



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF SCIENCE AND TECHNOLOGY EDUCATION
DEPARTMENT OF SCIENCE, MATHEMATICS AND TECHNOLOGY EDUCATION
MASTER OF SCIENCE IN ACCOUNTING AND BUSINESS STUDIES
APPLIED MANAGEMENT ACCOUNTING

PST6161

Main Examination Paper

Semester I

November 2024

This examination paper consists of 7 pages

Time Allowed: 3 hours

Total Marks: 100

Special Requirements: None

Examiner's Name: Lungisani Mpofu

External Examiner: Dr B Dlamini

INSTRUCTIONS

1. Answer all questions

MARK ALLOCATION

QUESTION	MARKS
1.	25
2.	25
3.	25
4.	25
TOTAL	100

Question One [25 Marks]

Discuss the strategic roles of a management accountant in modern organizations. In your answer, include the following aspects:

- Financial Planning and Analysis [5]
- Decision Support [5]
- Cost Management [5]
- Performance Management [5]
- Risk Management [5]

Question Two [25 Marks]

Ellen Ltd is an established company that provides seminars on various aspects of current and recently announced changes in employment legislation in the country of Zimbabwe. Ellen has decided to enter into a one-year renewable contract with Nust, which owns large premises that are suitable for holding educational seminars in each of the eight major cities in Zimbabwe. Ellen has had similar dealings with Nust during recent years.

Nust has offered a choice of four different contracts, each of which relates to seminar rooms of differing sizes. These are known as room types A, B, C and D, which are capable of accommodating 100, 200, 300 and 400 delegates respectively.

Ellen will charge an all-inclusive fee of \$80 per delegate at every seminar throughout the year. The cost incurred by Ellen varies according to room type, as shown in the following table:

Room Type	Number of Attendees	Cost per seminar \$
A	100	6 000
B	200	10 800
C	300	14 400
D	400	16 000

Ellen Ltd must decide in advance of the forthcoming year which size of conference room to contract for. It is not possible to contract for a different size conference room in different cities, i.e. only one size of room can be the subject of the contract with Nust.

Due to the rapid growth in interest regarding environmental issues and corporate social responsibility, and the large amount of forthcoming legislative changes, Ellen has decided to hold one seminar in every week of the year in each city. Sometimes a regional government representative will attend and speak at such seminars. On other occasions a national government representative will attend and speak at such seminars. The rest of the time the speakers at seminars are representatives from within Ellen

Ellen has estimated the following frequency regarding seminars to be held during the forthcoming year:

Category of speaker:	%
Ellen representative	20
Regional government representative	50
National government representative	30

Market research has indicated that where a national government representative is in attendance, Ellen can be reasonably assured of selling 400 seminar places and where a regional government representative is in attendance 200 seminar places can be sold. Ellen expects to sell only 100 seminar places when there is no attendance by a government representative

Required

Write a report to the CEO of Ellen that addresses the following:

(a) Advise Ellen on the size of seminar room that should be contracted from Nust, using the criterion of expected value. Your answer should show the expected annual contribution from each decision option. [7]

(b) Determine whether your decision in (a) would change if you were to use the Maximin, Maximax and Minimax regret decision criteria. Provide a justified recommendation for Ellen of the most appropriate measure of decision making under uncertainty. [12]

(c) Discuss the tools that can be used to incorporate risk and uncertainty in decision making. [6]

Question three 25 Marks

James is an innovative company that was born from the demand of customers for high quality, bespoke homes at affordable prices. The company is based in the country of Zimbabwe and is divided into three geographical areas; Bulawayo, Harare and Gwanda. The company's mission is 'to make environmentally sound homes available to the general public in a way that ensures accessibility and quality of the product'.

James is an off-site timber frame manufacturer, producing the shell of the house in their state-of-the-art factory using sustainably sourced, certified timber. The controlled environment assures customers of the best quality available. James prides itself on being a 'one-stop shop' providing the customer with a full design and build and a fixed price quotation which includes all the planning, demolition, ground works, house build and landscaping

James is starting to lose market share and its key goal of 'being the number one bespoke house builder in Zimbabwe' is starting to slip away. The fall in market share is primarily due to the entry of two new competitors into the market. The first of these, Vicky Ltd, provides cutting edge house designs and premium quality builds (but at prices to match). The second new competitor, Vimbai Ltd, undercuts James on price but is not able to provide the same quality, design, build or finish.

James has traditionally used EPS and ROCE to quantify shareholder value. The CEO understands that a number of James' rivals are now using a value-based management (VBM) approach to performance management and they think that it may be a useful development for James given the tough competitive environment. Financial data for James for the last two years is provided below. The CEO has come to you to advise him on the implications of a switch to VBM

Further information is as follows:

	20X1	20X0
	\$M	\$M
Operating Profit	130	110
Interest	20	18
Profit before tax	110	92
Tax at 25%	27.5	23
Profit after tax	82.5	69

1 The allowance for doubtful debts was \$6 million at 1 January 20X0, \$5 million at 31 December 20X0 and \$7 million at 31 December 20X1.

2 Research and development costs of \$10 million were incurred during each of the year's 20X0 and 20X1 on a new project, Project Light which is part completed. These costs were expensed in the income statement.

3 At 1 January 20X0, the company had completed another research project, Project Glass. Total expenditure on this project was \$30 million, none of which had been capitalised in the financial statements. The product developed by Project Glass went on sale on 1 January 20X0. The product has a two-year lifecycle and no further sales of this product are expected after 31 December 20X1.

4 The company incurred non-cash expenses of \$0.3 million in both years.

5 Capital employed was \$670 million at 1 January 20X0 and \$740 million at 1 January 20X1

6 The pre-tax cost of debt was 5% in each year. The estimated cost of equity was 12% in 20X0 and 14% in 20X1. The rate of corporation tax was 25% in both years.

7 The company's capital structure was 60% equity and 40% debt.

8 There was no provision for deferred tax

Required: Write a report to the CEO of James addressing the following:

(a) Perform an assessment of James using economic value added (EVA). Briefly comment on the results of your calculations. [16]

(b) Evaluate the use of value-based management (VBM) approaches to performance management. [9]

Question Four 25 Marks

(a) Discuss the various forecasting techniques used in business and their applications. [10]

(b) ABC manufactures and sells massaging chairs. They are considering a new design of massaging chair to launch into the competitive market in which they operate.

The frame and massage mechanism will be bought in for \$61 per chair and ABC will upholster it in leather and assemble it ready for despatch. Leather costs \$12 per metre and one metres are needed for a complete chair although 25% of all leather is wasted in the upholstery process

The upholstery and assembly process will be subject to a learning effect as the workers get used to the new design. ABC estimates that the first chair will take two hours to prepare but this will be subject to a learning rate (LR) of 95%. The learning improvement will stop once 128 chairs have been made and the time for the 128th chair will be the time for all subsequent chairs. The cost of labour is \$16 per hour. The learning formula is shown on the formula sheet and at the 95% learning rate the value of b is -0.074000581 .

Required

(i) Calculate the budgeted cost of labour if 150 chairs are planned to be produced in the next period. [8]

(c) Sales of product X each quarter for the last three years have been as follows (in thousands of units). Trend values, found by a moving averages method, are shown in brackets.

Year	Q1	Q2	Q3	Q4
1	18	30	20(18.75)	6(19.375)
2	20(20)	33(20.5)	22(21)	8(21.5)
3	22(22.125)	35(22.75)	25	10

Average seasonal variations for quarters 1 to 4 are -0.1 , $+12.4$, $+1.1$ and -13.4 respectively.

Required

(i) Use the trend line and estimates of seasonal variations to forecast sales in each quarter of year 4. [7]

END OF QUESTION PAPER