

COST ACCOUNTING 2162-E

Exam 17 January, 2011

Duration: 4 hours

Permitted tools: Calculator

1. A company that uses a conventional job costing system faces the task of calculating the product cost per unit and selling price per unit (excl. VAT) of one its products. The following details have been gathered for the product and the company.

Direct costs and mark-up per product unit:

Direct materials	240 €/product unit
Direct labour, department A	180 €/product unit
Direct labour, department B	210 €/product unit
Mark-up	25 % of the selling price

So far the following debit entries have been recorded in the main ledger:

	€
Raw materials, department A	44300
Raw materials, department B	58600
Direct labour, department A	112000
Direct labour, department B	440000
Materials overhead costs	48000
Production overhead costs, department A	92000
Production overhead costs, department B	390000
Selling expenses	320000
Administrative expenses	450000

Also to be allocated:

		€
Depreciation	Warehouse (Raw materials)	5600
	Warehouse (Finished goods)	7800
	Machinery, department A	52000
	Machinery, department B	64000
	Head office equipment	34000
Notional interest	Raw materials	8200
	Work in progress, department A	6400
	Finished goods	9800
Notional rents	Manufacturing, department A	180000
	Manufacturing, department B	160000
	Head office	130000

The following items should also be taken into account:

Production department A has done some repair work in the raw materials warehouse and incurred the following costs for this:		€
	Raw materials	5400
	Direct labour	8200
Direct labour costs in department B includes the following amounts for repairs and maintenance in:		€
	department A	6700
	department B	6300

Required:

Record the data given above in a system of T-accounts (NOT A MATRIX!!!), and calculate the appropriate overhead rates. Use these rates to calculate the selling price (excl. VAT) of a product for which the following data has been determined. Use the model for product costing shown below. (20 p)

CONVENTIONAL MODEL FOR PRODUCT COSTING:

PRODUCT COSTING (COSTS AND SELLING PRICE PER PRODUCT UNIT)	
DIRECT MATERIALS	
MATERIALS OVERHEAD (% OF DM)	
DIRECT LABOUR, DEP. A	
PRODUCTION OVERHEAD, DEP. A (% OF DL, DEP.A)	
DIRECT LABOUR, DEP. B	
PRODUCTION OVERHEAD, DEP. B (% OF DL, DEP. B)	_____
PRODUCTION COST	
SELLING EXPENSES (% OF PRODUCTION COST)	
ADMINISTRATIVE EXPENSES (% OF PRODUCTION COST)	_____
FULL COST	
MARK-UP(% OF SELLING PRICE)	_____
SELLING PRICE	=====

2. A company that uses a process costing system has two manufacturing processes. Output from process 1 is transferred as input to process 2. The process costs for a given period are:

Process 1	Input			€
Direct materials	4200 kg	x	0,4 €/kg	1680
Direct labour				210
Rent	20 hours	x	30 €/hour	600
Process 2				
Direct materials	(Material that does not increase output quantity).			800
Direct labour				240
Rent	30 hours	x	30 €/hour	900

In addition there are costs common to the two processes: 650 €. This amount can be allocated to the processes using direct labour as the allocation base.

Normal output for process 1 is: 85 % of input quantity.
 Normal output for process 2 is: 90 % of input quantity

The scrap value is: 1,20 €/kg för process 1.
 1,60 €/kg for process 2.

Output quantities for the period are:

Process 1	4000 kg
Process 2	3800 kg

Required:

Record the items on T-accounts and determine normal loss and abnormal gain/loss. Calculate the unit cost per process, and complete the T-accounts so that the debit and credit sides balance. (10 p)

4) MyBooks plc is a chain of book stores that sells three categories of books: Music, Travel, and Economy. Net profit for each category is calculated on a regular basis. For last year the net profit report looks as follows:

	Music books	Travel books	Economy books	Total
Sales	900000	1200000	1200000	3300000
- Cost of books sold	-600000	-800000	-900000	-2300000
- Variable overhead costs*	-75000	-50000	-180000	-305000
- Fixed overhead costs	-150000	-200000	-130000	-480000
= Net profit	75000	150000	-10000	215000

Required:

As can be seen, books on economy show a loss. Should the company discontinue selling these books? Motivate your answer based on a) a net profit analysis, and b) a contribution margin analysis. Assume in both cases that fixed overhead costs are not differential costs. (5 p)

Please observe that you are required to answer questions 5-7 from either Drury or Ax et al., not both books. However, the questions from either book can be answered in English or Swedish.

Questions from Drury: Management and Cost Accounting

- 5) Essential features of determining the relevant costs of direct materials and direct labour (10 p)
- 6) Which are the three main reasons why a cost accumulation system is required to generate relevant cost information for decision-making (10 p)
- 7) Cooper and Kaplan (1992) emphasize that ABC systems are models of resource consumption. What do they mean by this? (10 p)

Frågor från Ax et al.: Den nya ekonomistyrningen

- 5) Vilka rent kalkyltekniska fördelar kan tillskrivas ABC-kalkylering och vilka är fördelarna relaterade till dess användning? (10 p)
- 6) Tidsdriven ABC-kalkylering och tidsekvationer - grundläggande principer (10 p)
- 7) Vilka är stegkalkylens grunddrag? Stegkalkyler har fler användningsområden än en enkel bidragskalkyl. Vilka är dessa användningsområden? (10 p)

3) A company calculates product unit cost based on the following data:

Product	A	B	C	D
Production and sales volume (units)	180	160	90	50
Direct materials/unit	18	20	40	40
Direct labour/unit	15	15	30	30
Machine hours/unit	2	2	4	4

Overhead costs are estimated as follows:

Cost pool	Amount (€)	Cost driver volume	Cost driver
Machine-related	11 160	*	Number of machine hours
Set-up	5 040	*	Number of production batches
Receiving raw materials	4 400	80	Number of requisitions
Quality control	2 880	*	Number of production batches
Handling materials/delivering goods	5 280	*	Number of product orders

* calculate this yourself

The four products are quite similar and are manufactured in batches of 10 units/batch and shipped to customers in batches of 20 units per product order. The number of material requisitions is allocated equally between the products.

Required:

Calculate unit cost per product using a) traditional overhead costing, and b) activity-based costing (15 p)