THE UNIVERSITY OF THE WEST INDIES
EXAMINATION OF APRIL/MAY 2007

Code and Name of Course: MS25E - Management Accounting 1
Date and Time: Thursday April 26, 2007; 1:00-3:00p.m.

INSTRUCTIONS TO CANDIDATES: This paper has 5 pages and 5 questions.

- **DO QUESTION ONE (1) AND ANY OTHER TWO (2) QUESTIONS.**
- **NON-PROGRAMMABLE CALCULATORS ARE ALLOWED.**
Question 1 – (Compulsory question)
Individual management techniques are more effective when they are developed and framed within the context of a larger system of hierarchical relationships and processes. Discuss what the preceding comment entails. (30 marks)

Question 2
Peterson Company produces a product that passes through three processes: Fabrication, Assembly and Finishing. All manufacturing costs are added uniformly for both processes. The following information was obtained for the Assembly Department for April 2004:

(a) Work in process, April 1, had 10,000 units (40% completed) and the following costs:
   $  
   Direct materials  8,000  
   Direct labour  12,000  
   Overhead  4,000  

(b) During the month of April, 20,000 units were completed and transferred to the Finishing Department, and the following costs were added to production:
   $  
   Direct materials  24,000  
   Direct labour  16,000  
   Overhead  12,000  

(c) On April 30, there were 5,000 partially completed units in process. These units were 80% complete. The weighted average method is used.

Required:

(a) (i) Prepare a physical flow schedule. (2 marks)
   (ii) Prepare a schedule of equivalent units. (3 marks)
   (iii) Compute the cost per equivalent unit. (2 marks)
   (iv) Compute the cost of goods transferred out and the cost of ending work in process (3 marks)
   (v) Prepare a cost reconciliation (4 marks)

(b) How is normal spoilage treated for costing purposes? (1 mark)

(c) Assume that all spoilage is considered abnormal. How would the abnormal spoilage be treated for costing purposes? Give the journal entry to account for the cost of the spoiled units. (3 marks)

(d) Some companies view all spoilage as abnormal. Why is this view taken? (2 marks)
Question 3

Mondragon Company uses a normal job-order costing system. Currently, a plantwide overhead rate is used, based on machine hours. Alfred Cimino, the plant manager, has heard that departmental overhead rates can offer significantly better cost assignments than can a plantwide rate. Mondragon has the following data for its two departments for the coming year:

<table>
<thead>
<tr>
<th></th>
<th>Department A</th>
<th>Department B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead costs (expected)</td>
<td>$60,000</td>
<td>$15,000</td>
</tr>
<tr>
<td>Normal activity (machine hours)</td>
<td>10,000</td>
<td>5,000</td>
</tr>
</tbody>
</table>

Required:

(a) Compute a predetermined overhead rate for the plant as a whole based on machine hours. (2 marks)

(b) Compute predetermined overhead rates for each department using machine hours. (2 marks)

(c) Job 15 used 20 machine hours from Department A and 50 machine hours from Department B. Job 22 used 50 machine hours from Department A and 20 machine hours from Department B. Compute the overhead cost assigned to each job using the plantwide rate computed in requirement (a). Repeat the computation using the departmental rates found in requirement (b) Which of the two approaches gives the fairest assignment? Why? (7 marks)

(d) Explain the difference between normal cost of goods sold and adjusted cost of goods sold (4 marks)

(e) Explain how overhead is assigned to production when a predetermined overhead rate is used (2 marks)

(f) Explain the difference between an underapplied and an overapplied overhead variance (3 marks)
Question 4

Border Corporation is developing departmental overhead rates based upon direct labour hours for its two production departments – Molding and Assembly. The Molding Department employs 20 people, and the Assembly Department employs 80 people. Each person in these two departments works 2,000 hours per year. The production-related overhead costs for the Molding Department are budgeted at $200,000 and the Assembly Department costs are budgeted at $320,000. Two support departments – Repair and Power – directly support the two production departments and have budgeted costs of $48,000 and $250,000 respectively. The production departments’ overhead rates cannot be determined until the support departments’ costs are properly allocated. The following schedule reflects the use of the Repair Department’s and Power Department’s output by the various departments.

<table>
<thead>
<tr>
<th></th>
<th>Repair</th>
<th>Power</th>
<th>Molding</th>
<th>Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repair hours</td>
<td>-</td>
<td>1,000</td>
<td>1,000</td>
<td>8,000</td>
</tr>
<tr>
<td>Kilowatt-hours</td>
<td>240,000</td>
<td>-</td>
<td>840,000</td>
<td>120,000</td>
</tr>
</tbody>
</table>

Required:

(a) Calculate the overhead rates per direct labour hour for the Molding Department and the Assembly Department using the direct allocation method to charge the production departments for support departments costs. (5 marks)

(b) Calculate the overhead rates per direct labour hour for the Molding Department and the Assembly Department using the reciprocal method to charge support department costs to each other and to the production departments. (6 marks)

(c) Explain the difference between the methods, and indicate the arguments generally presented to support the reciprocal method over the direct allocation method. (5 marks)

(d) Assume that a company has decided not to allocate any support service costs to producing departments. Describe the likely behaviour of the managers of the producing departments. Explain the impact that allocation would have on this behaviour. (4 marks)
Question 5

Lankip Company produces two main products and a by-product out of a joint process. The ratio of output quantities to input quantities of direct materials used in the joint process remains consistent from month to month. Lankip has employed the physical units method to allocate joint production costs to the main products. The net realizable value of the by-product is used to reduce the joint production costs before the joint costs are allocated to the main products. Data regarding Lankip’s operations for the current month are presented in the chart below. During the month, Lankip incurred joint production costs of $2,520,000. The main products are not marketable at the split-off point and, thus, have to be processed further.

<table>
<thead>
<tr>
<th></th>
<th>First Main Product</th>
<th>Second Main Product</th>
<th>By-Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly output in lbs</td>
<td>90,000</td>
<td>150,000</td>
<td>60,000</td>
</tr>
<tr>
<td>Selling Price per lb</td>
<td>$30</td>
<td>$14</td>
<td>$2</td>
</tr>
<tr>
<td>Separable process costs</td>
<td>$540,000</td>
<td>$660,000</td>
<td></td>
</tr>
</tbody>
</table>

**Required:**

(a) Calculate the net realizable value of the by-product. What is the total joint cost to be allocated?  

(b) Calculate the amount of joint production cost that Lankip would allocate to (1) the first main product and (2) the second main product by using the physical units method to allocate joint production costs.  

(c) Should joint costs be considered in a sell-or-process further decision? Explain.  

(d) What is a joint cost? What is a by-product?

END OF QUESTION PAPER