Fundamentals Level – Skills Module

Performance Management

Monday 3 December 2012

Time allowed
Reading and planning: 15 minutes
Writing: 3 hours
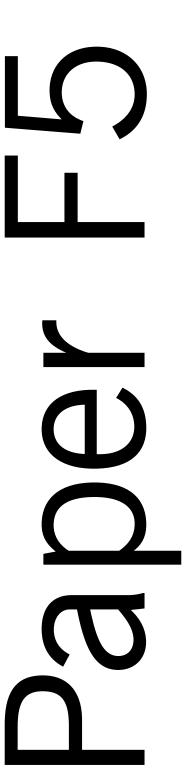
ALL FIVE questions are compulsory and MUST be attempted.

Formulae Sheet is on page 8.

Do NOT open this paper until instructed by the supervisor.

During reading and planning time only the question paper may be annotated. You must NOT write in your answer booklet until instructed by the supervisor.

This question paper must not be removed from the examination hall.

The Association of Chartered Certified Accountants

Paper F5

ACCA

ALL FIVE questions are compulsory and MUST be attempted

1   Hair Co manufactures three types of electrical goods for hair: curlers (C), straightening irons (S) and dryers (D.) The budgeted sales prices and volumes for the next year are as follows:

	C	S	D
Selling price	$110	$160	$120
Units	20,000	22,000	26,000

Each product is made using a different mix of the same materials and labour. Product S also uses new revolutionary technology for which the company obtained a ten-year patent two years ago. The budgeted sales volumes for all the products have been calculated by adding 10% to last year's sales.

The standard cost card for each product is shown below.

	C	S	D
	$	$	$
Material 1	12	28	16
Material 2	8	22	26
Skilled labour	16	34	22
Unskilled labour	14	20	28

Both skilled and unskilled labour costs are variable.

The general fixed overheads are expected to be $640,000 for the next year.

Required:

(a) Calculate the weighted average contribution to sales ratio for Hair Co.

Note: round all workings to 2 decimal places.   (6 marks)

(b) Calculate the total break-even sales revenue for the next year for Hair Co.

Note: round all workings to 2 decimal places.   (2 marks)

(c) Using the graph paper provided, draw a multi-product profit-volume (PV) chart showing clearly the profit/loss lines assuming:

   (i)   you are able to sell the products in order of the ones with the highest ranking contribution to sales ratios first; and
   (ii) you sell the products in a constant mix.

Note: only one graph is required.   (9 marks)

(d) Briefly comment on your findings in (c).   (3 marks)

(20 marks)

2 Truffle Co makes high quality, hand-made chocolate truffles which it sells to a local retailer. All chocolates are made in batches of 16, to fit the standard boxes supplied by the retailer. The standard cost of labour for each batch is $6·00 and the standard labour time for each batch is half an hour. In November, Truffle Co had budgeted production of 24,000 batches; actual production was only 20,500 batches. 12,000 labour hours were used to complete the work and there was no idle time. All workers were paid for their actual hours worked. The actual total labour cost for November was $136,800. The production manager at Truffle Co has no input into the budgeting process.

At the end of October, the managing director decided to hold a meeting and offer staff the choice of either accepting a 5% pay cut or facing a certain number of redundancies. All staff subsequently agreed to accept the 5% pay cut with immediate effect.

At the same time, the retailer requested that the truffles be made slightly softer. This change was implemented immediately and made the chocolates more difficult to shape. When recipe changes such as these are made, it takes time before the workers become used to working with the new ingredient mix, making the process 20% slower for at least the first month of the new operation.

The standard costing system is only updated once a year in June and no changes are ever made to the system outside of this.

Required:

(a) Calculate the total labour rate and total labour efficiency variances for November, based on the standard cost provided above. (4 marks)

(b) Analyse the total labour rate and total labour efficiency variances into component parts for planning and operational variances in as much detail as the information allows. (8 marks)

(c) Assess the performance of the production manager for the month of November. (8 marks)

(20 marks)

[P.T.O.

3 Web Co is an online retailer of fashion goods and uses a range of performance indicators to measure the performance of the business. The company's management have been increasingly concerned about the lack of sales growth over the last year and, in an attempt to resolve this, made the following changes right at the start of quarter 2:

Advertising: Web Co placed an advert on the webpage of a well-known online fashion magazine at a cost of $200,000. This had a direct link from the magazine's website to Web Co's online store.

Search engine: Web Co also engaged the services of a website consultant to ensure that, when certain key words are input by potential customers onto key search engines, such as Google and Yahoo, Web Co's website is listed on the first page of results. This makes it more likely that a customer will visit a company's website. The consultant's fee was $20,000.

Website availability: During quarter 1, there were a few problems with Web Co's website, meaning that it was not available to customers some of the time. Web Co was concerned that this was losing them sales and the IT department therefore made some changes to the website in an attempt to correct the problem.

The following incentives were also offered to customers:

Incentive 1: A free 'Fast Track' delivery service, guaranteeing delivery within two working days, for all continuing customers who subscribe to Web Co's online subscription newsletter. Subscribers are thought by Web Co to become customers who place further orders.

Incentive 2: A $10 discount to all customers spending $100 or more at any one time.

The results for the last two quarters are shown below, quarter 2 being the most recent one. The results for quarter 1 reflect the period before the changes and incentives detailed above took place and are similar to the results of other quarters in the preceding year.

	Quarter 1	Quarter 2
Total sales revenue	$2,200,000	$2,750,000
Net profit margin	25%	16·7%
Total number of orders from customers	40,636	49,600
Total number of visits to website	101,589	141,714
Conversion rate – visitor to purchaser	40%	35%
The percentage of total visitors accessing website through magazine link	0	19·9%
Website availability	95%	95%
Number of customers spending more than $100 per visit	4,650	6,390
Number of subscribers to online newsletter	4,600	11,900

Required:

Assess the performance of the business in Quarter 2 in relation to the changes and incentives that the company introduced at the beginning of this quarter. State clearly where any further information might be necessary, concluding as to whether the changes and incentives have been effective.

(20 marks)

4 Designit is a small company providing design consultancy to a limited number of large clients. The business is mature and fairly stable year on year. It has 30 employees and is privately owned by its founder. Designit prepares an annual fixed budget. The company's accounts department consists of one part-qualified accountant who has a heavy workload. He prepares the budget using spreadsheets. The company has a November year end.

Designit pays each of its three sales managers an annual salary of $150,000, plus an individual bonus based on sales targets set at the beginning of the year. There are always two levels of bonus that can be earned, based on a lower and an upper level of fee income. For the year ended 30 November 2012, for example, each of the sales managers was given a lower target of securing $1·5m of fee income each, to be rewarded by an individual bonus equating to 20% of salary. If any of the managers secured a further $1·5m of fee income, their bonus would increase by 5% to the upper target of 25%. None of the managers achieved the upper target but all of them achieved the lower one.

This is the same every year and Designit finds that often the managers secure work from several major clients early in the year and reach the $1·5m target well before the year has ended. They then make little effort to secure extra fees for the company, knowing that it would be almost impossible to hit the second target. This, together with a few other problems that have arisen, has made the company consider whether its current budgeting process could be improved and whether the bonus scheme should also be changed.

Designit is now considering replacing the fixed budget with a monthly rolling budget, which Designit believes will make the budgeting process more relevant and timely and encourage managers to focus on the future rather than the past. It would also prevent the problem of targets being met too early on in the year by the sales managers because the targets would be set for monthly performance rather than annual performance. For example, a manager could be given a target of securing $200,000 fee income in the first month for a reward of 2% of salary. Then, depending on what is happening both within the business and in the economy as a whole, at the end of the first month, a different target fee income could be set for the second month.

Required:

(a) Explain what a monthly rolling budget is and how it would operate at Designit. (4 marks)

(b) Discuss the problems that may be encountered if Designit decides to introduce monthly rolling budgets together with a new bonus scheme, such as the one outlined above. (6 marks)

(c) Discuss the problems with the current bonus scheme and, assuming that the company decides against introducing rolling budgets, describe and justify an alternative, more effective bonus scheme that could be introduced. (6 marks)

(d) Discuss the risk of using the company accountant's own spreadsheets for budgeting. (4 marks)

(20 marks)

5 Wash Co assembles and sells two types of washing machines – the Spin (S) and the Rinse (R). The company has two divisions: the assembly division, and the retail division.

The company's policy is to transfer the machines from the assembly division to the retail division at full cost plus 10%. This has resulted in internal transfer prices, when S and R are being transferred to the retail division, of $220·17 and $241·69 respectively. The retail division currently sells S to the general public for $320 per machine and R for $260 per machine. Assume it incurs no other costs except for the transfer price.

The retail division's manager is convinced that, if he could obtain R at a lower cost and therefore reduce the external selling price from $260 to $230 per unit, he could significantly increase sales of R, which would be beneficial to both divisions. He has questioned the fact that the overhead costs are allocated to the products on the basis of labour hours; he thinks it should be done using machine hours or even activity based costing.

You have obtained the following information for the last month from the assembly division:

	Product S	Product R
Production and sales (units)	3,200	5,450
Materials cost	$117	$95
Labour cost (at $12 per hour)	$6	$9
Machine hours (per unit)	2	1
Total no. of production runs	30	12
Total no. of purchase orders	82	64
Total no. of deliveries to retail division	64	80

Overhead costs:	$
Machine set-up costs	306,435
Machine maintenance costs	415,105
Ordering costs	11,680
Delivery costs	144,400
Total	877,620

Required:

(a) Using traditional absorption costing, calculate new transfer prices for S and R if machine hours are used as a basis for absorption rather than labour hours.

Note: round all workings to 2 decimal places. (3 marks)

(b) Using activity based costing to allocate the overheads, recalculate the transfer prices for S and R.

Note: round all workings to 2 decimal places. (8 marks)

(c) (i) Calculate last month's profit for each division, showing it both for each product and in total, if activity based costing is used. (3 marks)

(ii) You have calculated the profits that both divisions made last month using traditional absorption costing and found them to be as follows:

Using labour hours to allocate overhead	Product S $	Product R $	Total * $
Assembly's division profit	64,064	119,737	183,801
Retail division's profit	319,456	99,790	419,246
			603,047*

Using machine hours to allocate overheads			
Assembly division's profit	86,720	97,065	183,785
Retail division's profit	69,760	349,563	419,323
			603,108*

* Note: small differences arise in figures because of rounding.

Required:

Given these two sets of figures and your calculations in (c) (i), discuss whether activity based costing should be implemented. Consider the decision from the view of each of the divisional managers.

(6 marks)

(20 marks)

Formulae Sheet

Learning curve

$Y = ax^b$

Where Y = cumulative average time per unit to produce x units
$\quad a$ = the time taken for the first unit of output
$\quad x$ = the cumulative number of units produced
$\quad b$ = the index of learning (log LR/log2)
$\quad LR$ = the learning rate as a decimal

Regression analysis

$y = a + bx$

$$b = \frac{n\sum xy - \sum x \sum y}{n\sum x^2 - (\sum x)^2}$$

$$a = \frac{\sum y}{n} - \frac{b\sum x}{n}$$

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{(n\sum x^2 - (\sum x)^2)(n\sum y^2 - (\sum y)^2)}}$$

Demand curve

$P = a - bQ$

$b = \dfrac{\text{change in price}}{\text{change in quantity}}$

a = price when $Q = 0$

$MR = a - 2bQ$

End of Question Paper