

UNIVERSITY OF BOLTON
BOLTON BUSINESS SCHOOL
ACCOUNTANCY PATHWAY
SEMESTER I EXAMINATION 2008/ 2009
MANAGEMENT ACCOUNTING CONTROL SYSTEMS
MODULE NO: ACC3004

Date: Thursday 22nd January 2009

Time: 14:00 – 17:00

INSTRUCTIONS TO CANDIDATES:

There are **SIX** questions on this paper.

Answer **FOUR** questions – **TWO** from Section A, **TWO** from Section B.

All questions carry equal marks.

Silent calculators may be used.

No books or materials may be referred to in the examination.

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SECTION A - Answer any TWO questions

Q1 ADVANCED INDUSTRIAL FREEZERS plc

Advanced Industrial Freezers plc recently launched a new refrigeration unit which was assembled in its UK plant near Bolton and then shipped to its French distribution subsidiary in Bordeaux. Shipping costs of £175 are incurred during this transfer. Variable costs of production are as follows:-

| | |
|--------------------|---------|
| | £/ unit |
| Labour | 210 |
| Material | 260 |
| Variable Overheads | 230 |
| | ----- |
| TOTAL | 700 |
| | ===== |

Gallic Cool, a wholly owned subsidiary of Advanced Industrial Freezers, sells (only) this refrigeration unit in France for e6,500 (e=euro). It pays its distributors a commission of 3% of the selling price of the refrigeration units. Variable selling overheads (excluding commission) are e300 per unit and fixed costs amount to e100,000 per month. The purchase price of refrigeration units from Bolton is e6,000 per unit (paid in sterling). The budget level of sales is 60 units per month. Market information suggests that if the sales price is reduced to e5,900, sales volume would increase by 20%. The current exchange rate is e1=£0.80

REQUIRED

- (i) Calculate Gallic Cool's breakeven point using the existing selling price and volume
(5 marks)
- (ii) Calculate Gallic Cool's expected annual profit with the existing price and budget volume and then with the reduced price and increased volume
(10 marks)

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Section A continued

(iii) Calculate the marginal profit the UK company makes on the sale of one extra refrigeration unit in France (in £ sterling) and the profit impact if Gallic Cool were to reduce its price

(5 marks)

(iv) Critically evaluate the options available to the chief executive of Advanced Industrial Freezers and advise on the most attractive course of action for the company overall?

(5 Marks)

Total 25 marks

Q2. BASIC AND PREMIUM

A car manufacturer produces only two models, Basic and Premium, using two factors of production, labour (L) and capital (K). Basic takes 40 labour hours and 40 capital hours to make, while Premium takes 60 labour hours and 20 capital hours to make.

The firm has available 60,000 labour hours and 40,000 capital hours per day, and has daily orders for 300 Basics and 400 Premium. Basic and Premium can be sold at prices of £16,000 and £20,000 respectively, but it costs £10,000 to produce Basic and £12,000 to produce Premium.

REQUIRED

(i) What output combination should the firm choose in order to maximise profits, using linear programming techniques which identify the objective function and the constraints. You may, if preferred, plot the inequalities on a graph and identify the feasible region to find the optimum solution that satisfies the objective function

(17 marks)

(ii) Determine the new objective function and optimum solution if the cost of producing Basic and Premium were to rise to £12,000 and £14,000 respectively.

(8 marks)

Total 25 marks

**Section A continued over
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Section A continued

Q3. BAMBER BRIDGE INSULATIONS plc

Bamber Bridge Insulations plc entered the market for the manufacture and sale of a revolutionary insulating material one year ago. The budgeted production and sales volume were 1,000 units. The originally estimated sales and standard costs for this new product were:

| | | |
|-----------------------------|-----|-------|
| | £ | £ |
| Standard sales price/ unit | | 100 |
| Standard costs/ unit: | | |
| Raw materials | 50 | |
| Labour –6 hours at £4 | 24 | |
| | --- | 74 |
| | | ----- |
| Standard contribution/ unit | | 26 |

| | | |
|----------------------------------|-------|-------|
| Actual results were: | £,000 | £,000 |
| Sales – 1,000 units | | 158 |
| Production costs – 1,000 units: | | |
| Raw materials – Type A 10,800 kg | 97.2 | |
| Labour – 5,800 hours | 34.8 | |
| | ----- | 132 |
| | | ----- |
| Actual contribution | | 26 |
| | | ----- |

The managing director made the following observations:-

‘Throughout the year we attempted to operate as efficiently as possible, given the

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Q3 continued

prevailing conditions. Although in total the performance agreed with budget, there were large differences in every respect except volume. These were due, mainly, to the tremendous success of the insulating material which created increased demand both for the product itself and all the manufacturing resources used in its production. This then resulted in price rise all round.

Sales were made at what was felt to be the highest feasible price but, it was later discovered, our competitors sold for £165 per unit and we could have equalled this price. Labour costs rose dramatically with increased demand for the specialist skills required to produce the product and the general market rate was £6.25 per hour – although Bamber Bridge always paid below the general market rate whenever possible.

Raw material Type A was chosen as it appeared cheaper than the alternative Type B which could have been used. The costs which were expected at the time the budget was produced were, per kg, Type A - £5 and Type B - £6. However, the market prices relating to efficient purchases of the material during the year were Type A - £8.50/kg and Type B - £7.00/kg.

Therefore, it would have been more appropriate to have used Type B, but as the production plans were based on type A, it was 'A' that was used.

It is not proposed to request a variance analysis for the first year's results as most of the deviations from budget were caused by the new product's great success and this could not have been anticipated and planned for. In the event the final contribution was equal to that originally budgeted, so operations must have been fully efficient.'

REQUIRED

(i) Compute the traditional variances for the first year's operations.

(5 marks)

(ii) Prepare an analysis of variances for the first year's operations which will be useful in the circumstances of Bamber Bridge insulations plc. The analysis should indicate the extent to which the variances were due to operational efficiency or planning causes

(10 marks)

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Q3 continued

(iii) Evaluate the major advantages and disadvantages of the approach applied in part (ii) above over the traditional approach, using, for illustration, a comparison of the raw material variances computed in (i) and (ii) above

(10 marks)

Total 25 marks

SECTION B – Answer any TWO questions

Q4. Where interdivisional movements of goods and services occur between two or more subsidiaries of the same organisation, the transfer price may be determined by an external market price, if this exists. If there is no such 'market price' alternative 'compromise' solutions may be sought.

REQUIRED

Identify and critically evaluate the key features of different 'compromise' solutions to the scenario introduced above.- these may include ;-

- costs plus lump sum pricing
- pro-rating of contribution
- dual pricing
- merger of divisions

(25 marks)

Q5. Identify and critically evaluate the key components of the recently developed performance measurement technique of Economic Value Added (EVA) in comparison to the more established approach of the Balanced Scorecard.

(25 marks)

Q6. Explain the critical elements of an 'Accounting Information System' and the processes by which Data is converted into Information. Identify and critically evaluate the key features of Quality Information

(25 marks)

END OF QUESTIONS