



EXAMINATIONS 2010 / 2011 Semester 2

AHOLIADAU 2010 / 2011

FACULTY OF: BUSINESS AND MANAGEMENT

NAME OF COURSE/PROGRAMME:	BA BUSINESS PORTFOLIO
YEAR OR LEVEL:	LEVEL 6
NAME OF MODULE/EXAM PAPER:	Contemporary Issues in Management Accounting
MODULE NO:	M3X9077
DATE OF EXAMINATION:	Friday, 27th May 2011
EXAMINATION TIMES:	
START TIME:	12.00pm
FINISH TIME:	2.00pm
TIME ALLOWED:	2 hours

INSTRUCTIONS TO CANDIDATES:

Choose THREE from FOUR questions.

QUESTION ONE

A builder has purchased 21,000 square metres of land, on which it is planned to build two types of houses, detached and town-houses, within an overall budget of £2.1 million.

A detached costs £35,000 to build and requires 600 square meters of land.

A town house costs £60,000 to build and requires 300 square meters of land.

To comply with local planning regulations, not more than 40 buildings may be constructed on this land, but there must be at least 5 of each type.

From past experience, the builder estimates the contribution on the detached to be about £10,000 and on the town house to be about £6,000. Contribution is to be maximised.

Required:

- a) Write down the objective function. (3 marks)
- b) Write down the constraints of the problem. (5 marks)
- c) Graph these constraints, and shade the feasible region. (10 marks)
- d) Determine the numbers of each type of house to be built to achieve the objective of maximising contribution. You can use either your graph, or simultaneous equations. (7 marks)

(TOTAL 25 MARKS)

QUESTION TWO

Product 'Tom' is a highly perishable commodity, which can be sold on the retail market for £20 per case or for pig food at £1 per case. Tom costs £10 per case from the wholesale market and is only suitable for sale at the retail market for up to 24 hours after purchase.

Orders for 'Tom' must be placed in advance each day.

Amanda, a market stall owner, has kept the following records of sales of the Tom over the past 50 days.

<i>Daily sales</i>	<i>Number of days achieving daily sales</i>
10	15
20	25
30	10

Required:

- (a) Prepare a summary that shows the forecast net margin earned by Amanda for each possible outcome, and advise Amanda on the basis of maximising the expected value. **(8 marks)**
- (b) Amanda is considering employing a market research consultant who will be able to say with certainty, in advance, the level of daily sales. What is the maximum sum Amanda should pay for this information (i.e. what is the value of perfect information)? **(9 marks)**

(The phrase Perfect Information refers to a situation in which the future outcome can be predicted completely accurately. The value of this perfect information, i.e. the amount that a company would be willing to pay for it is calculated as follows:

Value of Perfect information = EV with PI – EV without PI

Imperfect information exists when the future outcome cannot be predicted with complete accuracy, but that the company gains some insight into it. This information can still have a value and is calculated in the same way as for Perfect Information.)

- (c) Use minimax regret to advise Amanda. **(8 marks)**

Steps in minimax regret calculation:

- (1) For each outcome ascertain what would have been the best decision.*
- (2) Compare the values for all other decisions with this best value (£) and therefore calculate the 'regret'.*
- (3) For each decision select the maximum regret.*
- (4) Choose the minimum of these maxima.)*

(TOTAL 25 MARKS)

QUESTION THREE

JB Ltd is a small specialist manufacturer of electronic components and much of its output is used by the makers of aircraft for both civil and military purposes. One of the few aircraft manufacturers has offered a contract to JB Ltd for the supply, over the next 12 months, of 400 identical components.

The data relating to the production of *each component* is as follows:

(1) Material requirements

3 kg material M1 – see note (i) below
2 kg material P2 – see note (ii) below
1 part no. 678 – see note (iii) below

Notes:

- i. Material M1 is in continuous use by the company. 1,000 kg are currently held in stock at a book value of £4.70/kg, but it is known that future purchases will cost £5.50/kg.
- ii. 1,200 kg of material P2 are held in stock. The original cost of this material was £4.30/kg, but, as the material has not been required for the last two years, it has been written down to £1.50/kg scrap value. The only foreseeable alternative use is as a substitute for material P4 (in current use) but this would involve further processing costs of £1.60/kg.
- iii. The current cost of material P4 is £3.60/kg.

It is estimated that the part no. 678 could be bought for £50 each.

(2) Labour requirements

Each component would require three hours of skilled labour and five hours of semi-skilled. An employee possessing the necessary skills can be hired for £8/hour. The semi-skilled workers are at present idle through lack of work and there is an agreement with the union that in such circumstances they be paid their normal rate of £5/hr.

(3) Overhead

JB Ltd absorbs overhead by a machine hour rate, currently £20/hour, of which £7 is for variable overhead and £13 for fixed overhead. If this contract is undertaken, it is estimated that fixed costs will increase for the duration of the contract by £3,200. Spare machine capacity is available and each component would require four machine hours.

A price of £145 per component has been suggested by the large company which makes aircraft.

Required:

- (a) State whether or not the contract should be accepted and **support your conclusion with appropriate figures for presentation to management.**
(15 marks)
- (b) In the context of relevant costing, "opportunity cost" is a key concept, explain what you understand by the term, identifying practical issues which might be encountered when applying this concept in relation to relevant costing.
(10 marks)

(TOTAL 25 MARKS)

QUESTION FOUR

- (a) The transfer pricing system operated by a divisional company has the potential to make a significant contribution towards the achievement of corporate financial objectives.

Required:

Explain the potential benefits of operating a transfer pricing system within a divisionalised company.

(9 marks)

- (b) A company operates two divisions, Able and Baker. Able manufactures two products, X and Y. Product X is sold to external customers for £42 per unit. The only outlet for product Y is Baker.

Baker supplies an external market and can obtain its semi-finished supplies (product Y) from either Able or an external source. Baker currently has the opportunity to purchase product Y from an external supplier for £38 per unit. The capacity of division Able is measured in units of output, irrespective of whether product X, Y or a combination of both are being manufactured. The associated product costs are as follows:

	X	Y
Variable costs per unit	32	35
Fixed overheads per unit	5	5
Total unit costs	37	40

Required:

Using the above information, provide advice on the determination of an appropriate transfer price for the sale of product Y from division Able to division Baker under the following conditions:

- (i) when division Able has spare capacity and limited external demand for product X
- (ii) when division Able is operating at full capacity with unsatisfied external demand for product X.

(8 marks)

- (c) The design of an information system to support transfer pricing decision-making necessitates the inclusion of specific data.

Identify the data that needs to be collected and how you would expect it to be used.

(8 marks)

(TOTAL 25 MARKS)