

UNIVERSITY OF BOLTON
INSTITUTE OF MANAGEMENT
BA(HONS) ACCOUNTANCY
SEMESTER ONE EXAMINATIONS 2022/2023
STRATEGIC MANAGEMENT ACCOUNTING
MODULE NO: ACC6005

Date: Wednesday 11 January 2023

Time:

10.00 – 1.00

INSTRUCTIONS TO CANDIDATES:

Answer **FOUR** questions.
Answer any **TWO** questions from
Section A and **TWO** questions from
Section B.

All questions carry equal marks.

This is a closed book examination
and only the use on silent non-
programmable calculators is
permitted.

You **MUST** hand in the question paper
with your answer booklet.

This examination accounts for 70% of
marks for the module.

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

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SECTION A- Answer any TWO questions

Question 1

Rivington University Hospital (RUH) is a private hospital carrying out two types of procedures on patients. Each type of procedure incurs the following direct costs:

	Procedure A	Procedure B
Surgical time and materials	£1,200	£2,640
Anesthesia time and materials	£800	£1,620

RUH currently calculates the overhead cost per procedure by taking the total overhead cost and simply dividing it by the number of procedures, then rounding the cost to the nearest 2 decimal places. Using this method, the total cost is £2,475.85 for Procedure A and £4,735.85 for Procedure B.

Recently, another local hospital has implemented activity-based costing (ABC). This has led the finance director at RUH to consider whether this alternative costing technique would bring any benefits to RUH. They have obtained an analysis of RUH's total overheads for the last year and some additional data, all of which is shown below:

Cost	Cost driver	Costs in \$
Administrative costs	Administrative time per procedure	1,870,160
Nursing costs	Length of patient stay	6,215,616
Catering costs	Number of meals	966,976
General facility costs	Length of patient stay	8,553,600
Total overhead costs		17,606,352

	Procedure A	Procedure B
Number of procedures	14,600	22,400
Administrative time per procedure (hours)	1	1.5
Length of patient stay per procedure (hours)	24	48
Average no. of meals required per patient	1	4

Required:

- Calculate overhead cost per procedure using traditional costing system (5 Marks)**

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Question 1 continued

b. Calculate administration cost per hour using activity-based costing (ABC).

(5 Marks)

c. Calculate nursing cost per hour under activity-based costing (ABC).

(5 Marks)

d. Critically evaluate the use of an ABC system in a not for profit organisation that is keen to demonstrate its VFM against the 3 E's.

(10 Marks)

Total 25 Marks

Question 2

Hussain plc is a company which reprocesses factory waste in order to extract good quality aluminium. Information concerning its operations is as follows:

- (1) Hussain plc places an advance order each year for chemical Z for use in the aluminium extraction process. It will enter into an advance contract for the coming year for chemical Z at one of three levels – high, medium or low, which correspond to the requirements of a high, medium or low level of waste available for reprocessing.
- (2) The level of waste available will not be known when the advance order for chemical Z is entered into. A set of probabilities have been estimated by management as to the likelihood of the quantity of waste being at a high, medium or low level.
- (3) Where the advance order entered into for chemical Z is lower than that required for the level of waste for processing actually received, a discount from the original demand price is allowed by the supplier for the total quantity of chemical Z actually required.
- (4) Where the advance order entered into for chemical Z is in excess of that required to satisfy the actual level of waste for reprocessing, a penalty payment in excess of the original demand price is payable for the total quantity of chemical Z actually required.

Question 2 continues over the page

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Question 2 continued

A summary of the information relating to the above points is as follows:

Level of reprocessing	Waste available 000 kg	Probability	Chemical Z costs per kg		
			Advance order £	Conversion discount £	Conversion premium £
High	50,000	0.30	1.00		
Medium	38,000	0.50	1.20		
Low	30,000	0.20	1.40		

Chemical Z: order conversion:		
Low to medium	0.10	
Medium to high	0.10	
Low to high	0.15	
Medium to low		0.25
High to medium		0.25
High to low		0.60

Aluminium is sold at £0.65 per kg. Variable costs (excluding chemical Z costs) are 70% of sales revenue. Aluminium extracted from the waste is 15% of the waste input. Chemical Z is added to the reprocessing at the rate of 1 kg per 100 kg of waste.

Required:

- a. Prepare a summary which shows the budgeted contribution earned by Hussain PLC for the coming year for each of nine possible outcomes.

(18 marks)

- b. Evaluate the contribution for the coming year which corresponds to the use of (i) maximax, and (ii) maximin decision criteria, and comment on the risk preference of management which is indicated by each.

(7 marks)

(Total: 25 marks)

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Question 3

Burrin Co produces animal feed made by mixing and heating three ingredients: Alpha, Beta and Gamma. The company uses a standard costing system to monitor its costs. The standard material cost for 100 kg of Omega is as follows:

Input	Kg	Cost per kg (£)	Cost per 100 kg of Omega (£)
Alpha	40	2.00	80.00
Beta	60	5.00	300.00
Gamma	20	1.00	20.00
Total	120		400.00

Notes:

- 1 The mixing and heating process is subject to a standard evaporation loss.
- 2 Alpha, Beta and Gamma are agricultural products and their quality and price varies significantly from year to year. Standard prices are set at the average market price over the last five years. Kappa Co has a purchasing manager who is responsible for pricing and supplier contracts.
- 3 The standard mix is set by the finance department. The last time this was done was at the product launch which was five years ago. It has not changed since.

Last month 4,600 kg of Omega was produced, using the following inputs:

Input	Kg	Cost per kg \$	Total cost \$
Alpha	2,200	1.80	3,960
Beta	2,500	6.00	15,000
Gamma	920	1.00	920
Total	5,620		19,880

Question 3 continues over the page

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Question 3 continued

At the end of each month, the production manager receives a standard cost operating statement from Kappa Co's performance manager. The statement contains material price and usage variances, labour rate and efficiency variances, and overhead expenditure and efficiency variances for the previous month. No commentary on the variances is given and the production manager receives no other feedback on the efficiency of the Omega process.

Required:

- (a) Calculate the following variances for the last month:
- (i) the material usage variance for each ingredient and in total (4 marks)
 - (ii) the total material mix variance (4 marks)
 - (iii) the total material yield variance. (3 marks)
- (b) Critique the problems with the current system of calculating and reporting variances for assessing the performance of the production manager. (14 marks)

(Total: 25 marks)

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SECTION B- Answer any TWO questions

Question 4

An overseas country has two airlines, Luxury Co, its national airline, and Cheap Co, a recent entrant into the market.

Luxury Co

Luxury Co was government owned until ten years ago but is now operated as a private company. Its mission is 'to be the airline of choice for long distance travellers'. It charges premium fares and operates routes from the country's capital city to the major airports serving the largest cities around the world. Many of its flights have durations greater than 12 hours. The majority of its passengers are travelling on business and are prepared to pay high prices, however the demand for business travel is very sensitive to economic conditions. Its fleet of aircraft is regarded as 'ageing' by industry analysts.

Cheap Co

Cheap Co was founded by a wealthy entrepreneur who invested their personal fortune in the company's equity. Its mission is 'to be the lowest fare airline on any route we serve'. It offers flights to destinations up to three hours travel from the country's capital city. Its fleet of aircraft are generally less than two years old. Most of its passengers are holiday-makers and the demand for its flights appears to be relatively insensitive to economic conditions.

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Question 4 continued

The following information is available for both companies:

Statement of profit or loss extract for the year end 31 December 2021	Luxury Co	Cheap Co
	£m	£m
Total revenue	11,333	6,654
Operating profit	1,239	404
Finance costs	250	50
Other non-operating costs	130	76
Profit before tax	859	278
Statement of financial position (summarised) for the year end 31 December 2021	Luxury Co	Cheap Co
	£m	£m
Non-current assets	11,972	3,177
Current assets (Note 1)	3,404	885
Total assets	15,376	4,062
Total equity	4,598	1,945
Non-current liabilities	5,078	1,001
Current liabilities	5,700	1,116
Total liabilities and shareholders' equity	15,376	4,062

Note 1: Current assets include inventory of £2.1m and £1.1m respectively.

Other information for year end 31 December 2022	Luxury Co	Cheap Co
Aviation fuel litres consumed (millions)	2,434	1,246
Available seat kilometres (millions)	21,423	14,953
Passenger seat kilometres (millions)	14,201	14,206
Operating gearing expressed as:- (contribution/profit before interest and tax)	950%	820%

Question 4 continues overleaf

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Question 4 continued

Required:

- a. **Analyse the financial performance of the two airlines, including reasons for the differences in the two businesses' performance.**

(18 marks)

Note: Use the headings profitability, liquidity and risk to structure your answer. There are up to six marks available for calculations.

- b. **Briefly explain how Fitzgerald and Moon's building block model could be used to manage the performance of a service business. (7 marks)**

(Total: 25 marks)

Question 5

- (a) Using appropriate Business Models, critically evaluate how Management Accountants might support the senior leadership within private sector and public sector organisations who want to review their current strategic position from both an internal and external perspective.

(12 Marks)

- (b) Critique how accountants might want to use Johnston, Scholes and Whittingham's model when reviewing a significant new project proposal to help support internal decision makers within a business.

(13 Marks)

Total 25 Marks

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Question 6

- (a) Appraise the main reasons for the adoption of a transfer pricing system within a large and complex global organisation.

(12 Marks)

- (b) Critically evaluate the different methods an organisation might adopt when choosing an acceptable Transfer Price and review how dysfunctional operational behaviour can be avoided.

(13 marks)

Total 25 Marks

End of Question Paper

PAST EXAMINATION