



Nkumba University

School of Business Administration and Information Technology

END OF AUGUST 2020/FEBRUARY 2021 SEMESTER EXAMINATIONS

(4th October 2021-10th October 2021)

**PAPER
MANAGEMENT ACCOUNTING
LEVEL
BACHELORS**

**TIME
5 HOURS**

STUDY SESSION

DAY/EVENING/WEEKEND/DISTANCE (ALL CAMPUSES)

INSTRUCTIONS:

- 1. Each section has different instructions so read the instructions before you attempt any section.**
- 2. Attempt THREE (3) Questions. All questions carry equal marks.**
- 3. Nkumba University examinations are conducted in accordance with the *Nkumba University Senate General Rules & Regulations 2009*. Breach of the above instructions, irregularity, or any other contravention of the examination regulations**

Question One

Good Dezin (GD) is a landscape gardening business based in Kololo offering tailored design, landscaping and consultancy services to businesses and private customers. The company's accountants have recommended the introduction of activity based costing (ABC) to replace the existing traditional overhead costing method used by GD. The existing costing method allocates overhead costs to clients based on total labour hours recorded. Clients are invoiced for services provided based on cost plus a mark-up of 50%. GD's management accountant has compiled a range of data for the previous accounting period to facilitate the introduction of ABC and this is shown below. Details relating to two clients of the company are also provided.

Cost and activity data:

Garden designer salaries	\$133,200
Gardening staff wages	\$271,200
Administration staff wages	\$45,200
Design costs	\$3,859
Supervision costs	\$3,705
Administration costs	\$12,400
Planning and consultation costs	\$2,844
Garden designer labour hours	1,480
Gardening staff labour hours	4,800
Administration staff hours	1,600
Total number of design drafts	85
Total number of site visits	52
Total number of client meetings	90

Details relating to two clients:

	TX Ltd	O'Brien
Number of design drafts	7	3
Garden designer time	8 hours	5 hours
Gardening staff time	64 hours	25 hours
Administration staff time	4 hours	1 hour
Number of client meetings	4	2
Number of site visits	6	2

Required

- a) Calculate the amount to be invoiced by GD to each of the clients noted above using:
 - i. The existing costing method;
 - ii. Activity based costing (ABC). **(18 marks)**

- b) Compare your answers at (a) (i) and (ii) above and comment on your results. **(3 marks)**

- c) Describe TWO advantages and TWO disadvantages of using ABC. **(4 marks)**

[Total: 25 Marks]

Question Two

HW was formed five years ago in Sligo and produces a range of health products and supplements for the Irish and UK markets. The management accountant is busy preparing budgets for the period from January to March 2019 and is currently compiling pertinent information relating to one of the company's newest products: Eyz. Eyz is a refreshing eye spray mist based on two key organic ingredients: mineral water and green tea extract. There is a simple manufacturing process and the product is manufactured in a 250ml size for everyday use. Details relating to this product are shown below.

1. Projected sales for the first quarter of 2019 are as follows:

	January	February	March
Sales in units (250ml bottles)	4,300	4,380	5,020

The selling price of Eyz is \$3,100 per bottle

2. At 1 January 2019, the company expects to have an opening inventory of 980 bottles of Eyz.
3. The costs incurred to produce one 250ml bottle of Eyz are shown in the table below:

	Shs
Materials	
Mineral water (225ml)	180
Green tea extract (25ml)	300
Recycled plastic 250ml bottle	100
Labour (0.06hr @ \$10 per hour)	600
Variable production overhead	<u>400</u>
	<u>1,580</u>

The company has arranged to purchase top quality mineral water at a cost of Shs 800 per litre and green tea extract at a cost of Shs12,000 per litre. These prices have been fixed from 2018-2020.

4. At 1 January 2019, the company expects to have 2,000 litres of mineral water and 1,000 litres of green tea extract in inventory. It also expects to have 1,000 250ml plastic bottles in inventory.
5. Projected closing inventory levels for the finished product and raw materials are as follows:

	End January	End February	End March
Eyz (250ml bottles)	1,000	1,500	2,000
Mineral water (litres)	2,108	3,010	4,108
Green tea extract (litres)	1,000	1,000	2,000
Recycled plastic bottles	1,000	1,500	2,000

Required

- a) For the first three months of 2019:
- (i) Prepare a sales budget (in units and \$). **(2 marks)**
 - (ii) Prepare a production budget in units. **(4 marks)**
 - (iii) Prepare a materials budget (in units and \$) for each material. **(6 marks)**
 - (iv) Prepare a labour cost budget. **(2 marks)**
 - (v) Prepare a variable production overhead cost budget. **(2 marks)**
- b) Prepare a budgeted income statement for the first quarter of 2019 based on your calculations in (i) to (v) above
- c) Briefly explain the reasons why a company should prepare budgets. **(5 marks)**

Question Three

Sceneit, based in Kampala, offers a range of sightseeing tours to tourists in the “summer” season. This year the company has developed two new tours, Magical Newgrange and Nansana Wonders. However, due to budget constraints the company can only afford to offer one of the new tours to tourists. The management accountant has collated the costing details of each of the tours, including a proposed selling price, and these are shown below. In addition, the company’s sales staff has conducted some market research to try to estimate the popularity and demand for each of the tours. This information is also provided below.

<i>Cost information</i>	Magical Newgrange	Nansana Wonders
Insurance cost (per day)	\$12	\$16.40
Entrance price to attractions per person (see Note 1)	\$10	\$16
Refreshments per person (see Note 2)	\$12.50	\$15.80
Kilometres travelled (See Note 3)	130	120
Bus hire costs (see Note 3)	\$50	\$50
Selling price of tour (per person)	\$50	\$56

<i>Market research information</i>	Magical Newgrange	Nansana Wonders
Average (expected) number of persons per tour	48	55

Notes:

- i. The selling price of each tour includes the entrance ticket to the various attractions. For Magical Newgrange, the entrance ticket relates to the heritage centre. For Nansana Wonders the entrance ticket relates to Powerscourt House and Gardens. Sceneit has negotiated a deal (with the Newgrange heritage centre and Powerscourt House and Gardens) whereby if there are 40 or more customers on the tour, the entrance price to the attraction is reduced by \$1.00 per person for all tickets.
- ii. Sceneit has arranged morning coffee and lunch for each person taking the tour. This cost is only payable for customers taking the tour and is included in the selling price of the tour.
- iii. The tour buses are hired from Busy Buses based in Kampala and can accommodate a maximum of 56 customers per tour. The bus hire cost is \$50 per day plus \$0.95 per kilometre travelled.

Required:

- (a) For EACH tour:
 - i. Calculate the breakeven point in sales revenue. **(8 marks)**
 - ii. How many tours must be sold for the company to achieve a profit of \$1,000 per day? **(5 marks)**
 - iii. Calculate the margin of safety in percentages, assuming tour sales achieved are equal to the average (expected) number of tour sales. **(3 marks)**

- (b) Recommend which tour Sceneit should choose for the summer season, giving relevant reasons to support your answer. **(4 marks)**
- (c) Explain the assumptions of Cost-Volume-Profit analysis. **(5 marks)**

Question Four

a) World Com Ltd's management accountant trainee has provided you with the following information.

World com has a cash balance of Shs 5,000,000 at the end of September 20X1.

- (i) The following information is also provided for your consideration.
- (ii) Creditors give one month credit.
- (iii) Salaries are paid in the month in which they accrue.
- (iv) Fixed costs are paid in the following month and include a charge for depreciation of Shs 10,000,000.
- (v) Credit sales are settled as follows:
 - 50% in the month of sale
 - 40% one month after sale
 - 8% two month after sale
 - The balance represents bad debts.

Month	Cash Sales	Credit Sales	Purchases	Salaries	Fixed Overheads
	Shs ('000')	Shs ('000')	Shs ('000')	Shs ('000)	Shs ('000')
August		100,000	100,000	6,900	20,000
September		200,000	120,000	6,500	15,000
October	50,000	300,000	200,000	7,500	20,000
November	30,000	250,000	150,000	7,000	25,000
December	80,000	400,000	200,000	8,000	30,000

Required:

Prepare a cash budget for October, November and December 20X1. **(15 marks)**

b)

- i. Describe the functions/reasons/benefits of Budgeting **(6 marks)**
- ii. Describe the stages in budgeting process **(4 marks)**

Question Five

Tasty Rolex Ltd. is an artisan bakery based in Nansana and specialises in sourdough bread. Currently the company has a small production facility and until recently this was sufficient to supply demand mainly from retailers. However, last month the company and its products were featured on a popular evening television show and as a result demand has grown steadily. The directors of the company are investigating the possibility of moving to a larger premises and hiring more staff but for now want to focus on producing an optimal mix of products to maximise profits. Financial information relating to the company for the year ahead is provided below.

1. The company makes three main types of sourdough bread: 100% Rye; Multigrain and Spelt.
2. Budgeted selling and distribution expenses are estimated to be Shs13,860,000 per quarter and budgeted fixed production overhead is Shs 9,450,000 per month.
3. The company has 9,792 labour hours available for production for the year.
4. Details relating to the three products are shown in the table:

	100% Rye bread	Multigrain bread	Spelt bread
Sales demand for the year (loaves)	27,100	56,600	31,500
Selling price per loaf	\$4.60	\$5.50	\$5.70
Ingredients required per loaf of bread:			
Direct materials:			
- Rye flour @ Shs 600 per Kg	0.5Kg		
- Multigrain flour mix @ Shs 850		0.6 Kg	
Direct labour: @ Shs 1500 per hour	0.05 hour	0.10 hour	0.10 hour
Variable overhead: 100% Direct labour			

Required:

- a) State whether Tasty Rolex Ltd. has sufficient production capacity to satisfy sales demand for the year ahead, providing calculations to support your answer. **(4 marks)**
- b) Compute and show the ranking for the optimal production plan for Tasty Rolex Ltd. for the year, clearly showing total profit expected. **(13 marks)**

- c) Another artisan bakery has offered to supply up to 4,000 loaves, of any of the three types, to Tasty Rolex Ltd. during the year for a fixed price of Shs 5,000 per loaf. Should the company avail of this offer? Give reasons for your answer. **(3 marks)**