Institute of Incorporated Public Accountants

Module 13:
Advanced Management Accounting
Tuesday 30th August 2011
10am – 1pm

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 question 1, 2 and 3 and should be read before attempting the questions.

The global telecommunications market has seen dramatic and dynamic changes with the increase in the number of mobile phone operators, broadband providers, and advances in portable media devices with internet connectivity. This has led to a rapid growth in online internet business activity, whereby consumers of many software products no longer have a need to visit a traditional ‘bricks and mortar’ store to make their purchase. Some ‘e-tailers’ have adopted an approach of only selling their products virtually, thus eliminating the need for traditional packaging and distribution networks. However, due to the speed that technology is advancing many of these producers are faced with short shelf lives for their products. This reduces product life cycle and discourages significant investment in software development. The advent and introduction of cloud computing is an example of the pace of change, and Apple Inc. has announced that it will phase out its very successful I-Pod range.

Ireland is well positioned to take advantage of such developments as one of the largest software exporters in the world. Pixpro Limited is a relatively new software start-up based at the Digital Hub in Dublin. The two promoters, John and Jane, are joint managing directors of the company and have been friends since college. They each have ten years previous programming experience with a large multinational company. They had spoken many times of their desire to build their own company, and eventually availed of an Enterprise Ireland scheme designed for entrepreneurs in the high-tech space. Following a year-long incubation on this scheme, they successfully lobbied for some angel investment funding to further develop their software programme which is now almost ready to launch. The software programme application is aimed globally at mobile phone users. This allows them to manage and enhance the pixel quality of photos on their phones, and it will be sold as a download through a popular virtual store.

They are having difficulty deciding the price to pitch the product at. A specialist consultant has offered the following advice. ‘Sales volume at €10 is expected to be 250,000 units but if the price is halved, sales will rise to 750,000 units.’ The variable cost per unit is very low and consists of a payment of €1.50 per download/unit to the virtual store and €0.30 per unit to the payment handler. The development cost of the application amounted to €200,000, and the company expects to incur marketing costs of €750,000 over the twelve month shelf life of the product funded from operating cash-flow.

Some heated disagreements have taken place recently between John and Jane over the future strategy of the business. John is more conservative by nature and favours an organic approach to growth, developing new products from internally generated cash-flow to avoid diluting the existing shareholdings. Jane on the other hand, favours funding from a venture capital agency and embarking on an aggressive development strategy.

Jane has identified this funding dilemma by pointing out the slow progress of the 'tablet/Ipad' product development which is a far larger project than the app. She has put together some costing to convince her partner of the immediate need for external finance.

Project: Tablet/Ipad	Detail	Total
Software programmers	4 @ €40,000 each	€160,000
Software Architect	1 @ €50,000	€50,000
Systems Analysts	2 @ €35,000	€70,000
Tele-sales and marketing	4 @ €25,000	€100,000
Office related costs	New offices – one year lease	€50,000
Computer costs	11 new high spec. computers	€11,000
General overheads	20% of labour costs	€76,000
		€517,000

John feels that these costs are much higher than competitors are paying in the open market. In addition some of the existing staff will be freed up as once the app is launched, and it will require at most some maintenance fixes and updates. Agreement could not be reached over this funding issue at the last board meeting. Consequently, both managing directors have agreed to temporarily set aside their differences in the short-term in order to concentrate and ensure a successful launch of their photo 'app'.

Section A: Answer all questions

Question 1

(a) Calculate the expected profit / loss in total for Pixpro Limited from the sale of the photo application at both levels indicated by the specialist consultant. Clearly state any assumptions about the treatment of costs.

(6 Marks)

(b) Using the optimal pricing model calculate the optimal price for Pixpro Limited to maximise profits and calculate the profit at this price.

(10 Marks)

(c) Advise what other pricing strategies the company should consider before the launch.

(4 Marks)
(Total 20 Marks)

Question 2

(a) Discuss how the use of a performance measurement tool such as the balanced scorecard helps Pixpro Limited in its growth strategy.

(8 Marks)

(b) Explain how the use of strategic management accounting provides better information for decision making purposes.

(6 Marks)

(c) Explain the concept of life cycle costing and how it is appropriate to this case study.

(6 Marks)
(Total 20 Marks)

Question 3

John has asked you to analyse the costing for the Tablet/Ipad project. You have discovered the following in relation to the information presented by Jane in the scenario.

(i) Only two new software programmers will need to be recruited, as two others will be free to work on this project once the photo app is launched.
(ii) A software architect will need to be recruited. However, s/he will only be required for a six month contract at a total cost of €28,000.
(iii) Two systems analysts are required, and the company currently has one permanent analyst who has a minor share in the company and will continue to be employed regardless. The company also has a further analyst who is about to finish a one year contract and is entitled to a loyalty termination bonus of €10,000. He has indicated that he would be willing to forsake this bonus for another one year contract.
(iv) Tele-sales and marketing staff are currently on contract from an external agency, and do not form part of the main company payroll. These additional staff can be hired from an alternative agency at a 20% discount from the quoted price due to intense competition in this sector at present.
(v) Additional space is currently available from the existing landlord who is willing to provide the first year free of charge as an incentive deal. Capital work of €20,000 would be required in order to make the premises suitable.
(vi) Only newly recruited staff will require new computers at quoted rates.
(vii) General overheads are 50% variable and 50% fixed.

Required:

(a) Calculate the revised cost of the new project using a relevant costing approach and state by how much less this is than Jane's proposal.

(10 Marks)

(b) Calculate, using both cost models, the selling price per unit required if the company expects to sell 100,000 units in the first year and industry sales mark-ups of 500% are applied. Comment on the implications of your results.

(6 Marks)

(c) Prepare a memo to the managing directors how the decision relevant approach differs from traditional accounting models.

(4 Marks)

(20 Marks)

Section B: Answer any two questions

Question 4

Mix Limited uses a standard variable costing system as part of its monthly management accounting package. The company produces a single product that uses three direct materials. These materials are to be used in the standard mix given below although some variation is allowed depending on material availability. Production is budgeted at 10,000 units per month.

Standard Cost Card for 1 unit of Product X:	
Direct material A	4 kgs at €5 per kg
Direct material B	5 kgs at €6 per kg
Direct material C	1 kgs at €4 per kg
Direct labour	2 hours at €15 per hour
Variable production overheads	2 hours at €5 per hour
Fixed production overheads	€50,000

Actual Data:	
Production	11,000 units
Direct material A	45,000 kgs costing €216,000
Direct material B	53,200 kgs costing €335,160
Direct material C	12,500 kgs costing €51,250
Direct labour	22,200 hours costing €328,560
Variable overheads	€111,000
Fixed overheads	€48,500

Required:

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

(16 Marks)

(b) Explain how the management team may use the variance report to improve performance.

(4 Marks)

(Total 20 Marks)

Question 5

As the management accountant for a new company, you are preparing budgets for the coming year. Your company will manufacture and sell four products. Details of the four products are given below.

	A	B	C	D
Sales (units)	20,000	14,000	10,000	6,000
	€ per unit	€ per unit	€ per unit	€ per unit
Selling price	80	100	50	75
Direct materials	20	20	10	10
Direct labour	20	30	10	15
Variable overheads	10	10	10	5

Total annual fixed costs for the firm have been budgeted at €750,000.

Required:

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

(4 Marks)

(b) Calculate the break-even point in revenues for the firm, and the number of units of each product that this will represent.

(6 Marks)

(c) The production manager has indicated that there may be a shortage of direct labour for the coming year. Direct labour costs €10 per hour and there may only be 85,000 hours of labour available for production. Prepare a production plan stating the maximum profit achievable if the shortage of labour occurs.

(6 Marks)

(d) Following on from part (c) an outside supplier has offered to manufacture whatever product there is a shortage of. They will charge 20% more than the existing variable cost of that product plus a fixed fee of €100,000 for machine tooling. State the financial impact of accepting this proposal, and state what other factors should be considered.

(4 Marks)

(Total 20 Marks)

Question 6

(a) The current business environment requires firms to focus on cost management in order to remain competitive. Describe what strategies companies can use to manage and reduce costs.

(10 Marks)

(b) Discuss how the design of management information systems ensures that management gets quality information to manage the business.

(10 Marks)

(Total 20 Marks)

[End of Paper]