

**UNIVERSITY OF BOLTON**

**SCHOOL OF BUSINESS AND CREATIVE  
TECHNOLOGIES**

**ACCOUNTANCY PATHWAY BY DISTANCE  
LEARNING**

**HONG KONG - CED (INTAKES 39 & 41)**

**SEMESTER 2 EXAMINATIONS 2010/2011**

**MANAGEMENT ACCOUNTING CONTROL SYSTEMS**

**MODULE NO: ACC3004**

Date: 4<sup>th</sup> June 2011

Time: 3 hours

---

**INSTRUCTIONS TO CANDIDATES:**

There are SIX questions on this paper.

Answer FOUR questions - ANY TWO questions from Section A and ANY TWO questions from Section B.

All questions carry equal marks.

Candidates are advised that the examiners attach importance to legibility of writing and clarity of expression.

This examination carries 70% of the marks for this module.

---

School of Business and Creative Technologies  
 BA Accountancy by Distance Learning  
 Hong Kong – CED (Intakes 39 & 41)  
 Semester 2 Examinations 2010/2011  
 Management Accounting Control Systems  
 Module No. ACC3004

**Section A – answer ANY TWO questions**

**Question A1**

Action Ltd has two divisions, Primary division and Secondary division.

Primary division produces three products, A, B and C. The products are sold to overseas specialist producers as well as to Secondary division at the same prices. Secondary division uses product A to make product X; product B to make product Y; and product C to make Z.

Recently Secondary division has been forced to work below capacity because of difficulties in obtaining sufficient supplies of products A, B and C. Consequently Primary division has been instructed by the board of directors to sell all its products to Secondary division.

The price and cost data is as follows:

**Primary division**

<i>Product</i>	A	B	C
	£	£	£
Transfer price	20	20	30
Variable manufacturing cost per unit	7	12	10
Fixed costs	50,000	100,000	75,000

The Primary division has a maximum monthly capacity of 50,000 units. The processing constraints are such that capacity production can only be maintained by producing 10,000 units of each product. The remaining capacity can be used to produce 20,000 units of any combination of the three products.

**Secondary division**

<i>Product</i>	X	Y	Z
	£	£	£
Final selling price	56	60	60
Variable cost per unit:			
Internal purchases	20	20	30
Processing in Secondary division	10	10	16
Fixed costs	100,000	100,000	200,000

The Secondary division has sufficient capacity to produce up to 20,000 units more than it is now producing, but, because of the lack of products A, B and C, is limiting production. Further the Secondary division is able to sell all the products that it can produce at the final selling prices.

**Question A1 continued over  
 PLEASE TURN THE PAGE...**

School of Business and Creative Technologies  
BA Accountancy by Distance Learning  
Hong Kong – CED (Intakes 39 & 41)  
Semester 2 Examinations 2010/2011  
Management Accounting Control Systems  
Module No. ACC3004

**Question A1 continued**

**Required:**

- (a) From the viewpoint of the Primary division, determine the production mix that would maximise its divisional profits and calculate the total company profit, given that all Primary's production is transferred internally. **(5 marks)**
- (b) From the viewpoint of the Secondary division, determine the products and quantities purchased from the Primary division that would maximise its divisional profits and indicate the effect on total company profits. **(5 marks)**
- (c) Determine the product mix that would maximise the total company profits assuming all transfers were internal. **(5 marks)**
- (d) If there were no transaction costs involved for either division in buying or selling A, B, or C outside the company, what if anything, is lost by the policy of internal transfers only? **(5 marks)**
- (e) Evaluate the effectiveness or otherwise of the transfer pricing system currently used at Action Ltd. **(5 marks)**

**TOTAL 25 MARKS**

**Section A continued over  
PLEASE TURN THE PAGE...**

School of Business and Creative Technologies  
 BA Accountancy by Distance Learning  
 Hong Kong – CED (Intakes 39 & 41)  
 Semester 2 Examinations 2010/2011  
 Management Accounting Control Systems  
 Module No. ACC3004

### Section A continued

#### Question A2

Triumph Ltd, a small engineering company, operates a job order costing system. It has been invited to tender for a comparatively large job that is outside the range of its normal activities and, as there is surplus capacity, the management are keen to quote as low a price as possible.

The estimating department has spent 200 hours on work in connection with the quotation and they have incurred travelling expense of \$600 in connection with the visit to the prospective customer's factory overseas. The following cost estimate has been prepared on the basis of their study:

#### Cost Estimate

<i>Direct Material and Components</i>	\$
2,000 units of X at \$25 per unit	50,000
200 units of Y at \$10 per unit	2,000
Other material & components to be bought in	<u>12,500</u>
	64,500
 <i>Direct Labour</i>	
600 hours of skilled labour at \$10.00 per hour	6,000
1,000 hours of unskilled labour at \$7.00 per hour	7,000
 <i>Overhead</i>	
Department P – 300 hours at \$25 per hour	7,500
Department Q – 500 hours at \$20 per hour	10,000
 <i>Estimating Department</i>	
200 hours at \$5 per hour	1,000
Travelling expenses	600
 <i>Planning Department</i>	
200 hours at \$5 per hour	<u>1,000</u>
	<u>97,600</u>

**Question A2 continued over  
 PLEASE TURN THE PAGE...**

School of Business and Creative Technologies  
 BA Accountancy by Distance Learning  
 Hong Kong – CED (Intakes 39 & 41)  
 Semester 2 Examinations 2010/2011  
 Management Accounting Control Systems  
 Module No. ACC3004

**Question A2 continued**

The following information is also supplied:

*Material X* This is a regular inventory item. The inventory holding is more than sufficient for this job. The material currently held has an average cost of \$25 per unit but the current replacement cost is \$20 per unit.

*Material Y* An inventory of 4,000 units of Y is currently held in the stores. This material is slow moving and the inventory is the residue of a batch bought seven years ago at a cost of \$10 per unit. Y currently costs \$24 per unit but the resale value is only \$18 per unit. However, Y could be used as a substitute for another type of regularly used raw material, which costs \$20 per unit.

*Direct Labour* The workforce is paid on a time basis. The company has adopted a “no redundancy” policy and this means that skilled workers are frequently moved to jobs that only require unskilled labour. The labour included in the cost estimate is for an ideal labour mix for this job. However, if the job is obtained, it is possible that the majority of the work will be done by skilled workers earning \$7.00 per hour.

*Overhead – Department P* Department P is the only department currently working at full capacity. The department is treated as a profit centre and it uses a transfer price of \$25 per hour for charging out its processing time to other departments. The charge is calculated as follows:

	\$
Estimated Variable Cost per machine hour	10
Fixed Department Overhead	8
Departmental Profit	<u>7</u>
	<u>25</u>

Department P’s facilities are frequently hired out to other firms and a charge of \$30 per hour is made. There is a constant demand from outside customers for the use of these facilities.

**Question A2 continued over  
 PLEASE TURN THE PAGE...**

School of Business and Creative Technologies  
 BA Accountancy by Distance Learning  
 Hong Kong – CED (Intakes 39 & 41)  
 Semester 2 Examinations 2010/2011  
 Management Accounting Control Systems  
 Module No. ACC3004

### Question A2 continued

*Overhead – Department Q* Department Q uses a transfer price of \$20 for charging out machine processing time to other departments. This charge is calculated as follows:

	\$
Estimated Variable cost per machine hour	8
Fixed Departmental Overhead	9
Departmental Profit	<u>3</u>
	<u>20</u>

*Estimating Department* The estimating department charges out its time to specific jobs using a rate of \$10 per hour. The average wage rate within the department is \$5 per hour but the higher rate is necessary to cover overheads and the work carried out on unsuccessful quotations.

*Planning Department* This department also uses a charging out rate, which is intended to cover all departmental costs.

### Required:

- (a) You are required to restate the cost estimate by using an opportunity cost approach. Make any assumptions that you think are necessary, and briefly justify each of the figures that you give.  
**(15 marks)**
- (b) Discuss the relevance of the opportunity cost approach to the situation described in the question and consider the problems which are likely to be encountered if it is used in practice.  
**(4 marks)**
- (c) Evaluate the use of opportunity cost in business decision-making where a choice exists amongst alternative courses of action.  
**(6 marks)**

**TOTAL 25 MARKS**

**Section A continued over  
 PLEASE TURN THE PAGE...**

School of Business and Creative Technologies  
BA Accountancy by Distance Learning  
Hong Kong – CED (Intakes 39 & 41)  
Semester 2 Examinations 2010/2011  
Management Accounting Control Systems  
Module No. ACC3004

**Section A continued**

**Question A3**

A Beach Buggy manufacturing company sells the following range of 4 vehicles:

Romeo: the basic model; Demand is about 20,000 per year

Dragon: a basic model with additional modifications; Demand is about 15,000 per year

Omega: a racing model; Demand is about 10,000 per year

Zenith: a high performance model: Demand is about 5,000 per year

The company financial structure is as follows:

Company financed by equity	\$50,000,000	ROI 20% per year after tax of 20%
Loans & other borrowings	\$40,000,000	Interest 10% per year

Costs:

Fixed costs \$23,500,000 per year

Variable Materials 15% of sales

Variable Labour \$500 per vehicle + 5% of sales

**Required:**

(a) Based on the above information calculate the average selling price for a vehicle.

**(5 marks)**

(b) Calculate the selling price for each model where the Dragon is priced at \$100 above the Romeo. The Omega is priced at \$200 above the Romeo, and the Zenith at \$500 above the Romeo.

**(8 marks)**

(c) Skilled labour is in short supply there are only 1,500,000 hours available for the next year. Advise on the most profitable sales mix where one Romeo vehicle requires 30 hours of skilled labour, Dragon 42 hours, Omega 55 hours and Zenith 60 hours.

**(6 marks)**

(d) Discuss the other factors, apart from cost, that influence selling prices.

**(6 marks)**

**TOTAL 25 MARKS**

**PLEASE TURN THE PAGE...**

School of Business and Creative Technologies  
BA Accountancy by Distance Learning  
Hong Kong – CED (Intakes 39 & 41)  
Semester 2 Examinations 2010/2011  
Management Accounting Control Systems  
Module No. ACC3004

**Section B – answer ANY TWO questions**

**QUESTION B4**

TQM aims to change the management culture in an organisation to that of a 'quality culture', focusing on improving customer care, the relationship with suppliers and team-centred management. All business functions in the organisation are involved in continuous quality improvement.

(a) Discuss the above statement and how the traditional approach to quality differs from the TQM approach. **(10 marks)**

(b) Critically evaluate the effect that TQM will have on the role of MACS and the information needs of management. **(15 marks)**

**TOTAL 25 MARKS**

**QUESTION B5**

Discuss what is meant by the term “Target Costing”, and evaluate its use in management accounting and control systems.

**TOTAL 25 MARKS**

**QUESTION B6**

Critically evaluate the use of “Activity Based Costing” as opposed to the traditional approach of overhead absorption. Illustrate your answer with appropriate examples of its use in industry.

**TOTAL 25 MARKS**

**END OF QUESTIONS**