MANICALAND STATE UNIVERSITY OF APPLIED SCIENCES

FACULTY OF AGRIBUSINESS MANAGEMENT AND APPLED SOCIAL SCIENCES

DEPARTMENT: APPLIED ACCOUNTING SCIENCES

MODULE: MANAGEMENT AND COST ACCOUNTING

CODE: ACCT 214

SESSIONAL EXAMINATIONS

APRIL 2024

DURATION: 3 HOURS

EXAMINER: MR K. MUNYEPWA

INSTRUCTIONS

1. *Answer **All** questions*
2. *This question paper contains 5 questions*
3. *Each question carries 20 marks*

Additional material(s): *Nonprogrammable calculators*

Question 1 [20 marks]

Greatbulls Construction is a building supplies company that sells products to trade and private customers. Budget data for each of the six months to March are given below:

	Oct **(000)**	**Nov** **(000)**	**Dec** **(000)**	**Jan** **(000)**	**Feb** **(000)**	**Marc** **(000)**
Credit Sales	250	250	250	260	260	280
Cash Sales	60	60	65	75	80	90
Credit Purchases	170	180	180	200	200	200
Other Operating Costs excluding depreciation	90	90	90	122	123	123

80% of the value of credit sales is received in the month after sale,

10% two months after sale

8 % three months after sale.

The balance is written off as a bad debt. 75% of the value of credit purchases is paid in the month after purchase and the remaining 25% is paid two months after purchase. All other operating costs are paid in the month they are incurred. Greatbulls Construction has placed an order for four new fork lift trucks that will cost $25 000 each. The scheduled payment date is in February. The cash balance at 1 January is estimated to be $15 000

Required:

Define the following terms:

i) Budget and budgeting process (2 marks)

ii) Cash budget (3 marks)

iii) Prepare a cash budget for each of the 3 months of January, February and March. (15 marks)

Question 2 [20 marks]

Bholoncha manufactures a single product, called Manake. Budget and standard cost details for next year 2024 include following :

Selling price per unit	$24.00
Variable production cost per unit	$8.60
Fixed production costs	$650 000
Fixed selling and distribution costs	$230 400
Sales commission **5%** of selling price	
Sales	90 000 units

Required:

(i) Calculate the break-even point in units. (5 marks)

(ii) Calculate the percentage by which the budgeted sales can fall before the company begins to make a loss. (8marks)

The marketing manager has suggested that the selling price per unit can be increased to $25.00 if the sales commission is increased to 8 per cent of selling price and a further $10 000 is spent on advertising.

(iii) Calculate the revised break-even point based on the marketing manager’s suggestion. (7 marks)

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Question 3 [20 marks]

The annual overhead costs for the Enterprise Company which has three production centres (two machine centres and one assembly centre) and two service centres (Materials Procurement and General factory support) are as follows:

Indirect wages and supervision	($)	($)
Machine centres: X	1 000 000	
Y	1 000 000	
Assembly	1 500 000	
Materials procurement	1 100 000	
General factory support	1 480 000	**6 080 000**
Indirect materials		
Machine centres: X	500 000	
Y	805 000	
Assembly	105 000	
Materials procurement	0	
General factory support	10 000	**1 420 000**
Lighting and heating	500 000	
Property taxes	1 000 000	
Insurance of machinery	150 000	
Depreciation of machinery	1 500 000	
Insurance of buildings	250 000	
Salaries of works management	800 000	**4 200 000**
		11 700 000

The following information is also available:

	Book value of Machinery ($)	Area occupied (sq. metres)	Number of employees	Direct labour hours	Machine hours
Machine shop: X	8 000 000	10 000	300	1 000 000	2 000 000
Y	5 000 000	5 000	200	1 000 000	1 000 000
Assembly	1 000 000	15 000	300	2 000 000	
Stores	500 000	15 000	100		
Maintenance	500 000	5 000	100		
	15 000 000	50 000	1000		

Details of total materials issues (i.e. direct and indirect materials) to the production centres are as follows:

			$
Machine shop	X	4 000 000	
Machine shop	Y	3 000 000	
Assembly			1 000 000
			8 000 000

Required

a. Prepare an overhead analysis sheet from the information provided above (5marks)
b. Reapportion the overheads from the service cost centres to the production departments using the direct method. (15 marks)

Question 4 [20 marks]

A business based in Harare manufactures one product which sells for $58 per unit. Production and sales data for each of the first three months of 2019 are as follows:

	January	*February*	*March*
Sales in units (actual)	4 800	5 000	7 600
Production in units (actual)	5 400	4 800	8 000

Budgeted cost information for each month:

a. ***Product cost***

Cost	**Quantity**	**Amount**
Direct materials	2 square metres	$4.20 per square metre
Direct labour	2 hours	$10.25 per hour
Variable production overheads	50% of direct labour	

b. ***Actual cost information for each month***:

Fixed production overheads: $12 000.

Fixed selling overheads: $22 500.

Sales commission: 10% of sales value.

There was no opening inventory at 1 January 2021. Fixed production overheads are budgeted at $120 000 per annum and are absorbed into products based on budgeted normal output of 60 000 units per annum.

Required:

a. Prepare a profit statement for the ***first two months*** using absorption costing principles. (6 marks)

b. Prepare a profit statement for the ***first two months*** using variable (marginal) costing principles. (8 marks)

c. Present a reconciliation of the profit or loss figures given in your answer to (a) and (b) together with an explanation of the reason for the difference.

(3marks)

d. The managing director of the company wants to use variable (marginal) costing principles as the basis for both management accounts and the company's financial statements.

Required:

Outline *two* reasons ***against*** this course of action. (3marks)

Question 5 [20 marks]

Tweed Ltd is a company engaged solely in the manufacture of sweaters, which are bought mainly for sporting activities. Present sales are direct to retailers, but in recent years there has been a steady decline in output because of increased foreign competition. In the last trading year, the accounting report indicated that the company produced the lowest profit for ten years. The forecast for next year indicates that the present deterioration in profits is likely to continue. The company considers that a profit of $80 000 should be achieved to provide an adequate return on capital. The managing director has asked that a review be made of the present pricing and marketing policies. The marketing director has completed this review, and passes the proposals on to you for evaluation and recommendation, together with the profit and loss account for year ending 31 December last year.

Tweed Ltd profit and loss account for year ending 31 December

~~Munyepwa Pharmaceuticals was formed three years ago by a group of research scientists to market a new medicine that they had developed. The technology involved in the medicine's manufacture is both complex and expensive. Because of this, the company is faced with a high level of fixed costs. This is of particular concern to Dr Jacha, the company's chief executive. She recently arranged a conference of all management staff to discuss company profitability. Dr Jacha showed the managers how average unit cost fell as production volume increased and explained that this was due to the company's heavy fixed cost base. 'It is clear,' she said, 'that as we produce closer to the plant's maximum capacity of 70 000 packs the average cost per pack falls. Producing and selling as close to that limit as possible must be good for company profitability.' The data she used are reproduced below:~~

~~Production Volume~~	(~~$40~~ **000)**	(~~$50~~ **000)**	(~~$60~~ **000)**	~~70 000~~
Sales Revenue (10 000 Sweaters @10			**1000**	
Factory~~Average~~ Cost of goods sold : Direct Materials ~~per Unit~~	100~~$430~~	~~$388~~	~~$360~~	~~$340~~
Direct Labour	350			
Variable Factory overheads		60		
Fixed Factory Overheads		220	730	
Administrative Overheads			140	
Sales Commission (2% of sales)		20		
Delivery costs (variable per unit sold)		50		
Fixed Costs		40	110	**(980)**
Profit				**20**

The information to be submitted to the managing director includes the following three proposals:

(i) To proceed on the basis of analyses of market research studies which indicate that the demand for the sweaters is such that a 10 per cent reduction in selling price would increase demand by 40 per cent.

(ii) To proceed with an enquiry that the marketing director has had from a mail order company about the possibility of purchasing 50 000 units annually if the selling price is right. The mail order company would transport the sweaters from Tweed Ltd to its own warehouse and no sales commission would be paid on these sales by Tweed Ltd. However, if an acceptable price can be negotiated, Tweed Ltd would be expected to contribute $60 000 per annum towards the cost of producing the mail order catalogue. It would also be necessary for Tweed Ltd to provide special additional packaging at a cost of $0.50 per sweater. The marketing director considers that for the next year sales from existing business would remain unchanged at 100 000 units, based on a selling price of $10 if the mail order contract is undertaken.

(iii) To proceed on the basis of a view by the marketing director that a 10 per cent price reduction, together with a national advertising campaign costing $30 000 may increase sales to the maximum capacity of 160 000 sweaters. Required:

(a) The calculation of break-even sales value based on the accounts for last year.

(b) A financial evaluation of proposal

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(i) and a calculation of the number of units Tweed Ltd would need to sell at $9 each to earn the target profit of $80 000.

(c) A calculation of the minimum prices that would have to be quoted to the mail order company, first, to ensure that Tweed Ltd would, at least, break even on the mail order contract, second, to ensure that the same overall profit is earned as proposal

(i) and, third, to ensure that the overall target profit is earned.

(d) A financial evaluation of proposal (iii)

~~Current Sales volume 65 000~~

~~Selling Price per pack $420~~

~~You are a member of Munyepwa Pharmaceutical's management accounting team and shortly after the conference you are called to a meeting with Mr Malongo, the company's marketing director. He is interested in knowing how profitability changes with production.~~

~~**Required:**~~

~~(a) **Calculate:**~~

- ~~i) the amount of Munyepwa Pharmaceuticals' fixed costs; (2 marks)~~
- ~~ii) the profit of the company at its current sales volume of 65 000 packs; (2 marks)~~
- ~~iii) the break-even point in units; (3 marks)~~
- ~~iv) the margin of safety expressed as a percentage. (3marks)~~

~~Mr Malongo now tells you of a discussion he has recently had with Dr Jacha. Dr Jacha had once more emphasized the need to produce as close as possible to the maximum capacity of 70 000 packs. Mr Malongo has the possibility of obtaining an export order for an extra 5000 packs but, because the competition is strong, the selling price would only be $330. Dr Jacha has suggested that this order should be rejected as it is below cost and so will reduce company profitability. However, she would be prepared, on this occasion, to sell the packs on a cost basis for $340 each, provided the order was increased to 15 000 packs.~~

~~(b)Write a memo to Mr Malongo. ***Your memo should***:~~

- ~~i) calculate the change in profits from accepting the order for 5000 packs at $330; (3marks)~~
- ~~ii) calculate the change in profits from accepting an order for 15 000 packs at $340; (2marks)~~
- ~~iii) briefly explain and justify which proposal, if either, should be accepted; (3marks)~~

~~**iv)** identify two non-financial factors that should be taken into account before making a final decision. (2 marks)~~

END OF EXAMINATION