

**FATİH UNIVERSITY**  
**FACULTY OF EENGINEERING**  
**DEPARTMENT OF INDUSTRIAL ENGINEERING**  
**IE 325 COST ANALYSIS AND CONTROL**  
**1<sup>st</sup> MIDTERM EXAM**

Instructor: Ali COSKUN  
Duration: 75 Minutes

November 6, 2007

**QUESTIONS**

**Question 1. (25 points)** Using the following information find the unknown amounts. Assume each set of information is an independent case.

a. Direct Materials	Beginning balance	\$ 14,000
	Ending balance	28,000
	Purchases	96,000
	Direct materials used	?
b. Work-in-process Inventory	Ending balance	\$ 44,000
	Cost of goods manufactured	42,000
	Beginning balance	16,000
	Current manufacturing costs	?
c. Finished Goods Inventory	Cost of goods manufactured	\$124,000
	Ending balance	40,000
	Cost of goods sold	122,000
	Beginning balance	?

**Question 2. (25 points)** Thomson Company has two departments, A and B. Overhead is allocated based on direct labor cost in Department A and machine-hours in Department B. The following additional information is available:

<u>Budgeted Amounts</u>	<u>Department A</u>	<u>Department B</u>
Direct labor cost	\$180,000	\$165,000
Manufacturing overhead	\$225,000	\$180,000
Machine-hours	51,000 mh	40,000 mh
<u>Actual data for Job #110</u>	<u>Department A</u>	<u>Department B</u>
Direct materials used	\$10,000	\$16,000
Direct labor cost	\$11,000	\$14,000
Machine-hours	5,000 mh	3,000 mh

Required:

- a. Compute the budgeted manufacturing overhead rate for Department A and for Department B.
- b. What is the total cost of Job 110?
- c. If Job 110 consists of 25 units of product, what is the unit cost of this job?

**Question 3. (25 points)** Smart Company manufactures two types of products: Deluxe and Standard. For 2006, data for the two products are as follows:

	<u>Deluxe</u>	<u>Standard</u>
Sales units	5,000	40,000
Sales price per unit	\$ 650.00	\$ 475.00
Direct costs per unit	\$ 180.00	\$ 130.00

There are three indirect cost categories and the company obtained the following ABC information for 2006:

<u>Activity</u>	<u>Cost</u>	<u>Allocation base</u>	<u>Total</u>	<u>Deluxe</u>	<u>Standard</u>
Setups	\$ 50,000	Number of setups	50	40	10
Machine-related	\$ 4,400,000	Machine hours	60,000	30,000	30,000
Packing	\$ 500,000	Number of shipments	25,000	5,000	20,000

- a. Calculate the total cost of each product lines.
- b. Calculate the operating income for the current year.

**Question 4. (25 points)** Campaign Printing has two service departments, Human Resource and Maintenance, and two operating departments, Cutting and Assembly. The data for May were as follows:

<u>Activity</u>	<u>Costs</u>	<u>Services provided to:</u>			
		<u>HR</u>	<u>M</u>	<u>Cutting</u>	<u>Assembly</u>
Human Resource	\$ 90,000		20%		50%
Maintenance	\$ 60,000	10%		55%	35%
Cutting	\$320,000				
Assembly	\$400,000				

Allocate the costs of Service Departments to Operating Departments using the reciprocal method?