



Advanced Management Accounting Module 13 June 2009

Instructions: Answer all Question in Section A
Answer any two in Section B

Time Allowed: 3 Hours

Section A - Compulsory Answer all questions

The following scenario relates to questions 1, 2 and 3 and should be read before attempting the questions.

Gen-Eng Limited is an engineering company specialising in stainless steel and metal fabrication work. The company produces and sells a range of stainless steel tables to the food and pharmaceutical sectors as well as producing customised products to customers' specifications. For the past ten years the company has been very successful and has seen significant increases in turnover, profits and employee numbers. Two years ago the company raised significant debt finance to undertake a capital extension of plant and equipment. This has increased the finance cost and has resulted in decreased profitability in the last financial period. The company has also seen weakening turnover figures, a smaller order book and for the first time in a long time a strain on working capital.

Consequently, there has been an increased emphasis on cost management and in certain areas cost reduction. At a recent executive meeting the company directors decided to investigate how the increased use of a total quality management system may help reduce costs and also how value analysis and value engineering may be used as part of a cost management programme. This report has been scheduled for the next executive meeting in two weeks time.

The financial director has also requested more detail than the summary figures he usually receives. He has asked for a reconciliation report reconciling original budgeted profit to actual profit with all relevant variances for the largest selling stainless steel product, a 100 kg stainless steel table that represents 80% of all sales and production figures. The company currently uses a standard absorption costing system.

The following standard data for this table has been presented overleaf:

Standard Cost Card per unit for 100 kg Stainless Steel Table

Stainless Steel Grade 1	60 kgs @ €5 per kg
Stainless Steel Grade 2	60 kgs @ €3 per kg
Fabrication Labour	10 hours @ €20 per hour
Finishing Labour	5 hours @ €15 per hour
Variable Production Overhead	€5 per labour hour
Fixed Production Overhead	€10 per labour hour

There is a normal loss of 20% of stainless steel due to wastage / cut-offs with each table. There is a specific mix for steel but occasionally slight variations are allowed for operational reasons. Labour is not subject to a specific mix. Budgeted monthly production and sales are 500 tables per month at a budgeted selling price of €1,200 per table.

Actual accounts information for the month just ended is as follows:

Sales	400 tables yielding revenue of €470,000
Stainless Steel Grade 1	Purchased and used 28,000 kgs @ €6 per kg
Stainless Steel Grade 2	Purchased and used 25,000 kgs costing €72,500
Fabrication Labour	4,200 hours costing €92,400
Finishing Labour	1,900 hours @ €15.50 per hour
Variable production overhead cost	€40,000
Fixed production overhead cost	€85,000

This set of results repeats the trend that has taken place over recent months but these management accounting reports receive little attention at the executive meetings.

The sales director has received an enquiry from a customer for a special order of low grade tables. The order is for 200 grade 3 stainless steel tables and the customer has offered €800 per table with cash on delivery. Each table will require 50 kgs of grade 3 stainless steel and 6 hours of fabrication labour and 4 hours of finishing labour. There is sufficient inventory of grade 3 steel which has no further immediate use by the company. This stock was bought for €2.75 per kg and a scrap merchant has offered to buy this material for €1 per kg. Fabrication labour is skilled and is in short supply. In order to fulfil this order fabrication labour will need to be diverted from production of the 100 kg stainless steel table. Finishing labour can be hired in as required to fulfil the requirements on this order. Variable production overheads will be incurred as per other products and there will be no increase in fixed production overheads but there will be a sales commission of 5% due to the sales director for any contracts over €100,000.

It is hoped by the executive that this order will help improve cash flow and improve the profitability of the business. The managing director has asked that all relevant topics be scheduled on the agenda for the next executive meeting.

Section A: Answer all questions

Question 1

(a) Discuss how Gen-Eng can manage costs by using techniques such as total quality management, value analysis and value engineering.

[12 Marks]

(b) Due to the current economic downturn many businesses such as Gen-Eng are facing difficult trading and operating conditions. Discuss how management accounting tools such as strategic management accounting and/or the balanced scorecard may be used to help businesses in this climate.

[8 Marks]

[Total Marks 20]

Question 2

(a) Prepare, using variance analysis, a reconciliation of original budgeted profit to actual profit for the month just ended. Your report should show workings for all relevant variances including mix and yield variances for stainless steel, however you are not required to prepare sub-variances for the fixed production overhead volume variance.

[15 Marks]

(b) Explain how management may use the information contained in the above report for control purposes.

[5 Marks]

[Total Marks 20]

Question 3

(a) Prepare a profitability analysis for the special order using both traditional financial accounting principles and relevant costing principles and recommend, with supporting argument, to the executive whether the order should be accepted.

[14 Marks]

(b) Discuss whether a move to a variable / marginal costing system would help Gen-Eng to improve short term financial performance.

[6 Marks]

[Total Marks 20]

Section B - Answer any two questions

Question 4

Bosh Limited is a company that sells a range of electric home improvement tools. They are about to launch a new product with a major DIY chain and are trying to establish a selling price. They have established the following cost structure.

Direct Materials	€10 per unit
Direct Labour	€10 per unit
Variable Production Overhead	€10 per unit
Fixed Production Overheads	€10 per unit

Fixed overheads and direct labour costs have been determined based on a budgeted output of 1,000 units per month. Materials, labour and variable production overheads are the only costs considered variable with output.

The sales director has found it difficult to establish the price demand relationship but has established that demand will decrease by 100 units for every €20 increase in price and vice versa. They have also indicated that they expect demand to be 800 units at a selling price of €100.

Required:

(a) Determine the expected profit or loss for Bosh Limited based on the budgeted output level.

[4 Marks]

(b) Calculate the optimal price and output level necessary to maximize profits of Bosh Limited for the coming period. Prepare a profitability statement at this level.

[12 Marks]

(c) List the other factors that Bosh Limited should consider when it comes to setting prices.

[4 Marks]

[Total Marks 20]

Section B - Answer any two questions

Question 5

A production engineering consultant has recently been employed by your company to undertake time and motion studies in your labour intensive manufacturing department. She has found that for all new products that a 90% learning curve is applicable to direct manufacturing labour and that the learning curve ceases once the first twenty units have been produced.

Required:

(a) Calculate the estimated profit/(loss) per unit and in total to manufacture

- (i) 12 Units
- (ii) 20 Units
- (iii) 24 Units

The first production unit takes 20 direct labour hours at a cost of €20 per hour, variable production overheads are applied at a rate of 75% of direct labour and direct materials costs €300 per unit. Fixed costs are €5,000 and each unit is expected to sell for €620.

[15 Marks]

-0.301

Note: Learning curve is represented by $Y = A(X)$

(b) Describe situations where the learning curve is best applied, how it may assist management accountants and the any weaknesses associated with it.

[5 Marks]

[Total Marks 20]

Question 6

(a) Discuss how performance measures such as return on capital employed, return on investment, residual income and margin analysis are used to evaluate divisional performance for a multi-divisional business and how these measures may lead to dysfunctional decision making.

[10 Marks]

(b) Discuss how budgeting methods such as zero based budgeting and activity based budgeting may be used by business organisations in the current economic environment.

[10 Marks]

[Total Marks 20]