

**Ollscoil na hÉireann, Gaillimh**

**National University of Ireland, Galway**

**SEMESTER II EXAMINATIONS, 1999-2000**

**HIGHER DIPLOMA IN BUSINESS STUDIES**

**AY 873: ACCOUNTING FOR CONTROL**

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**Time Allowed: TWO AND A HALF HOURS**

**Please answer any three questions.**

### **Question 1**

Kilkenny Concrete Ltd manufactures four main products using broadly the same production methods and equipment for each.

The company currently prices its products on the basis of conventional costing to arrive at a cost plus selling price using machine hours to allocate total manufacturing overheads. Selling price is determined by the addition of a 50% mark-up on cost.

The Managing Director of Kilkenny Concrete Ltd has heard conflicting advice on whether to use the activity-based costing (ABC) approach to accounting for overheads.

Total manufacturing overheads for the period have been analysed as follows:

<b><u>Activity Centres</u></b>	<b><u>Cost Drivers</u></b>	<b><u>Cost Pools</u></b>
Machining services	Machine hours	£10,430
Set-up costs	Number of production runs	£5,250
Stores receiving	Requisitions raised	£3,600
Quality control	Number of production runs	£2,100
Material handling	Orders executed	£4,620

Details of the four products and relevant information are given below for one period:

	<b><u>Products</u></b>			
	<b><u>A</u></b>	<b><u>B</u></b>	<b><u>C</u></b>	<b><u>D</u></b>
Number of units produced	120	100	80	120
Costs per unit:	£	£	£	£
Direct materials	40	50	30	60
Direct labour	28	21	14	21
Machine hours (per unit)	4	3	2	3

The four products are usually produced in production runs of 20 units and sold in batches of 10 units.

The number of requisitions raised on the stores was 20 for each product and the number of orders executed was 42, each order being for a batch of 10 of a product.

**Cont'd..**

**Question 1 cont'd..**

**Required:**

- a) Calculate the unit manufacturing cost and selling price for each product if overhead costs are absorbed on a machine hour basis.  
(10 marks)
- b) Calculate the unit manufacturing cost and selling price for each product using activity-based costing.  
(18 marks)
- c) Consider which system presents a fairer valuation of the product cost per unit, giving reasons for your answer.  
(5marks)

**[Total:  $33\frac{1}{3}$  marks]**

## Question 2

- (a) **Pedro Ltd.** manufactures a specialised form of cardboard, which it sells to a number of major clients. The following is a summary of key figures from the company's budget and actual results for March 2000:

	Original Budget	Actual Results
Sales (number of bales of cardboard)	12,000	14,000
Selling price (per bale)	£122	£118
Raw materials used in production (kilograms)	270,000	302,625
Price paid for raw materials (per kilogram)	£1.75	£1.80
Direct labour hours used in production	18,000	18,900
Wage rate (per hour)	£7.20	£7.30
Variable production overhead costs	£259,200	£283,500

The company's managing director has expressed concern that the numbers of *labour hours* and *raw material kilograms* used were much greater than the originally budgeted amounts.

Fixed costs are not included in the budget or actual results, because these costs are largely outside of managers' control in the short term. The "variable production overhead costs" are generally expected to vary in accordance with labour hours.

### Required:

Calculate the budget and actual contribution (*i.e.*, profit before deduction of fixed costs) for March, and reconcile these two profit figures using variance analysis.

[21 marks]

- (b) **Briefly** explain whether you agree with the managing director that the amounts of labour and raw materials used provide cause for concern.

[4 marks]

- (c) **Either**: Explain what is meant by "planning and operational variances", and discuss the usefulness of such variances for management control;

**Or**: Explain how variance analysis differs as between a *variable costing system* and an *absorption costing system*, and discuss which of these two approaches is the more useful for management control purposes.

[8 <sup>1</sup>/<sub>3</sub> marks]

**Total for Question 2: [33 <sup>1</sup>/<sub>3</sub> marks]**

### Question 3

**Borek Manufacturing Ltd.** is preparing its budget for the third quarter (*i.e.*, July, August and September) of 2000. The company's standard costing system indicates a standard cost of production of £11 per unit, analysed as follows:

Raw materials	£ 5
Direct labour (0.5 hour @ £8 per hour)	£ 4
Allocation of fixed production overheads	<u>£ 2</u>
	<u>£11</u>

Fixed production overheads include £2,000 per month for depreciation. All other fixed production overheads are paid in cash each month. The allocation of fixed production overheads for standard costing purposes is based on a monthly output level of 4,000 units.

The company has a strong market position, and expects sales to be as follows:

	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>
<u>Sales (units):</u>	4,000	5,000	5,500	4,800	4,500

Stocks at the end of each month are to be maintained at the following levels:

- finished goods: 80% of the number of units to be sold in the following month;
- raw materials: 60% of the materials required for production in the following month.

Sales and purchases are made on one month's credit, but 1% of sales become bad debts.

Direct labour is paid for when production occurs. The company has agreed to increase the hourly wage rate from £8 to £10 per hour, with effect from 1<sup>st</sup> August. When this happens, Borek Manufacturing will pass this cost increase on to its customers, by increasing the selling price (which is currently £15 per unit). Only those units which have been produced at the higher cost will be sold at the higher price. Stocks are sold on a "first in, first out" basis, *i.e.*, the oldest items in stock are sold before newer items.

Other costs each month are:

- Fixed selling and distribution costs (£2,000 per month).
- Scheduling costs of £800 per "batch" of output (or part of a batch). A batch consists of 2,500 units of the product.

All of these costs require cash and are paid in the month when they are incurred.

The company expects to have the following opening balances at 1<sup>st</sup> July 2000:

Cash:	£4,500
Trade Debtors:	£60,000
Trade Creditors:	£20,000
Stock of Raw Materials (at cost):	£14,400
Stock of Finished Goods:	3,200 units

**[Question 3 continues on the next page ...]**

**[... Question 3 continued from the previous page.]**

**Required:**

- (a) Prepare the following budgets for Borek Manufacturing Ltd., by month and in total, for the third quarter (July to September inclusive) of 2000:

- production budget (in units);
- purchases budget for raw materials (in £);
- cash payments budget;
- cash receipts budget;
- cash budget.

**[28 marks]**

- (b) Write a memo to the managing director of Borek Manufacturing Ltd., making two specific suggestions as to how the company might improve the timing of its cash flows (*i.e.*, speed up the timing of its cash receipts, and/or slow down the timing of cash payments). N.B.: In your memo, you should critically assess the advantages and disadvantages of each of your two suggestions.

**[5 <sup>1</sup>/<sub>3</sub> marks]**

**Total for Question 3: [33 <sup>1</sup>/<sub>3</sub> marks]**

**[Question 4 is on the next page]**

#### **Question 4**

**N.B.** *If you choose this question, answer any two of its three parts.*

- (a) Discuss the use of *non-financial performance measures* as part of a system of responsibility accounting.

**[16  $\frac{2}{3}$  marks]**

- (b) Explain what is meant by the term “investment centre”. Explain the reasons for using this form of performance appraisal, and discuss the financial measures which are commonly used in assessing the performance of investment centres.

**[16  $\frac{2}{3}$  marks]**

- (c) Describe the principal benefits which a firm can expect to derive from the process of *budgeting*. In your answer, include reference to what a firm must do in order to realise those benefits.

**[16  $\frac{2}{3}$  marks]**

**Total for Question 4 (two parts): [33  $\frac{1}{3}$  marks]**