



Institute of Incorporated Public Accountants

Module 13:

**Advanced Management
Accounting**

Wednesday

29th August 2012

(2pm – 5pm)

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

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Section A All three questions are compulsory

Celtic Technologies Ltd is a new company formed by three ex college graduates. Mary aged 27 years, is a computer science graduate and the technical director. Sean aged 28 years, an engineering graduate is production director. Michael aged 26 years, the C.E.O, has a general degree in languages with some marketing and accounting. The company has sought new ways to integrate existing technologies into new products for existing markets.

Current staff consists of number highly skilled technicians, two sales personnel, stores and admin staff.

It was not felt necessary, up till now, to hire an accountant, as Michael-the CEO- was able to incorporate that role into the CEO function. But with the launch of the company's first product it was felt that the time was appropriate to separate the accounting function from the CEO.

You, a recently recruited IIPA, are attending your first board meeting as the company accountant barely two days after your appointment. Mary opened the meeting by welcoming the newly appointed accountant, and then set out details of the company's first designed product. It is a monitoring device -called "Energy Watcher"- that enables households to not only monitor their use of electricity and water, but to print out reports on a daily basis of the usage and cost of such items by being linked into an ordinary lap top computer.

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Section A All three questions are compulsory

Michael-the CEO- believes that this product will be profitable and generate fortunes for all three shareholders. Their plan is to sell it to hardware shops around the country and who in turn will sell the product to the house owners.

The costs prepared by Michael are as follows;

Cost of manufacturing one "Energy Watcher"

Materials, [box casing, wires, embedded software]	€ 85
Labour 2 hours @ €30 per hour	<u>€ 60</u>
	<u>€145</u>

Estimated Fixed Costs are as follows;

Rent of factory facilities	€ 85,000
Director's Salaries	€180,000
Depreciation of machinery	€ 50,000
Insurance	€ 50,000
Administration and sales staff	<u>€ 90,000</u>
	Total € 455,000

Sean also did a phone around survey of the various hardware shops in Dublin in relation to the new product. From that information he made the following estimates.

<u>Sales price per machine</u>	<u>Sales volume in units</u>
€290.00	2,000 machines
€270.00	4,000 machines
€250.00	6,000 machines
€230.00	8,000 machines

Section A All three questions are compulsory

Sean, the production director, intervened at that stage to say that he noticed a learning curve effect that ceased after the first four machines.

<u>Cumulative Units produced</u>	<u>Cumulative production time (hrs)</u>
1 machine	2.00 hours
2 machines	3.60 hours
4 machines	6.48 hours

Mary, the technical director suggested that regardless of any learning curve and given the uncertainty of predicting sales prices, that the company should go for volume to keep the workers occupied. She suggested that they produce 8,000 machines for a sales price of €230 per machine.

Michael the CEO was not so sure and vaguely wondered if there was not an optimum price. At this point it was decided to adjourn the meeting until a number of issues have been resolved by you the new accountant.

Questions 1, 2, and 3 which are compulsory are on the following pages

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Section A-Compulsory Answer all questions

Question 1

- (a) Ignoring any learning curve affect, calculate the optimal selling price and quantity that will maximise contribution. Show by how much the profit computed under the "Optimal selling price" approach is greater or less than the profit computed under Mary's suggestion that the company sell the maximum of 8,000 machines at €230 each.

[14 marks]

- (b) Comment on the proposal in general with particular reference to amounts presented and any other factors that should have been considered in the presentation.

[6 marks]

Total marks [20 marks]

Question 2

- (a) Compute the percentage rate of learning that applies to production, and calculate the length of time that each machine will take once the learning effect ceases after production of the 4th machine.

[10 marks]

- (b) Taking account of the learning curve effect, re-compute the optimal sales price and quantity that will maximise contribution.

[5 marks]

- (c) Calculate the break even and the margin of safety, taking account of the learning curve effect, and the recomputed optimum selling price.

[5 marks]

Total marks [20 marks]

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Section A-Compulsory Answer all questions

Question 3

- (a) Discuss what is meant by "Target Costing" and outline the four stages explaining briefly what is involved in each stage.
- (b) As the newly appointed accountant, set out and explain any three requirements necessary for the proper implementation of a target costing system in Celtic Technologies.

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SECTION B Answer any two questions

Question 4

Set out below is a summary of first year actual and budgeted results of Kryron Ltd that sells techie toys to the teenage market.

They were prepared by the former company secretary who has retired and gone to live in the USA.

	Actual		Budget	
Sales volume	11,000 u		10,000 u	
Selling price unit	€8.00		€10.00	
Production volume	11,000 u		10,000 u	
Total Direct materials in kilograms	5,000		4,000	
Price per kilogram	€6.00		€8.00	
Total labour hours	7,000		6,000	
Wage rate per hour	€4.20		€3.00	
Fixed Production overhead	€13,000		€12,500	
Market size	30,000 u		25,000 u	

An emergency meeting between the C.E.O., the Production Director, and the Sales Director was held in the C.E.O.'s office.

Did we make a profit or not!" the C.E.O demanded.

"And I don't see the point in giving us the market size. After all we don't control it. But we did sell more than budgeted".-Sales Director

"Well when you consider that production was increased above budget it is only natural that more material and labour hours were required" - Production Director

The requirements to this question are set out on the next page

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SECTION B Answer any two questions

Question 4 -continued-requirements

Required

You the newly appointed accountant are required to produce the following from the information provided

(a)

- | | |
|--|------------|
| (i) The actual Net Profit | [1 mark] |
| (ii) The budgeted Net Profit | [1 mark] |
| (iii) Sales price variance | [2 mark] |
| (iv) Sales volume variance in terms of Standard Contribution | [2 marks] |
| (v) Material price and usage variance | [3 marks] |
| (vi) Labour efficiency and rate variance | [3 marks] |

(b) Analyse the sales volume variance between

- | | |
|-------------------|------------|
| (i) Market Size | [2 mark] |
| (ii) Market Share | [2 mark] |

*For each variance indicate whether it is Favourable "F" or Adverse "A"

[c] Comment on the views given by the Sales Director and the Production Director

[4 marks]
Total **[20 marks]**

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SECTION B Answer any two questions

Question 5

Set out below is the standard cost card of a talking teddy bear, together with the results from the months of May and June

Selling price per unit	€15.00
Direct Labour cost per unit	€5.00
Direct Materials cost per unit	€3.00
Variable Overheads per unit	€2.00
Fixed Production Overhead rate per unit	€1.50
Variable selling costs per unit	€1.00
Annual Budgeted Production units	66,000 u

The actual results were as follows;

	May	June
Total sales units	5,000 u	5,800 u
Total Units produced	5,300 u	5,700 u
Actual Production Fixed Costs	€9,200	€8,000

Required

- (i) Compute the profit statement [TAC]. for both May and June
[7 marks]

- (ii) Marginal/Variable costing [M.C].for both May and June
[7 marks]

- (a) Set out three advantages of the T.A.C. method
and three advantages of the M.C. method [6 marks]

Total [20 marks]

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SECTION B Answer any two questions

Question 6

- (a) The setting of a transfer price between two divisions can lead to dysfunctional decision making.
- (i) Explain what is meant by dysfunctional decision making.
 - (ii) Outline four methods of computing a transfer price.
 - (iii) Explain in the case of two of the method you outlined above how dysfunctional decision making can occur.

(14 marks)

- (b) Explain the concept of life cycle costing and how it is useful in product costing

(6 marks)

(20 marks)

END OF EXAMINATION