Institute of Incorporated Public Accountants

Module 13:

Advanced Management Accounting

Wednesday 28th. May 2014

2:00pm – 5:00pm

Instructions: **Answer five questions**

You must answer the three questions in Section A

Answer any two questions in Section B

All questions carry equal marks

Time Allowed: 3 Hours

Section A - Compulsory   Answer all three questions

The following scenario relates to all three questions.

Computer Factors Ltd is an Irish owned company, founded by five college graduates who were also its directors. An emergency meeting was called on the 4th April 2014 of the five directors and you, their newly appointed financial and management accountant. Computer Factors Ltd had started out with high hopes of exploiting a niche market in computer devices. Currently the company employs about 30 people engaged in design, production and delivery. Their main customers are the computer shops around the country. Competitive pricing from rival suppliers has cut into their margins in the last few years.
Mary, -the CEO- handed each member a copy of the latest Balance Sheet.

"Our former part-time accounts manager, Jim Slowey, prepared the Balance Sheet set out below for the end of the 1st quarter 2014".

	B/S as at 31/03/14			
Non Current Assets				
Premises	€	2,000,000		
Equipment	€	1,400,000		
			€	3,400,000
Current Assets (a)			€	000
Total Assets			**€**	**3,400,000**
Equity				
Share Capital	€	2,800,000		
Loss brought forward	(€	300,000)		
			€	2,500,000
Current Liabilities				
Bank Overdrawn			€	900,000
Equity plus Liabilities			**€**	**3,400,000**

(a) There was no inventory or receivables at the balance sheet date.

Section A - Compulsory Answer all three questions

Computer Factors Ltd –continued

The CEO continued
"As you see we are €900,000 overdrawn and we must come up with a plan in the next fortnight or the banks will move against us. They will force us to sell the only real asset left in the business which is the building. The value of the building represents its purchase price when it was bought at the height of the Celtic tiger. I am not sure we would realise current value in a sale, and we will certainly not get our investment back at this stage.

However, as you know our production team has just designed and patented a new memory stick that is no bigger than a pen, and for that reason we plan to call it "memory pen." But first I will hand you over to our design director Sean."

Sean handed out five pens for each director of the board. "As you can see you can write with the pen on paper, or any other material"-pausing to allow each member to try out the new pen. Patricia a director and the company secretary were not impressed. "This is what is going to save the company and our investment? – a pen!" Sean smiled back at her before replying

"Now screw off the top part of the pen-unscrewing the top of his own pen-and behold a memory key that can be inserted into any computer, or any device with a screen and keyboard. It also contains the basic applications together with a RAM facility. You don't need to worry whether a particular device has your programmes or not, as they are already located within the memory pen.

This will do away with the need for lap tops, tablets etc. All that is needed is a device with a screen and keyboard. Those travelling around the world by plane will no longer need to carry a laptop with them"

"And the projections for these?"-Patricia interrupting

Michael- a history graduate -had been assigned responsibility for Marketing.

"I have made some preliminary estimates, with the help of our former accounts manager Jim Slowey", handing around his projections.

Section A - Compulsory Answer all three questions

Computer Factors Ltd –continued

Projections in relation to the number/units of memory pens to be produced and sold for the remaining nine months of 2014

	2nd Quarter	3rd Quarter	4th Quarter	Average units
				produced per Quarter
Budgeted Sales units	45,000 u	57,000 u	63,000 u	
Budgeted Production units	50,000 u	55,000 u	60,000 u	55,000 u
				see note(a) below
Budgeted Fixed Production costs	€4,400,000	€4,400,000	€4,400,000	
Budgeted Semi-Variable Marketing costs	€585,000	€681,000	€729,000	See note(b) below

(a) Where relevant, the budgeted fixed overhead production rate per unit is to be computed by reference to the average quarterly production of 55,000 units/memory keys.

(b) Semi Variable marketing costs are a mixture of sales variable marketing costs and fixed marketing costs. The outgoing accounts manager, Jim Slowey, left no further details.

Estimated unit sales price and unit production costs- excluding those above, are as follows

	1 Memory Pen
Sales price per unit/memory pen will be	€ 95.00
Variable Production costs per unit	€ 44.00

The CEO expressed some bewilderment at the figures presented, as it contained no projections of sales and profits together with projected cash flows. These projections will demanded by the bank at next week's upcoming meeting.

Patricia, the company secretary, further pointed out that the information should have been presented in a format that assisted the board in deliberations on the production of the memory pen.

Section A - Compulsory   Answer all three questions

Computer Factors Ltd –continued

An awkward silence ensued before Bill, their research director, raised a further point. He queried the sales price of €95.00 for the memory pen. He wondered if that was the best price considering that the same sales price was associated with different volumes of sales.

The CEO nodded in agreement only now realising that increasing volumes were being sold at the same selling price. The marketing director responded that the 63,000 units represented the absolute upper range at this sales price, and that in the initial stages it would require advertising to get sales volumes up to this limit. Hence, the reason initially for charging the same price at different volumes of the new product.

The CEO suggested that the €95 sales price be taken to represent a maximum sales of 63,000 units, and that your report should include an assessment of a possible optimum price.

Question 1

(a) Prepare an operating income statement for the 2nd, 3rd and 4th quarters of Computer Factors Ltd using a total absorption method of accounting.

[8 marks]

(b) Prepare an income statement for the 2nd, 3rd and 4th quarters of Computer Factors Ltd. using a variable/marginal cost method of accounting.

[8 marks]

(c) Prepare a reconciliation statement that reconciles the annual profit under each of the methods, and explain any difference of the profit amount.

[4 marks]

[20 marks]

Section A - Compulsory   Answer all three questions

Computer Factors Ltd –continued

Question 2

The research director has come back with the following projections for the 4th quarter of 2014, showing estimated sales volume units for a particular sales price per unit.

Sales price per unit		Estimated units for the 4th quarter
€80.00		93,000 u
€85.00		83,000 u
€90.00		73,000 u
€95.00		63,000 u

Marginal costs per unit are estimated at €52.00

a) The sales director has suggested, on seeing these new projections, that the obvious strategy for the 4th quarter is to go for the lowest sales price of €80. This is about 16% lower than the original proposed sales price, but with an estimated volume of 93,000 units, which is 48% greater than the original proposal. Estimate what the profit would be in the 4th quarter 2014 using the Sales director's suggestion.

[5 marks]

b) Using the above information calculate the optimum sales price in order to maximise profits in the 4th quarter. State what the total contribution and the total net profit would be at that price.

[10 marks]

c) Set out the limitations in relation to the optimal price model and comment on the above results.

[5 marks]
[20 marks]

Section A - Compulsory   Answer all three questions

Computer Factors Ltd –continued

Question 3

The following information has been obtained from the records of the company, the directors and from meetings with staff in relation to proposed credit given and received.

Sales

The customers of the company, who are mainly computer shops, will be given 60 days to pay in order to incentivise them to buy the new product.

Fixed Production costs

These are paid as incurred. They include a depreciation charge in respect of Premises and Equipment. The total annual depreciation charge is €320,000

Variable production costs, Variable Marketing costs and Fixed marketing costs

The suppliers of services and goods, under each of the above costs, have agreed to give the company 35 days to pay.

Assumptions

It may be assumed that each month is of 30 days duration. The sales for the 4th quarter are to be taken at their original amounts i.e. 63,000 units at a sales price of €95.00 each.

Required

(a) Prepare a cash flow budget showing the net cash flow for the 2nd, 3rd and 4th quarters and the total of all three quarters combined. Additionally, each of the quarters should show the opening cash balance and the closing cash balance.

A suggested layout is set out below though other layouts are acceptable if suitable.

Item	**Q2**	**Q3**	**Q4**	**Total**
??	??	??	??	??
??	(??)	(??)	(??)	(??)
Net cash flow	??	??	??	??
Opening balance	??	??	??	??
Closing balance	??	??	??	??

[15 marks]

(b) Comment your on findings **[5 marks]**

Total **[20 marks]**

Section B- Compulsory   Answer any two questions

Question 4

Premier Products Ltd. produces four different types of product details set out below

	Super	De Luxe	Standard	Basic
	10,000 u	20,000 u	40,000 u	50,000 u
Sales per unit	€118.00	€95.00	€74.00	€53.00
Direct Materials per unit	€30.00	€25.00	€20.00	€15.00
Direct Labour per unit (i)	€42.00	€35.00	€28.00	€21.00
Variable overheads per unit	€24.00	€20.00	€16.00	€12.00

(i) Direct labour is budgeted at €14.00 per hour.

Fixed costs for the period are budgeted at €800,000

Required

(a) Calculate the total contribution for each product, and the total budgeted net profit for the firm.

[4 marks]

(b) Calculate the company's overall breakeven in units and revenue, and the number of units of each product that will make up that overall break even in units.

[6 marks]

(c) Due to scarcity of the requisite skills there are only 185,000 labour hours available. Prepare a production plan that will maximise profits.

[6 marks]

(d) Joe Deal, an outside supplier, has offered to produce and supply any shortfall in a particular product for (i) a flat fee of €80,000 and (ii) Premier Product's variable cost of making that product plus a negotiated percentage "add on. Compute the maximum amount of percentage "add on" to its variable cost of making the relevant product that the company could agree with Joe Deal and leave it with no profit or loss in subsequent sales to the shops.

[4 marks]

Total [20 marks]

Section B- Compulsory   Answer any two questions

Question 5

Murphy Group Ltd which has branches in all the major cities is considering if it should sell off its Cork division and invest the proceeds in some other more profitable venture.

	Murphy Group Ltd.
Note 1 Sales/Revenue	€10,000,000
Note 2 Cost of sales	(€6,000,000)
Note 3 Gross Profit	€4,000,000
Note 4 Fixed Admin. costs	(€1,500,000)
Net profit	**€ 2,500,000**

Note 1
20% of the group sales relate to the Cork division.

Note 2
Cork division's total production costs include €650,000 fixed production costs.

Note 3
The Cork division's Gross profit percentage margin is 60% of the Group's overall gross profit percentage margin.

Note 4
The Cork Branch's Fixed Admin costs amounted to €400,000, of which €120,000 would not be affected by the sale of the division.

<u>Cork division over the next twelve months</u>
The sales of the Cork branch are estimated to increase by 8% over the next Twelve months, whilst its Gross Profit percentage margin would remain unchanged.

Its fixed costs, both fixed production and fixed admin costs, would increase by 4%

<u>Proceeds from the sale of the Cork division</u>
The proceeds from the sale of the Cork division would be invested immediately in German Bonds. With interest this investment would accumulate to a total sum of €250,000 in twelve months time.

<u>Other divisions of the Group</u>
If the Cork division is sold then other divisions of the group would lose a combined total contribution of €30,000.

Question 5- requirements

(a) Taking account of the projected performance of the Cork division over the next twelve months, show with computations whether the Cork division should be sold immediately. Should the sum received from its sale be invested to realise €250,000 in twelve months time?.

[12 marks]

(b) Discuss other factors that should be taken into account.

[4 marks]

(c) By what percentage would the <u>existing</u> sales of the Cork division have to grow for it to make no difference whether it was sold immediately or not? Assume all other factors in relation (a) remain unchanged

<u>[4 marks</u>]

Total **<u>[20 marks]</u>**

Question 6

(a) The setting of transfer pricing between divisions can lead to either dysfunctional decision making in the absence of guidelines from head office, or demotivation of a divisional head delegated to manage those divisions.

(i) Outline four purposes of delegation. [**4 marks]**

(ii) Explain what is meant by the term dysfunctional decision making**.**
[4 marks]

(iii) Comment on how demotivation of a divisional head can occur.
[4 marks]

(iv) Outline the disadvantages of a transfer price using total actual cost plus margin for profit
[4 marks]

(v) Excluding the method in (iv) above outline four other methods of computing a transfer price.
[4 marks]

Total [20 marks]

END OF EXAMINATION