct itself based on its beliefs and norms. It does not express what the organization desires to become. Answer c) is correct because the vision statement paints a picture of what the organization wants to become. Its intended audience is the internal organization and it is useful for formulating a common goal for employees to work toward.

*c) Answer c) is correct. The vision statement paints a picture of what the organization wants to become. Its intended audience is the internal organization and it is useful for formulating a common goal for employees to work toward.

d) Answer d) is incorrect. The overall objective is what needs to be accomplished for the organization to achieve its desired future state. Answer c) is correct because the vision statement paints a picture of what the organization wants to become. Its intended audience is the internal organization and it is useful for formulating a common goal for employees to work toward.
66. SG605:
Which of the following provides a brief definition of “value proposition.”

a. The promise a business makes to price-match the competition
*b. The unique service or feature that is attractive to customers
c. The pricing strategy designed to maximize profits
d. The assurance of product quality, price, and placement.

Feedback:

a) Answer a) is incorrect. If this is a feature that is attractive to customers, it could be a value proposition. However, it does not define the term. The definition is an innovation, service, or feature that is attractive to customers. The correct answer is b). This is the definition of a value proposition.

*b) Answer b) is correct. This is the definition of a value proposition.

c) Answer c) is incorrect. While a business will want to consider the cost-volume-profit relationship, it is not of interest to the customer. A value proposition is an implied promise to meet the most critical customer expectations. It answers the question “Why do the customers choose our company or product?” The correct answer is b). This is the definition of a value proposition.

d) Answer d) is incorrect. These elements help ensure a product has the best chance for success, but a value proposition is from a customer perspective. It is the innovations, services, or features that are attractive to customers. The correct answer is b). This is the definition of a value proposition.
67. SG633:
Which of the following provides the best description of a vision statement?

a. A promise a business makes to price-match the competition.
*b. A vivid description of where the organization is going. It is future oriented, meant to inspire and give direction to an internal audience.
c. A declaration of the core beliefs, principles, and philosophies that comprise the organizational culture, both internally and externally.
d. A declaration of an organization’s strategic direction.

Feedback:

a) Answer a) is incorrect. The correct answer is b). A vision statement is a vivid description of where the organization is going. It is future oriented, meant to inspire and give direction to an internal audience.

*b) Answer b) is correct. This is the definition of a vision statement.

c) Answer c) is incorrect. The correct answer is b). A vision statement is a vivid description of where the organization is going. It is future oriented, meant to inspire and give direction to an internal audience.

d) Answer d) is incorrect. The correct answer is b). A vision statement is a vivid description of where the organization is going. It is future oriented, meant to inspire and give direction to an internal audience.
68. SG634:
Which of the following provides the best description of a mission statement?

a. A promise a business makes to price-match the competition.
b. A vivid description of where the organization is going. It is future oriented, meant to inspire and give direction to an internal audience.
c. A declaration of the core beliefs, principles, and philosophies that comprise the organizational culture, both internally and externally.
*d. A declaration of an organization’s strategic direction.

Feedback:

a) Answer a) is incorrect. The correct answer is d). A mission statement is a declaration of an organization’s strategic direction. It is intended to help move the organization from its present state to the future state envisioned by the vision statement.

b) Answer b) is incorrect. The correct answer is d). A mission statement is a declaration of an organization’s strategic direction. It is intended to help move the organization from its present state to the future state envisioned by the vision statement.

c) Answer c) is incorrect. The correct answer is d). A mission statement is a declaration of an organization’s strategic direction. It is intended to help move the organization from its present state to the future state envisioned by the vision statement.

*d) Answer d) is correct. A mission statement is a declaration of an organization’s strategic direction. It is intended to help move the organization from its present state to the future state envisioned by the vision statement.
69. SG454:
Pretty Styles, a small clothing company, has been experiencing competitive pressure from large retailers seeking to gain market share. Pretty Styles distinguishes itself through customer service, price, and community involvement.

In a SWOT analysis, which one of the following facts would be identified as a threat for Pretty Styles?

a. Pretty Styles purchasing power is limited compared with large retailers.
   b. Pretty Styles lacks a performance evaluation system.
   c. Pretty Styles rate of expansion is insufficient to maintain its market share.
   *d. There is increasing competition from large retailers.

Feedback:

a) Answer a) is incorrect. Pretty Styles will have less purchasing power than a large retailer with larger volume requirements. This is an internal risk factor, and a weakness in a SWOT analysis. Answer d) is correct. This represents an external risk factor beyond Pretty Styles control and is classified as a threat in a SWOT analysis.

b) Answer b) is incorrect. This is an internal risk factor, and a weakness in a SWOT analysis. Answer d) is correct. This represents an external risk factor beyond Pretty Styles control and is classified as a threat in a SWOT analysis.

c) Answer c) is incorrect. This represents Pretty Styles current rate of expansion. This is an internal risk factor, and a weakness in a SWOT analysis. Answer d) is correct. This represents an external risk factor beyond Pretty Styles control and is classified as a threat in a SWOT analysis.

*d) Answer d) is correct. This represents an external risk factor beyond Pretty Styles control and is classified as a threat in a SWOT analysis.
70. SG457:
In completing a SWOT analysis, which of the following is an example of a weakness?

a. Suppliers in the industry control access to a scarce resource.
   *b. Lack of advertising has led to poor brand recognition.
   c. Buyer preferences are shifting to a competing company.
   d. The inflation rate is higher than expected.

Feedback:

a) Answer a) is incorrect. This is an example of a threat. It is external to the company and beyond its control, although it can seek ways to minimize the threat. The correct answer is b). A lack of advertising is a weakness that the company can do something about. The poor brand recognition is a symptom (and may have been identified as a threat).

*b) Answer b) is correct. The lack of advertising is a weakness that the company can do something about. The poor brand recognition is a symptom (and may have been identified as a threat).

c) Answer c) is incorrect. To the extent that this is beyond the company’s control, this is a threat. If this is occurring as a result of something the company can control (such as customer service or quality issues), then it is a symptom of a weakness. However, the fact itself would be identified as a threat. The correct answer is b). A lack of advertising is a weakness that the company can do something about. The poor brand recognition is a symptom (and may have been identified as a threat).

d) Answer d) is incorrect. This is external and so is an example of a possible threat or opportunity. Whether it is relevant to a specific SWOT analysis will depend on the situation. The correct answer is b). A lack of advertising is a weakness that the company can do something about. The poor brand recognition is a symptom (and may have been identified as a threat).
71. SG638:
Which of the following best describes horizontal diversification?

a. Diversifying a business by acquiring a company operating in a different industry
*b. Diversifying a business through the addition of new products or services that are not related to the current product but that are likely to appeal to the same target market

c. Diversifying a business through the addition of new products or services that are related to the current business in the sense that they build on the same skills and expertise

d. Increasing capacity at some point along the value chain

Feedback:

a) Answer a) is incorrect. Answer b) is correct. Horizontal diversification refers to diversifying the business through the addition of new products or services that are not related to the current product but that are likely to appeal to the same target market.

*b) Answer b) is correct. Horizontal diversification refers to diversifying the business through the addition of new products or services that are not related to the current product but that are likely to appeal to the same target market.

c) Answer c) is incorrect. This is concentric diversification. Answer b) is correct. Horizontal diversification refers to diversifying the business through the addition of new products or services that are not related to the current product but that are likely to appeal to the same target market.

d) Answer d) is incorrect. This is horizontal integration. Answer b) is correct. Horizontal diversification refers to diversifying the business through the addition of new products or services that are not related to the current product but that are likely to appeal to the same target market.
72. SG603:
Which of the following provides a brief description of a strategic process?

*a. A process that involves all aspects of the organization in the strategic plan
b. A process by which the vision, mission, and values are determined
c. A process that ensures the organization is aligned with the organizational goals
d. A process that determines the best competitive strategy

Feedback:

*a) Answer a) is correct. The strategic process is a continuous loop from planning to implementation to feedback, and back to planning.

b) Answer b) is incorrect. This is the planning part of the strategic process, in which a business determines its overall goals and the constraints it will have to meet in ensuring the goals are met. Answer a) is correct. The strategic process is a continuous loop from planning to implementation to feedback, and back to planning.

c) Answer c) is incorrect. This describes the feedback or performance management stage of the strategic process. Answer a) is correct. The strategic process is a continuous loop from planning to implementation to feedback, and back to planning.

d) Answer d) is incorrect. This is part of planning, but is only one part of the strategic process. Answer a) is correct. The strategic process is a continuous loop from planning to implementation to feedback, and back to planning.
73. SG426:
Which of the following statements is used to describe the purpose of the organization?

*a. Mission statement
b. Values statement
c. Vision statement
d. Objectives statement

Feedback:

*a) Answer a) is correct. By definition, the mission statement describes the purpose of the organization and is broadly disseminated to communicate that purpose to the world.

b) Answer b) is incorrect. The values statement describes how an organization will conduct itself based on its beliefs and norms. It does not express the purpose of the organization. Answer a) is correct because the mission statement describes why a business exists.

c) Answer c) is incorrect. The vision statement paints a picture of what the organization wants to achieve. Its intended audience is the organization itself and it is useful for formulating a common goal for employees to work toward. Answer a) is correct because the mission statement describes why a business exists.

d) Answer d) is incorrect. An objectives statement spells out what needs to be accomplished in order for the organization to achieve its desired future state. These objectives can be articulated using a variety of financial and non-financial indicators. Answer a) is correct because the mission statement describes why a business exists.
74. SG436:
Which one of the following statements exerts the most influence in the formation of the organizational culture?

a. Mission statement
*b. Values statement
 c. Vision statement
d. Objectives statement

Feedback:

a) Answer a) is incorrect. The mission statement describes the purpose of the organization and is broadly disseminated to communicate that purpose to the world. It does not describe the organization’s core beliefs. Answer b) is correct because the values statement describes how an organization will conduct itself based on its beliefs and norms. These elements are at the core of what constitutes the organizational culture.

*b) Answer b) is correct. The values statement describes how an organization will conduct itself based on its beliefs and norms. These elements are at the core of what constitutes the organizational culture.

c) Answer c) is incorrect. The vision statement paints a picture of what the organization wants to achieve, as opposed to what its core beliefs are. Its intended audience is the organization itself, and it is useful for formulating a common goal for employees to work toward. Answer b) is correct because the values statement describes how an organization will conduct itself based on its beliefs and norms. These elements are at the core of what constitutes the organizational culture.

d) Answer d) is incorrect. The overall objective of a for-profit entity is to maintain or increase shareholder value. Answer b) is correct because the values statement describes how an organization will conduct itself based on its beliefs and norms. These elements are at the core of what constitutes the organizational culture.
75. SG617:
Simlyn Industries (Simlyn) has recently developed a new product that should appeal to its existing customers. In order to quickly gain market acceptance, it has set the selling price slightly below that of its competitors. At the same time, it launched a marketing campaign that will feature the product during highly rated television shows.

Which of the following strategies is Simlyn using?

a. Market development strategy
b. Market penetration strategy
c. Product development strategy
d. Horizontal integration strategy

Feedback:

a) Answer a) is incorrect. Market development involves entering new markets, but this product should appeal to existing customers. Answer b) is correct because Simlyn is offering a low price and heavily promoting the new product with the intent of capturing market share.

*b) Answer b) is correct. Market penetration seeks to gain market share. It often involves a bargain selling price and increased promotion.

c) Answer c) is incorrect. Product development strategy involves improving or modifying an existing product, but this is a new product. Answer b) is correct because Simlyn is offering a low price and heavily promoting the new product with the intent of capturing market share.

d) Answer d) is incorrect. This strategy occurs when the business increases involvement at a point in the value chain by increasing capacity. Answer b) is correct because Simlyn is offering a low price and heavily promoting the new product with the intent of capturing market share.
76. SG654:
Which of the following is part of a customer value proposition?

*a. Description of features favoured by customers
b. Identification of geographic markets
c. Description of the distribution channel
d. Identification of generic strategy

Feedback:

*a) Answer a) is correct. The customer value proposition explains why the target market buys a certain product rather than that of a competitor. Favoured features are valued by customers.

b) Answer b) is incorrect. Determining geographic markets is part of strategy development but does not explain why customers buy this product from this company. Answer a) is correct because features favoured by customers add value and help explain why they buy a certain product rather than that of a competitor.

c) Answer c) is incorrect. The distribution channel *may* help explain why the customer buys from this company (easy access, quick delivery); however, it is not necessarily part of the customer value proposition. Answer a) is correct because features favoured by customers add value and help explain why they buy a certain product rather than that of a competitor.

d) Answer d) is incorrect. Strategy is how the customer value proposition is delivered to the customer. Answer a) is correct because features favoured by customers add value and help explain why they buy a certain product rather than that of a competitor.
77. SG614:
Jinga Ltd. manufactures clothing. One of its successful lines, Jinga-run, is aimed at competitive female runners. The company’s CEO recently said that in addition to delivering a great product in a variety of popular colours and patterns, Jinga-run provides seamless knits that are strong, long lasting, and free of pressure points. “Our customers prefer our products because we incorporate technical-performance-enhancing features that keep them dry and supported while running.”

In this statement, the CEO described which of the following?

a. Product leadership  
b. Customer value proposition  
c. Customer intimacy  
d. Market development  

Feedback:

a) Answer a) is incorrect. A product leadership strategy may be appropriate to deliver the value proposition to the customer. Answer b) is correct because the CEO is explaining why customers buy Jinga-run rather than a competitor’s product. This is the definition of a customer value proposition.

*b) Answer b) is correct. The CEO is explaining why customers buy Jinga-run rather than a competitor’s product. This is the customer value proposition.

c) Answer c) is incorrect. Customer intimacy is a strategy designed to deliver the value proposition to the customer. However, the CEO is not describing the strategy. Answer b) is correct because the CEO is explaining why customers buy Jinga-run rather than a competitor’s product. This is the definition of a customer value proposition.

d) Answer d) is incorrect. Market development is the process of increasing sales by entering a new market or increasing a current market share. The CEO is not describing a new market or a new use for a product. Answer b) is correct because the CEO is explaining why customers buy Jinga-run rather than a competitor’s product. This is the definition of a customer value proposition.
78. SG639:
Which of the following best describes conglomerate diversification?

*a. Diversifying the business through the addition of new products or services that are completely unrelated to the current product offering
b. Diversifying the business through the addition of new products or services that are not related to the current product but that are likely to appeal to the same target market
c. Diversifying the business through the addition of new products or services that are related to the current business in the sense that they build on the same skills and expertise
d. Increasing capacity at some point along the value chain

Feedback:

*a) Answer a) is correct.

b) Answer b) is incorrect. This is horizontal integration. Answer a) is correct.
Conglomerate diversification refers to diversifying the business through the addition of new products or services that are completely unrelated to the current product offering.

c) Answer c) is incorrect. This is concentric diversification. Answer a) is correct.
Conglomerate diversification refers to diversifying the business through the addition of new products or services that are completely unrelated to the current product offering.

d) Answer d) is incorrect. This is horizontal integration. Answer a) is correct.
Conglomerate diversification refers to diversifying the business through the addition of new products or services that are completely unrelated to the current product offering.
79. SG611:
Which of the following would be **best** described as a mission statement?

a. To make travel the best part of your life  
b. Honesty, trust, and transparency in all that we do  
c. Advancement through technology  
*d. We are here to resolve tax problems for small business owners, efficiently and effectively*

Feedback:

a) Answer a) is incorrect. This is future-oriented and describes an idealized outcome — characteristic of a vision statement. A mission statement describes the overall purpose of the organization. Answer d) is correct because it answers the question “Why does the company exist?”

b) Answer b) is incorrect. This statement may be (part of) a value statement. It describes how the company will achieve its goals. Answer d) is correct because it answers the question “Why does the company exist?”

c) Answer c) is incorrect. This is Audi’s main slogan. Slogans often convey the value proposition, and some suggest they are mini mission statements, but the main use of a slogan is as a marketing tool. Answer d) is correct because it answers the question “Why does the company exist?”

*d) Answer d) is correct. A mission statement describes the overall purpose of the organization. It answers the question “Why does the company exist?” It communicates with both internal and external stakeholders.*
80. SG636:
A mission statement is a written declaration of an entity’s primary reason for existence. It may define the entity’s high-level goals regarding customers, employees, and shareholders.

Which of the following is the best example of a mission statement?

*a. To attract and attain customers with high-valued products and services and the most satisfying ownership experience in North America.
b. To be a national leader in empowering people through great software.
c. To deliver happiness to our customers, colleagues, and business partners.
d. We build our business on knowledge, respect, and flawless execution.

Feedback:

*a) Answer a) is correct. A mission statement describes the purpose of the organization and is broadly disseminated to communicate that purpose to the world.

b) Answer b) is incorrect. This is a vision statement, which is a vivid description of where the organization is going. It is future-oriented, meant to inspire and give direction to an internal audience. Answer a) is correct. A mission statement describes the purpose of the organization and is broadly disseminated to communicate that purpose to the world.

c) Answer c) is incorrect. This is a vision statement, which is a vivid description of where the organization is going. It is future-oriented, meant to inspire and give direction to an internal audience. Answer a) is correct. A mission statement describes the purpose of the organization and is broadly disseminated to communicate that purpose to the world.

d) Answer d) is incorrect. This is a values statement. A values statement describes how an organization will conduct itself based on its beliefs and norms. It does not express the purpose of the organization. Answer a) is correct. A mission statement describes the purpose of the organization and is broadly disseminated to communicate that purpose to the world.
81. F2004: The net present values of two mutually exclusive investment proposals both exceed zero. Which of the following best describes the decision-making rationale of a company that is not under the constraint of capital rationing?

a. Accept the proposal that has the greater IRR, because that proposal will result in a greater return.
   *b. Accept the proposal that has the greater profitability index, because it will return the highest NPV per dollar of investment.
   c. Accept the proposal that has a shorter payback period, because the initial investment will be recovered more quickly.
   d. Accept the proposal that has the highest NPV, because the goal of the company is to maximize shareholder wealth.

Feedback:

a) Answer a) is incorrect because IRR alone cannot be used to compare projects. One proposal may have a higher IRR than another, but if that IRR is not greater than the company’s required return, neither project should be accepted. Answer b) is correct. The profitability index compares the net present value of each alternative against the respective capital cost. This enables a company to identify which project is returning the highest NPV per dollar of investment.

*b) Answer b) is correct. The profitability index compares the net present value of each alternative against the respective capital cost. This enables a company to identify which project is returning the highest NPV per dollar of investment.

c) Answer c) is incorrect. The shorter payback period will allow the company to more quickly recover its initial investment, but it will not necessarily result in a greater return. Answer b) is correct. The profitability index compares the net present value of each alternative against the respective capital cost. This enables a company to identify which project is returning the highest NPV per dollar of investment.

d) Answer d) is incorrect. NPV allows a company to compare the project returns against its hurdle rate; however, NPVs cannot be compared between projects directly. Answer b) is correct. The profitability index compares the net present value of each alternative against the respective capital cost. This enables a company to identify which project is returning the highest NPV per dollar of investment.
82. F1023:
Ryan Car Inc. (Ryan) is assessing the investment in a new machine that will cost $450,000 after taxes. Ryan has forecasted that with the new machine, annual before-tax cash inflows will increase by $125,000 per year for the next eight years. The company has an income tax rate of 15%.

What is the payback period for this project?

a. 3.18 years
b. 3.60 years
*c. 4.24 years
d. 8.0 years

Feedback:

a) Answer a) is incorrect. The initial investment was adjusted for taxes, which was not required. Answer c) is correct because the payback period is: $450,000 / $125,000 × (1 – 0.15) = 4.24 years.

b) Answer b) is incorrect. The annual cash flows were not adjusted for taxes. Answer c) is correct because the payback period is: $450,000 / $125,000 × (1 – 0.15) = 4.24 years.

*c) Answer c) is correct. The payback period is: $450,000 / $125,000 × (1 – 0.15) = 4.24 years.

d) Answer d) is incorrect. This is the length of time that the cash flows will occur, not how many years it will take to recover the initial investment. Answer c) is correct because the payback period is: $450,000 / $125,000 × (1 – 0.15) = 4.24 years.
83. F1010:
Richard Inc. has just completed its 2020 year end with net earnings of $350,000. It has paid out total dividends of $200,000. The company has 400,000 common shares that have a market price of $25 per share. What is the dividend yield for Richard’s share?

a. 57%
b. $0.50
c. $0.875
*d. 2%

Feedback:

a) Answer a) is incorrect. This is the payout ratio. Answer d) is correct. The dividend yield is the dividend divided by the market price. The dividend per share is $200,000 / 400,000 = $0.50. The dividend yield is $0.50 / $25 = 2%.

b) Answer b) is incorrect. This is the dividend per share determined as $200,000 / 400,000. Answer d) is correct. The dividend yield is the dividend divided by the market price. The dividend per share is $200,000 / 400,000 = $0.50. The dividend yield is $0.50 / $25 = 2%.

c) Answer c) is incorrect. This is the earnings per share calculated as $350,000 / 400,000 = $0.875. Answer d) is correct. The dividend yield is the dividend divided by the market price. The dividend per share is $200,000 / 400,000 = $0.50. The dividend yield is $0.50 / $25 = 2%.

*d) Answer d) is correct. The dividend yield is the dividend per share divided by the market price. The dividend per share is $200,000 / 400,000 = $0.50. The dividend yield is $0.50 / $25 = 2%.
84. F1033:
In which of the following circumstances would it be appropriate to prepare pro forma statements?

*a. To evaluate different strategic alternatives
b. To evaluate if a company has met its lending covenants
c. To evaluate the company’s return on equity (ROE) for the past three years
d. To determine management’s bonus for the past year

Feedback:

*a) Answer a) is correct. Pro forma statements are statements prepared on the basis of some assumed events and transactions that have not yet occurred. Preparing pro forma statements for each of the various strategic alternatives being considered will help decision makers better understand the implications of each strategy.

b) Answer b) is incorrect. Pro forma statements would not help in this situation because it looks at something that has already occurred. The company would need to evaluate its most recent historical financial statements to assess if it is in compliance. Answer a) is correct.
Pro forma statements are statements prepared on the basis of some assumed events and transactions that have not yet occurred. Preparing pro forma statements for each of the various strategic alternatives being considered will help decision makers better understand the implications of each strategy.

c) Answer c) is incorrect. An evaluation of the company’s ROE for the past three years would use historical financial statements, not pro forma statements. Answer a) is correct. Pro forma statements are statements prepared on the basis of some assumed events and transactions that have not yet occurred. Preparing pro forma statements for each of the various strategic alternatives being considered will help decision makers better understand the implications of each strategy.

d) Answer d) is incorrect. The bonus is determined using last year’s historical statements, so pro forma statements would not help in making this decision. Answer a) is correct. Pro forma statements are statements prepared on the basis of some assumed events and transactions that have not yet occurred. Preparing pro forma statements for each of the various strategic alternatives being considered will help decision makers better understand the implications of each strategy.
85. F1038:
Which of the following is a disadvantage of informal negotiations with creditors?

a. The process of informal negotiations is lengthy and expensive for the entity.
b. Individual creditors have little say or control over what terms and conditions can be renegotiated, since the entire class of creditors has to agree.
*c. Individual creditors may refuse to negotiate, jeopardizing the entire restructuring plan for the company.
d. The entity is required to provide cash flow forecasts to the creditors.

Feedback:

a) Answer a) is incorrect. Informal negotiations are usually completed more quickly and for less cost than more formal legal court proceedings. Answer c) is correct. Some creditors may “hold out” and refuse to negotiate, requiring the company to seek formal legal court proceedings instead.

b) Answer b) is incorrect. Informal negotiations are done individually with each creditor, so this will give each creditor more control over the final revised terms and conditions. Answer c) is correct. Some creditors may “hold out” and refuse to negotiate, requiring the company to seek formal legal court proceedings instead.

*c) Answer c) is correct. Some creditors may “hold out” and refuse to negotiate, requiring the company to seek formal legal court proceedings instead.

d) Answer d) is incorrect. There is no legal requirement to provide creditors with information. In fact, this lack of information may be detrimental, since a creditor may not be able to make a decision without some knowledge of how the company will improve its cash flows in the future. Answer c) is correct. Some creditors may “hold out” and refuse to negotiate, requiring the company to seek formal legal court proceedings instead.
86. F458:
Copper Mining Co. (CMC), a Canadian company, owns and operates a copper mine in a country in South America. The company has assessed that it faces high political risk. Which one of the following statements represents an example of political risk?

a. The government of the foreign country is part owner in the mine. The agreement requires that a fixed proportion of sales be remitted to the government on a monthly basis.
*b. The foreign government recently changed the regulations and has significantly reduced the allowable limit of cash that can be remitted back to Canada.
c. Interest rates recently increased, requiring CMC to pay a higher interest rate on funds provided by a local foreign bank.
d. Due to adverse weather conditions, CMC’s production was affected and it was unable to meet its sales commitments.

Feedback:

a) Answer a) is incorrect. This is not political risk, although it is one method that can employed to reduce political risk. Answer b) is correct. Political risk arises due to changes in value when certain actions are taken by the foreign government. Blocking cash flow out of the country is one example.

*b) Answer b) is correct. Political risk arises due to changes in value when certain actions are taken by the foreign government. Blocking cash flow out of the country is one example.

c) Answer c) is incorrect. This is an example of interest rate risk, not political risk. Answer b) is correct. Political risk arises due to changes in value when certain actions are taken by the foreign government. Blocking cash flow out of the country is one example.

d) Answer d) is incorrect. This is an operating risk and not due to government intervention. Answer b) is correct. Political risk arises due to changes in value when certain actions are taken by the foreign government. Blocking cash flow out of the country is one example.
87. F1035:
A company has $225,000 in cash flows from operations on its statement of cash flows. During the year, it invested $175,000 in plant and equipment. Scheduled debt repayments were $30,000 during the year, and the company spent $10,000 repurchasing its own shares and $20,000 on dividends.

What is the company’s free cash flow (FCF) on a levered basis?

a. $10,000
*b. $20,000
c. $30,000
d. $50,000

Feedback:

a) Answer a) is incorrect. The repurchase cost of the company’s own shares is not included in the calculation of FCF. Answer b) is correct. The FCF calculation excludes the share repurchase and dividend payment, as these are a discretionary expenditure that the board of directors authorizes out of free cash flow. ($225 – $175 – $30 = $20)

*b) Answer b) is correct. The FCF calculation excludes the share repurchase and dividend payment, as these are a discretionary expenditure that the board of directors authorizes out of free cash flow. ($225 – $175 – $30 = $20)

c) Answer c) is incorrect. Dividends are not added to levered FCF. Answer b) is correct. The FCF calculation excludes the share repurchase and dividend payment, as these are a discretionary expenditure that the board of directors authorizes out of free cash flow. ($225 – $175 – $30 = $20)

d) Answer d) is incorrect. Scheduled debt repayments are deducted, not added, in the calculation of levered FCF. Answer b) is correct. The FCF calculation excludes the share repurchase and dividend payment, as these are a discretionary expenditure that the board of directors authorizes out of free cash flow. ($225 – $175 – $30 = $20)
88. F1012:
Boros Ltd. has determined the cash flows to be generated from a project as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>$50,000</td>
</tr>
<tr>
<td>Year 2</td>
<td>$75,000</td>
</tr>
<tr>
<td>Year 3</td>
<td>$30,000</td>
</tr>
</tbody>
</table>

The appropriate discount rate for this investment is 15%.

How much must Boros initially invest in this project in order to generate a project return of 15%?

*a. $119,915  
b. $137,902  
c. $134,783  
d. $155,000*

Feedback:

*a) Answer a) is correct. The present value is calculated using the formula NPV (15%, 50,000, 75,000, 30,000). The amount of the initial investment to generate a project return of 15% will be equal to the present value of all the cash flows, giving an NPV of 0.*

*b) Answer b) is incorrect. This calculation included the $50,000 as a Time 0 cash flow and therefore only discounted the remaining payments using the formula NPV (15%, 75,000, 30,000) + 50,000. Answer a) is correct. The present value is calculated using the formula NPV (15%, 50,000, 75,000, 30,000). The amount of the initial investment to generate a project return of 15% will be equal to the present value of all the cash flows, giving an NPV of 0.*

*c) Answer c) is incorrect. It adds all the payments together and then divides by 1.15, assuming only a one-year discount. Answer a) is correct. The present value is calculated using the formula NPV (15%, 50,000, 75,000, 30,000). The amount of the initial investment to generate a project return of 15% will be equal to the present value of all the cash flows, giving an NPV of 0.*

*d) Answer d) is incorrect. This simply adds all the payments together and does not discount the cash flows. Answer a) is correct. The present value is calculated using the formula NPV (15%, 50,000, 75,000, 30,000). The amount of the initial investment to generate a project return of 15% will be equal to the present value of all the cash flows, giving an NPV of 0.*
89. F2025:
You, a CPA, and the chief financial officer of Invest Inc. have been meeting regularly to analyze last year’s financial results. Today you are reviewing the company’s cash flow. Pertinent information is as follows:

<table>
<thead>
<tr>
<th>#</th>
<th>Item</th>
<th>Action</th>
<th>Book value or maturity value</th>
<th>Transaction value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Investment in FVTPL that are held for trading</td>
<td>Sold</td>
<td>$13,000</td>
<td>$16,000</td>
</tr>
<tr>
<td></td>
<td>(HFT)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Shares in an associate</td>
<td>Bought</td>
<td>$21,000</td>
<td>$20,000</td>
</tr>
<tr>
<td>3</td>
<td>Equipment (owned)</td>
<td>Sold</td>
<td>$25,000</td>
<td>$21,000</td>
</tr>
<tr>
<td>4</td>
<td>Equipment (leased)</td>
<td></td>
<td>$50,000</td>
<td>$50,000</td>
</tr>
<tr>
<td>5</td>
<td>Investment in bonds</td>
<td>Purchased</td>
<td>$300,000</td>
<td>$285,000</td>
</tr>
</tbody>
</table>

Assuming that Invest Inc. prepares its financial statements in accordance with IFRS, what is the amount that the company should report as cash flows arising from investing activities?

a. $268,000 cash outflow
*b. $284,000 cash outflow
 c. $299,000 cash outflow
d. $334,000 cash outflow

Feedback:

a) Answer a) is incorrect. You incorrectly included the cash inflow from the sale of the HFT security in the cash flow from investing section. It is an operating activity. Include #2 ($20,000 cash outflow), #3 ($21,000 cash inflow) and #5 ($285,000 cash outflow). Net outflow from investing activities is $284,000. Exclude #1 (operating activity) and #4 (non-cash activity). Answer b) is correct. Include #2 ($20,000 cash outflow), #3 ($21,000 cash inflow) and #5 ($285,000 cash outflow). Net outflow from investing activities is $284,000. Exclude #1 (operating activity) and #4 (non-cash activity).

*b) Answer b) is correct. Include #2 ($20,000 cash outflow), #3 ($21,000 cash inflow) and #5 ($285,000 cash outflow). Net outflow from investing activities is $284,000. Exclude #1 (operating activity) and #4 (non-cash activity).

b) Answer c) is incorrect. You incorrectly recorded the cash outflow for the bond purchase at the maturity value, rather than the price paid. Include #2 ($20,000 cash outflow), #3 ($21,000 cash inflow) and #5 ($285,000 cash outflow). Net outflow from investing activities is $284,000. Exclude #1 (operating activity) and #4 (non-cash activity). Answer b) is correct. Include #2 ($20,000 cash outflow), #3 ($21,000 cash inflow) and #5 ($285,000 cash outflow). Net outflow from investing activities is $284,000. Exclude #1 (operating activity) and #4 (non-cash activity).
d) Answer d) is incorrect. You incorrectly included the value of the leased equipment as a cash outflow; however, this is a non-cash transaction that is not reported directly on the statement of cash flows. Include #2 ($20,000 cash outflow), #3 ($21,000 cash inflow) and #5 ($285,000 cash outflow). Net outflow from investing activities is $284,000. Exclude #1 (operating activity) and #4 (non-cash activity). Answer b) is correct. Include #2 ($20,000 cash outflow), #3 ($21,000 cash inflow) and #5 ($285,000 cash outflow). Net outflow from investing activities is $284,000. Exclude #1 (operating activity) and #4 (non-cash activity).
90. F041:
The definition of fair market value for valuation purposes includes which of the following terms:

*a. Acting at arm’s length
b. Closed and restricted market
c. Lowest price available
d. Under a compulsion to act

Feedback:

*a) Answer a) is correct. Acting at arm’s length is part of the definition of fair market value.

b) Answer b) is incorrect. A valuator determines the value of a company considering an open and unrestricted market.
Answer a) is correct. Acting at arm’s length is part of the definition of fair market value.

c) Answer c) is incorrect. It is the highest price available that is part of the definition of fair market value. Answer a) is correct. Acting at arm’s length is part of the definition of fair market value.

d) Answer d) is incorrect. The definition of fair market value requires that the parties be under no compulsion to act. Answer a) is correct. Acting at arm’s length is part of the definition of fair market value.
91. F2060:
You are the assistant controller of ABC Manufacturing Corporation (ABC). Several new project proposals have been submitted by the company’s process engineers. ABC has a corporate policy of investing in projects with a risk profile similar to the overall company’s current cost of capital. The following details are available:

<table>
<thead>
<tr>
<th></th>
<th>Discount rate</th>
<th>Net present value (after-tax at 25%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project A</td>
<td>2.4%</td>
<td>$8,200,000</td>
</tr>
<tr>
<td>Project B</td>
<td>7.2%</td>
<td>$5,500,000</td>
</tr>
<tr>
<td>Project C</td>
<td>9.6%</td>
<td>$7,200,000</td>
</tr>
<tr>
<td>Project D</td>
<td>12%</td>
<td>$7,800,000</td>
</tr>
</tbody>
</table>

The capital structure of ABC includes $60 million in equity at a cost of 12% and $40 million in debt with an interest cost of 8%.

Which project should be accepted?

a. Project A
b. Project B
*c. Project C
d. Project D

Feedback:

a) Answer a) is incorrect because Project A does not have the same risk profile (WACC) as the company. Even though it has the largest positive NPV of the available projects, the company policy dictates that this project cannot be accepted. Answer c) is correct. Project C should be accepted because it has a similar risk profile to the company’s capital structure and has a positive NPV. WACC = 12% × $60/($60 + $40) + (8%)(1 – 0.25) × $40/($60 + $40) = 9.6%

b) Answer b) is incorrect because Project B does not have the same risk profile (WACC) as the company. Even though it has a positive NPV, the company policy dictates that this project cannot be accepted. Answer c) is correct. Project C should be accepted because it has a similar risk profile to the company’s capital structure and has a positive NPV. WACC = 12% × $60/($60 + $40) + (8%)(1 – 0.25) × $40/($60 + $40) = 9.6%

*c) Answer c) is correct. Project C should be accepted because it has a similar risk profile to the company’s capital structure and has a positive NPV. WACC = 12% × $60/($60 + $40) + (8%)(1 – 0.25) × $40/($60 + $40) = 9.6%
d) Answer d) is incorrect because Project D does not have the same risk profile (WACC) as the company. Even though it has a positive NPV, the company policy dictates that this project cannot be accepted. Answer c) is correct. Project C should be accepted because it has a similar risk profile to the company’s capital structure and has a positive NPV. WACC = 12% × $60/($60 + $40) + (8%)(1 – 0.25) × $40/($60 + $40) = 9.6%
92. F2001:
Sensitivity analysis is an integral part of evaluating financial risk management policies. Which of the following statements best describes how this type of analysis is the most beneficial?

a. Sensitivity analysis identifies the financial risks the organization should pay close attention to.
b. Sensitivity analysis indicates how financial risks can be minimized.
* c. Sensitivity analysis quantifies the impact on financial results arising from erroneous critical assumptions.
d. Sensitivity analysis provides insight as to the likelihood that one or more critical assumptions will be different than expected.

Feedback:

a) Answer a) is incorrect. It is not the best answer, as sensitivity analysis does not specifically identify risks. Risk identification takes place in the “assumption building” stage as, if the assumptions are incorrect, there is a risk that forecast financial results will not be met. Sensitivity analysis quantifies those risks. Answer c) is correct.
Sensitivity analysis assesses the financial impact of erroneous assumptions.

b) Answer b) is incorrect. It is not the best answer, as sensitivity analysis indicates the possible magnitude of financial risks but does not prescribe how to minimize them.
Answer c) is correct. Sensitivity analysis assesses the financial impact of erroneous assumptions.

*c) Answer c) is correct. Sensitivity analysis assesses the financial impact of erroneous assumptions.

d) Answer d) is incorrect. It is not the best answer, as sensitivity analysis does not incorporate probability into the evaluation process. Answer c) is correct. Sensitivity analysis assesses the financial impact of erroneous assumptions.
93. F2002: Notwithstanding its drawbacks, the payback period method is widely used as a project evaluation tool, as it can provide useful information. Which of the following statements about the payback period method is true?

- a. The payback period method gives an indication of how quickly the firm will recover its investment.
- b. The payback period method is helpful in evaluating how sensitive a net present value calculation is to small changes in assumptions.
- c. The payback period method accounts for all cash flows in the project under consideration.
- d. It is very easy to compare opportunity costs when the payback period method of project evaluation is used.

Feedback:

- a) Answer a) is correct. The payback period method gives an indication of how quickly the firm will recover its investment.

- b) Answer b) is incorrect, as the methodology does not address sensitivities, nor does the result speak to NPV. Answer a) is correct. The payback period method gives an indication of how quickly the firm will recover its investment.

- c) Answer c) is incorrect, as the payback period method ignores cash flows received after recovery of the initial investment. Answer a) is correct. The payback period method gives an indication of how quickly the firm will recover its investment.

- d) Answer d) is incorrect, as using the payback period method does not facilitate comparison of opportunity costs. Answer a) is correct. The payback period method gives an indication of how quickly the firm will recover its investment.
94. F414:
Which of the following strategies is most likely to decrease the cash conversion cycle?

a. Extending longer credit terms to customers
b. Adopting a new policy of paying supplier invoices within the cash discount period
c. Deferring capital projects that do not involve working capital requirements
*d. Adopting just-in-time inventory management

Feedback:

a) Answer a) is incorrect. Extending credit terms increases the cash conversion cycle by increasing the average collection period. Answer d) is correct. Adopting just-in-time inventory management will reduce inventory levels and the inventory period and shorten the cash conversion cycle.

b) Answer b) is incorrect. Paying supplier invoices more quickly will increase the cash conversion cycle. Answer d) is correct. Adopting just-in-time inventory management will reduce inventory levels and the inventory period and shorten the cash conversion cycle.

c) Answer c) is incorrect. The timing of capital projects does not affect the cash conversion cycle because the capital project does not affect the working capital accounts. Answer d) is correct. Adopting just-in-time inventory management will reduce inventory levels and the inventory period and shorten the cash conversion cycle.

*d) Answer d) is correct. Adopting just-in-time inventory management will reduce inventory levels and this shortened inventory period and decrease the cash conversion cycle.
95. F2111: Financial analysis and planning is an essential process, but one that is subject to a number of limitations. Which of the following is the most severe limitation of the financial planning process?

a. The financial planning process allows management to monitor the sensitivity of forecast results to changes in key variables.
b. The entire management group should be involved in the financial planning process.
c. The basic financial plan arrived at through the financial planning process is only a starting point.
*d. The financial plan must be constantly updated to reflect fast-changing micro- and macroeconomic conditions.

Feedback:

a) Answer a) is incorrect, as the ability to monitor sensitivities, while time-consuming, gives greater insight into the business and should lead to more accurate plans in the future. Answer d) is correct. The need to constantly update the plan brings the validity of the process into question and is very time-consuming to do.

b) Answer b) is incorrect. While time-consuming, the involvement of all key players is a benefit, as it should result in the preparation of a more accurate plan than would otherwise be produced. Answer d) is correct. The need to constantly update the plan brings the validity of the process into question and is very time-consuming to do.

c) Answer c) is incorrect. This is a benefit, rather than a limitation. Once formulated, the plan can then be used as a basis on which other decisions can be made (for example, whether more staff should be hired or a plant expanded). Answer d) is correct. The need to constantly update the plan brings the validity of the process into question and is very time-consuming to do.

*d) Answer d) is correct. The need to constantly update the plan brings the validity of the process into question and is very time-consuming to do.
96. F040:
A troubled company has growing liabilities and the owner does not believe it can continue to operate. You are asked to estimate the value of the company.

Which valuation approach would be most relevant to use in this circumstance?

a. Adjusted net asset
b. Capitalized cash flow
   *c. Liquidation
d. Discounted cash flow

Feedback:

a) Answer a) is incorrect. As the company is not a going concern, the adjusted net asset approach should not be used. Answer c) is correct. The company is not operating under the going-concern assumption, and there is indication from the owner that the business should be liquidated.

b) Answer b) is incorrect. As the company is not a going concern, the capitalized cash flow approach should not be used. Answer c) is correct. The company is not operating under the going-concern assumption, and there is indication from the owner that the business should be liquidated.

*c) Answer c) is correct. The company is not operating under the going-concern assumption, and there is indication from the owner that the business should be liquidated.

d) Answer d) is incorrect. As the company is not a going concern, the discounted cash flow approach should not be used. Answer c) is correct. The company is not operating under the going-concern assumption, and there is indication from the owner that the business should be liquidated.
97. F421:
A company is experiencing lower inventory turnover and a longer average collection period for accounts receivable. Which of the following is most likely to be associated with these symptoms?

a. Longer payment terms provided by suppliers
b. Higher operating cash flows compared to last year
c. Higher sales levels
*d. Lower operating productivity

Feedback:

a) Answer a) is incorrect. Longer payment terms from the suppliers impacts the accounts payable turnover and will not directly impact on the inventory turnover and the company’s collection period. Answer d) is correct. Operating productivity is a ratio that correlates sales to key operational resources (for example, defects, customer complaints, and so on). Inventory that isn’t selling and accounts receivable that is difficult to collect may be a lagging indicator of quality problems. An increase to average inventory levels would decrease inventory turnover. An increase in accounts receivable would decrease accounts receivable turnover and increase the average collection period.

b) Answer b) is incorrect. Lower inventory turnover indicates that either average inventory levels are increasing or cost of sales is decreasing. A longer average collection period indicates a declining accounts receivable turnover that could be caused by either a decline in sales or an increase in average accounts receivable. Together, this will have a negative impact on operating cash flows. Answer d) is correct. Operating productivity is a ratio that correlates sales to key operational resources (for example, defects, customer complaints, and so on). Inventory that isn’t selling and accounts receivable that is difficult to collect may be a lagging indicator of quality problems. An increase to average inventory levels would decrease inventory turnover. An increase in accounts receivable would decrease accounts receivable turnover and increase the average collection period.

c) Answer c) is incorrect. An increase in the level of sales would result in a higher accounts receivable turnover ratio and, therefore, a shorter average collection period. Cost of goods sold, an expense that is correlated to sales, would likely increase and result in a higher inventory turnover ratio. Answer d) is correct. Operating productivity is a ratio that correlates sales to key operational resources (for example, defects, customer complaints, and so on). Inventory that isn’t selling and accounts receivable that is difficult to collect may be a lagging indicator of quality problems. An increase to average inventory levels would decrease inventory turnover. An increase in accounts receivable would decrease accounts receivable turnover and increase the average collection period.
*d) Answer d) is correct. Operating productivity is a ratio that correlates sales to key operational resources (for example, defects, customer complaints, and so on). Inventory that isn’t selling and accounts receivable that is difficult to collect may be a lagging indicator of quality problems. An increase to average inventory levels would decrease inventory turnover. An increase in accounts receivable would decrease accounts receivable turnover and increase the average collection period.
98. F413:
Arts & Crafts Ltd. (ACL) has current assets of $45,000, total assets of $75,000, current liabilities of $31,500, and total liabilities of $66,000. Management is planning to reduce its investment in working capital.

Which of the following strategies is most likely to reduce ACL’s investment in working capital?

a. Decrease the inventory turnover ratio from 4 times to 3 times.
*b. Decrease the payables turnover from 15 times to 10 times.
 c. Increase the cash conversion cycle by 10 days.
 d. Decrease the receivables turnover from 20 times to 15 times.

Feedback:

a) Answer a) is incorrect. Decreasing the inventory turnover will require a larger investment in inventory; therefore, working capital will increase. Answer b) is correct. Decreasing the payables turnover will result in a longer average payables period, which will reduce the required investment in working capital.

*b) Answer b) is correct. Decreasing the payables turnover will result in a longer average payables period, which will reduce the required investment in working capital.

 c) Answer c) is incorrect. Increasing the cash conversion cycle will increase current assets and/or decrease current liabilities, which will increase the investment in working capital. Answer b) is correct. Decreasing the payables turnover will result in a longer average payables period, which will reduce the required investment in working capital.

 d) Answer d) is incorrect. Decreasing the receivable turnover will increase the number of days to collect the receivables. This results in a larger investment in accounts receivable, therefore working capital will increase. Answer b) is correct. Decreasing the payables turnover will result in a longer average payables period, which will reduce the required investment in working capital.
99. F419:
Downward Inc. has budgeted sales for the second quarter of $400,000 for April, $525,000 for May, and $600,000 for June. Normally, 20% of sales are cash sales and 80% are on account. Of the sales made on account, 30% are normally collected during the month the sale is made, 50% are collected in the month following the sale, and 20% are collected in the second month following the sale. Disbursements are expected to be $380,000 in June and the opening cash balance for June is $25,000.

What is the expected cash balance or short-term borrowing balance at the end of June, assuming that there is no minimum cash balance to maintain?

a. A short-term borrowing balance of $91,000
b. Cash balance of $63,000
c. Cash balance of $167,500
*d. Cash balance of $183,000

Feedback:

a) Answer a) is incorrect. It only includes collections from June sales and should include the cash collected from the May and April sales as well. Answer d) is correct based on the following:

June cash sales ($600,000 × 20%) $120,000
Collections from credit sales:
June ($600,000 × 80% × 30%) 144,000
May ($525,000 × 80% × 50%) 210,000
April ($400,000 × 80% × 20%) 64,000
Total expected collections $538,000
Less disbursements (380,000)
Opening cash balance 25,000
Closing cash balance $183,000

b) Answer b) is incorrect. It omits the June cash sales. Answer d) is correct based on the following:

June cash sales ($600,000 × 20%) $120,000
Collections from credit sales:
June ($600,000 × 80% × 30%) 144,000
May ($525,000 × 80% × 50%) 210,000
April ($400,000 × 80% × 20%) 64,000
Total expected collections $538,000
Less disbursements (380,000)
Opening cash balance 25,000
Closing cash balance $183,000
c) Answer c) is incorrect. It assumes that all sales are made on account in determining the collections (that is, it ignores the 20% of sales that are made in cash). Answer d) is correct based on the following:

June cash sales ($600,000 × 20%) $120,000

Collections from credit sales:
June ($600,000 × 80% × 30%) 144,000
May ($525,000 × 80% × 50%) 210,000
April ($400,000 × 80% × 20%) 64,000
Total expected collections $538,000
Less disbursements (380,000)
Opening cash balance 25,000
Closing cash balance $183,000

*d) Answer d) is correct based on the following:

June cash sales ($600,000 × 20%) $120,000

Collections from credit sales:
June ($600,000 × 80% × 30%) 144,000
May ($525,000 × 80% × 50%) 210,000
April ($400,000 × 80% × 20%) 64,000
Total expected collections $538,000
Less disbursements (380,000)
Opening cash balance 25,000
Closing cash balance $183,000
100. F037:
Show Us Co. has annual credit sales of $16,000,000. If the company decides to increase its credit terms to 40 days from 30 days, which of the following statements regarding the impact of this policy change on the company’s accounts receivable turnover ratio is true?

a. The turnover will increase by 3.1.
*b. The turnover ratio will decrease by 3.1.
c. The turnover will increase by 9.1.
d. The turnover will decrease by 12.2.

Feedback:

a) Answer a) is incorrect. The numerical calculation is correct but the direction will be a decrease, not an increase. Answer b) is correct. The old turnover ratio is 12.2 (365/30) and the new turnover ratio is 365/40 = 9.1, so the difference is a decrease of 3.1 (12.2 – 9.1).

*b) Answer b) is correct. The old turnover ratio is 12.2 (365/30) and the new turnover ratio is 365/40 = 9.1, so the difference is a decrease of 3.1 (12.2 – 9.1).

c) Answer c) is incorrect. This is the new receivable turnover and not the amount of the change. Answer b) is correct. The old turnover ratio is 12.2 (365/30) and the new turnover ratio is 365/40 = 9.1, so the difference is a decrease of 3.1 (12.2 – 9.1).

d) Answer d) is incorrect. This is the old turnover ratio and not what it will change by. Answer b) is correct. The old turnover ratio is 12.2 (365/30) and the new turnover ratio is 365/40 = 9.1, so the difference is a decrease of 3.1 (12.2 – 9.1).