Advanced Management Accounting
Module 13
November 2009

Instructions:	Answer five questions
	You must answer the three questions in Section A
	Answer any two questions from section B
	All questions carry equal marks
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.

Skill-ware Limited is a software house that develops and sells e-learning solutions to large international clients in the aviation and electronics sectors. They are highly regarded and are seen as market leaders and innovators but there is a perception that they are generally the highest priced company in this market. Skill-ware has seen a decline in sales and profitability in the last two years partly due to the global economic recession but also in part due to this pricing perception. The Skill-ware Board of Directors recently commissioned a well known group of international consultants to prepare a benchmarking report to identify how competitive was the company's product range.

The consultants reported that the company was expensive for newly launched products but in line with sector averages for products launched over twelve months ago. The consultants concluded that Skill-ware should reconsider its pricing strategy and consider methods such as total life cycle costing as an example of how to recover development costs. Each software product has an average life span of three years before requiring major update or redesign. The Board has passed on the report to management and asked them to revert back with responses to the report. This has led to debate at the most recent management meeting with different viewpoints being presented by different function heads. The difficulty with the software sector is that the majority of the cost spend is in the development process with only marginal costs being incurred thereafter. One suggestion is that the company should change its accounting policy and treat all development costs as period costs and not charge them against product profitability at all.

The Chief Executive Officer (CEO) has decided that the best way to consider how to move forward is to analyse the situation in relation to the upcoming launch of Skill-ware's new Aviator-Pro software product. The total development cost of the product is expected to be €15,000,000 and advance marketing and promotional costs are budgeted at €2,500,000.

Market research has indicated the following pricing and demand patterns.

Price per seat €	Annual Demand (units)
5,000	7,500
4,000	10,000
3,000	12,500

The price per seat is the common method of pricing in the software market and is the same as a price per unit. Skill-ware is budgeting for further annual support costs of €2,500,000 and there are variable seat costs of €200 for training and €50 in sales commission. The sales manager has recommended that the advice of the consultants be followed and that the price should be set at €3,000 in order to achieve greater market share and to dispel the perception of high price.

A major airline has contacted Skill-ware with a view to developing a tailored version of an existing product, the Aviator-Gold, that currently sells for €1,500 per seat. The airline wishes to use the modified product to train all of its 300 pilots. They have however a restricted budget and as they previously had purchased and paid for a 300 seat licence for the Aviator-Gold they are looking for a significant discount of at least 50% on the price per seat. A Skill-ware software engineering manager has prepared the following estimate of work required to modify the programme to the airline's requirements. The major difficulty is that the modification would require releasing staff that are currently working on the Aviator-Pro product.

The following are the requirements:

(a) Contract flight simulator time: 100 hours @ €500 per hour

(b) Grade 1 software engineers : 450 hours currently paid €50 per hour gross. These high level engineers are currently employed but fully utilised by the company. Replacement contract workers are scarce and will cost €100 per hour

(c) Grade 2 software engineers: 300 hours currently paid €30 per hour. The company currently employs these engineers on a salary basis and has capacity to redeploy these engineers to the proposed contract without disrupting other work schedules.

(d) The in-house IT Services department currently charges out its fixed overhead costs at a rate of €100 per software engineering hour.

(e) Other general fixed overhead costs are apportioned to each product/contract at a rate €50 per software engineering hour.

(f) The variable training costs is €200 per seat and sales commission costs of €50 will apply to this proposed contract.

(g) The normal accounting practice for contract work is to charge a mark-up of 40% to arrive at a price.

The sales manager is anxious that this contract be secured because he feels it will be a further 'coup' for Skill-ware and that it will lead to other similar contracts from other airlines.

The CEO has asked for financial projections to be prepared but is concerned about this contract for a number of reasons other than financial reasons.

Section A: Answer all questions

Question 1

(a) Skillware's international consultants have recommended that the company have a more external focus to the business. Explain how the use of 'strategic management accounting' may assist Skillware to improve its performance.

[10 Marks]

(b) Traditional cost and management accounting has been criticised as being out of date and not relevant to today's modern business environment. Discuss some of these criticisms and provide examples of how management accounting as a discipline has responded to such criticism.

[10 Marks]

Total 20 Marks

Question 2

(a) Using the information from the scenario calculate the selling price that will maximise profits and show by how much greater this will be than the price recommended by the sales director.

[15 Marks]

(b) Explain the factors that need to be considered before implementing the optimal price and the possible situations where this may not be the preferred price.

[5 Marks]

Total 20 Marks

Question 3

(a) Explain how total life cycle costing may be used by Skillware and what other factors should be considered when employing this method of costing.

[6 Marks]

(b) Prepare a quote for the modified Aviator-Gold contract using

(i) existing Skill-ware financial costing methods;
(ii) relevant costing principles showing the minimum acceptable price per seat.

[10 Marks]

(c) Outline what you feel may be the concerns of the Chief Executive Officer and explain how these may be dealt with.

[4 Marks]

Total 20 Marks

Section B Answer any two questions form question (4), (5) and (6)

Question 4

Fix-it Limited has commenced business in Dublin to meet the demand for assembling flat pack furniture that is being retailed by a major Swedish company. Fix-it will employ its own trade-staff on a contract by contract basis of which there is no shortage due to the current economic downturn. Fix-it bases prices on time for assembly plus any associated expenses. In the first month of operation staff reported that they are spending approximately 80% of their hours assembling three standard products, 6ft wardrobes, a corner sideboard and 'L' shaped kitchens. Further research reveals that these are three of the Swedish giant's most popular products. More worryingly for the owner of Fix-it are the customer complaints, especially in the first month, that they have been charged more than friends for assembly of the same product. A staff member has explained this is probably due to the learning effect. An analysis of job cards reveals the following information.

Cumulative Assembly	Wardrobe Cumulative Time	Sideboard Cumulative Time	Kitchen Cumulative Time
1	8 hours	4 hours	20 hours
2	12.8 hours	7.6 hours	40 hours
4	20.48 hours	12.96 hours	80 hours
8	40.96 hours	23.33 hours	160 hours

Trade staff are paid €15 per hour or part of and Fix-it charges its customers €25 per hour. Fix-it wishes to set standard selling prices for these products to avoid customer complaints.

Required:

(a) Calculate the rate of learning associated with the assembly of each product.
[4 Marks]

(b) Calculate the selling price and profit per wardrobe for the fifth unit onwards.
[6 Marks]

(c) If learning for Sideboards ceases after 8 units calculate the selling price and profit per unit for every unit thereafter.
[6 Marks]

(d) Comment on your results above and identify any weaknesses associated with the pricing model.
[4 Marks]

Total 20 Marks

Note : Learning curve is represented by $Y = ax^n$
Learning co-efficient for 95% = -0.074
Learning co-efficient for 90% = -0.152
Learning co-efficient for 85% = -0.234
Learning co-efficient for 80% = -0.322
Learning co-efficient for 75% = -0.415

Question 5

Plastic Limited manufactures and sells rolls of plastic covering for the agriculture sector. The company uses standard variable costing and variance analysis as part of its monthly management accounting process. The standard cost card and actual data for Product A1 for the month just ended is as follows.

Standard Cost Card for 10kgs of Product A1	
Direct material A	6 kgs at €4 per kg
Direct material B	6 kgs at €3 per kg
Direct labour	2 hours at €10 per hour
Variable overheads	25% of direct labour cost
Fixed overheads	€2,500

Actual Data for October 2009	
Production	1,000 kgs of Product A1
Direct material A	600 kgs costing €2,700
Direct material B	650 kgs costing €1,885
Direct labour	240 hours costing €2,160
Variable overheads	€600
Fixed overheads	€2,800

Required:

(a) Prepare a reconciliation of total flexible budgeted costs to total actual costs showing as many variances as possible including direct materials mix and yield variances. Show all workings

[12 Marks]

(b) Describe the usefulness of the above reconciliation statement and explain how management might use the information.

[4 Marks]

(c) Explain the weaknesses associated with standard costing and variance analysis.

[4 Marks]

Total 20 Marks

Question 6

MNC Group plc has two operating divisions whose managers' performance is judged using Return on Investment (ROI) ratios. The company uses Non-Current Assets plus Net Current Assets as part of the measure for ROI. MNC Group has a minimum acceptable ROI of 15% a year and uses the straight line method of depreciation for non-current assets. Extracts from the divisional budgets for the coming year are as follows:

	Division A	**Division B**
	€000	**€000**
Divisional Profit	520	100
Non-Current Assets at cost	1,880	2,400
Net Current Assets	780	360

Two new investment projects have since been identified and are presented as follows to the divisional managers.

1. Divisional Manager A has been authorised to buy new equipment costing €600,000 with a useful economic life of five years and expected savings of €180,000 per annum for the five years.

2. A new product has been identified for Division B which will increase sales revenue by €500,000 each year over the next five years. This will necessitate an increase in advertising by €120,000 per year and inventories held will increase by €180,000. The contribution margin for this new product will be 30% of sales.

Required:

(a) Calculate the expected return on investment (ROI) for each division assuming:

(i) the investment opportunities are not taken up;
(ii) the investment opportunities are taken up.

[10 Marks]

(b) Comment on the results obtained in (a) and state how the divisional managers and senior group / head office managers might view the investment opportunities.

[6 Marks]

(c) Comment on the usefulness of return on investment as a performance measure and explain what other alternatives are available.

[4 Marks]

Total 20 Marks