

TECHNICAL UNIVERSITY OF MOMBASA

School of business

DEPARTMENT OF ACCOUNTING AND FINANCE

UNIVERSITY EXAMINATIONS FOR DEGREE IN BACHELOR OF /
COMMERCE/ BUSINESS ADMINISTRATION.

BAC 4203; MANAGEMENT ACCOUNTING

END OF SEMESTER EXAMINATIONS

SERIES; MAY 2015

TIME; 2 HOURS

Instructions;

Answer question one and any other two questions.

Question One

- (a) TIM produces and sells two products, the MK and the KL. The organization expects to sell 1 MK for every 2 KLs. The MK has a C/S ratio of 20% whereas the KL has a C/S ratio of 40%. Budgeted monthly fixed costs are sh. 288,000. The products sell for sh. 40 and 50 respectively.

Required

- (i) What is the budgeted breakeven sales revenues (10 marks).
- (ii) Assume that TIM Ltd desired a net profit after tax of sh. 470,400 and the company's tax rate is 30%, how many units of each product to produce and sell in order to achieve the desired net profit. (10 marks)
- (b) Sausage makers makes two products, the Mash and the Sauce. Unit variable costs are as follows.

	Mash	Sauce
	Sh.	Sh.
Direct materials(sh. 10 per kg)	10	30
Direct labour (sh.30 per hour)	60	30
Overheads	<u>30</u>	<u>30</u>
	<u>100</u>	<u>90</u>

Variable overheads are 1/3 of total overheads. The sales price per unit is sh.140 per Mash and sh.110 per Sauce. During July the available direct labour is limited to 7,000 hours. Sales demand in July is expected to be as follows.

Mash	4,000 units
Sauce	5,000 units

Required

Determine the production budget that will maximise profit, and the maximum profit if fixed costs per month are sh.200,000 and that there is no opening inventory of finished goods or work in progress (10 marks)

Question two.

Probook water Ltd manufactures garden products and leisure products. The budget for June estimated that 150 kilos of steel at sh.16.00 per kilo would be used and 240 metres of timber at sh.30.00 per metre. The actual usage was 160 kilos of steel purchased at a total of sh.2,528 and 260 metres of timber purchased at sh.32.00 per metre. The budget also anticipated that 850 hours of semi-skilled labour at sh.80.00 per hour would be required, together with 1,600 hours of unskilled labour at sh.50.00 per unit. The company used 860 hours of semi-skilled labour and paid sh.64,500 and 1,500 hours of unskilled labour at sh. 78,000.

REQUIRED

- (a) (i) Standard and the actual cost of production for the month of June. [6 marks]

- (ii) A calculation of the following:

Material price variances;

Material usage variances;

Labour rate variances;

Labour efficiency variances. (8 marks)

(b) Comment on the material price variances and the labour cost variances. [6 marks]

Question Three.

(a) Kojos Ltd. produces, on average, 15,000 units of product Alay per month despite having 20% more capacity. Costs per unit of product Alay are as follows:

	Sh.
Direct Material	8.00
Direct Labor	5.00
Variable Factory Overhead	2.00
Variable Selling Expense	0.50
Fixed Factory Overhead	3.00
Fixed Office Expense	2.00
	20.50

The company received a special order of 3,500 units of product Alay at sh.17.00 per unit from a new customer. Should the company accept the special order, (10 marks)

(b)The total profits for two levels of sales at Makuti hotel were as follows:

Sales	ksh.	100,000	180,000
Net profit	ksh.	52,500	107,500

The variable production cost per unit and the total fixed production cost both remain constant in the range of activity shown.

Required;

Calculate the break-even point in shillings for Makuti hotel. (10 marks)

Question Four.

(a) You are given the following data for output at a factory and costs of production over the past five months.

Month	Output units	Costs sh.
	X	y
1	20	80

2	16	72
3	24	90
4	22	85
5	18	76

Required

(i) Calculate an equation to determine the expected cost level for any given output volume. (5 marks)

(ii) Prepare a budget for total costs if output is 5,000 units (5 marks)

b). A Bakery with a capacity 100 birthday cakes is considering whether to bake birthday cakes or purchase them from the market. The cakes can be outsourced at sh. 900 @. The total cost of baking a birthday cake is as follows:

Direct material	sh.	350
Direct labour	sh.	250
Indirect fixed costs	sh.	<u>100</u>
Total		<u>700</u>

In addition, baking the cakes would mean that sales of loaves of bread would be reduced by 1000 loaves. Each loaf has a marginal cost of sh.160 per unit and sells at sh. 200.

Required:

Advice the company on whether to manufacture or buy. Show all your makings. (10 marks)

Solution.

Question Five.

(a). The following information relates to cost estimates for the production of item Zed.

	Sh..
Direct materials	100,000
Direct wages	80,000
Direct expenses	35,000
Indirect factory costs	55,000
Administration costs	30,000
Distribution costs	30,000
Selling expenses	25,000

Additional information;

During the year ended 30th November 2007, prime cost will rise by 15% indirect factory costs will increase by 10% administration costs, distribution costs and selling expenses will each increase by 5%. The company expects to make 20% profit on the selling price of product Zed.

Required:

Prepare a statement to show the selling price of product zed for the year ended 30th November 2007. (10 marks)

(b) Team Kubwa is planning a music event in TUM hall. TUM has given Team Kubwa two options on hiring the hall i.e Pay TUM sh. 13 for each spectator and sh. 4,000 for hiring the venue or pay sh. 2,000 to hire the venue for the night and sh.23 per spectator.

Team Kubwa will also pay sh. 2,000 to the band that will perform that night and sh. 2 per spectator to the firm that provides the security for the event. The spectators will pay a ticket price of sh.75 to attend the event. Team Kubwa expects 250 spectators.

Required;

Advice team Kubwa on which hiring option to take. (10 marks)

MARKING SCHEME.

Question one.

(a) (i)

Products	MK	ML
Selling price per unit	40.00	50.00
Less variable costs (80% and 60%)	<u>32.00</u>	<u>30.00</u>
Contribution	8.00	20.00
Contribution per batch (1x8) + (2x20)	= 48.00	
Contribution per unit = 48/3	= 16.00	
BEP = 288,000/16	= 18,000	
MK = 18,000 x 1/3	= 6,000 units	
KL = 18,000 x 2/3	= 12,000 units.	

(ii) Contribution per unit = sh. 16.00

Net profit before tax = 470,400/.7 = 672,000

Units to be produced = 672,000/16 = 42,000 + 18,000

Units of MK = 60,000 x 1/3 = 20,000

Units of KL = 60,000 x 2/3 = 40,000

(b)

Products	Mash Sh.	Sauce Sh.
Selling Price	140	110
Direct materials (sh. 10 per kg)	10	30
Direct labour (sh.30 per hour)	60	30
Overheads	10 <u>80</u>	10 <u>70</u>
Contribution	60	40
Contribution per labour hour	60/2 = 30	40/1 = 40

Ranking no. of hours 8,000

Sauce 5,000 x 1 = 5,000

Balance 3,000

Mash 1,500 x 2 = 3,000

Net profit

Contribution

Sauce 5,000 x 40 = 200,000

Mash 1,500 x 60 = 900,000

= 1,100,000

Less fixed cost 200,000

Net profit **900,000**

Question Two.

(a) (i) Standard cost of Production

Material Steel	150 x 160	=	24,000	
Timber	240 x 30	=	7,200	
Labour smi-skilled	850 x 80	=	68,000	
Unskilled	1600 x 50	=	<u>80,000</u>	
			<u>179,200</u>	(2)

Actual cost of Production

Material Steel	160 x 158	=	25,280	
Timber	260 x 32	=	8,320	
Labour smi-skilled	860 x 75	=	64,500	
Unskilled	1500 x 52	=	<u>78,000</u>	
			<u>175,100</u>	(2) [4]

(ii) Material Price variance steel	$(160 - 158) \times 160$	=	320 F	(1)
Timber	$(30 - 32) \times 260$	=	520 A	(1)
Material Usage; steel	$(150 - 160) \times 160$	=	1,600 A	(1)
timber	$(240 - 260) \times 30$	=	600 A	(1)
Labour Rate semi-skilled	$(80 - 75) \times 860$	=	4,300 F	(1)
unskilled	$(50 - 52) \times 1500$	=	3,000 A	(1)
Labour Efficiency Semi-skilled	$(850 - 860) \times 80$	=	800 A	(1)
Unskilled	$(1600 - 1500) \times 50$	=	5000 F	(1) [8]

(b) Material price variance is favourable for steel and adverse for timber.

Higher or lower price; possibly use of substitute material.

Lower price could have been obtained by buying in bulk and gaining quantity discount.

Higher price due to inflation or shortage of material.

Labour efficiency variance is adverse for semi-skilled and favourable for unskilled- more or less hours used than planned due using a different grade of labour.

Poor workshop supervision resulting in more hours than planned. Good working practices increase efficiency of each worker.

(c) A standard must be attainable for those who are asked to achieve the standard.

A standard should be based upon normal efficient working conditions any variance calculated could then be used for management information purposes.

Should not use ideal standards, an ideal standard may not be achieved by workers and could cause a lack of motivation in the work force.

Consultation should take place between workforce and management on the setting of standards.

The involvement of the workforce may lead to an increase in motivation and a sense of ownership.

If management imposes standards without consultation could lead to a decrease in motivation.

Question Three.

(a) Viability

Revenue $3,500 \times 17 = 59,500$

Less variable cost $= 3,500 \times 15.5 = 54,250$

Contribution $5,250$

Capacity

Full capacity $15,000 / .8 = 18,750$ units

Less current production level $15,000$ units

Spare capacity $3,750$ units

Advice Accept this order because it is viable and there is enough capacity.

(b) Sales total cost.

Period 2 $180,000$ $62,500$

Period 1 $100,000$ $47,500$

$80,000$ $15,000$

Variable cost margin $= 15,000 / 80,000 = 0.1875$

Contribution margin $= 1 - 0.1875 = 0.8125$

Fixed cost $= 62,500 - (180,000 \times 0.1875)$

Fixed cost $= 62,500 - 33,750 = 28,750$

$$\text{BEP} = 28,750 / 0.8125 = 35,385.$$

Question Four.

(a) Evaluation of the order.

Offer price	100.00
Relevant costs	
Direct materials	30.00
Direct labour	25.00
Variable manufacturing overheads	12.50
Variable selling and administrative expense	17.50
Total	<u>85.00</u>
Contribution	<u>15.00</u> per unit.

Advice accept this offer since the variable(relevant) costs are covered by the offer price.

(b)

	Make	Buy
VC per birthday cake 600 x 100 =	60,000	Total cost 900 x 100 = 90,000
Opportunity cost 40 x 1000 =	40,000	
Total cost	<u>100,000</u>	

(a) Advice; Outsource because it is cheaper

Question Five.

(a)	Sh.
Direct materials	115,000
Direct wages	92,000
Direct expenses	40,250
Indirect factory costs	60,500
Administration costs	30,000

Distribution costs	31,500
Selling expenses	26,250
<u>Profit loading</u>	<u>98,857</u>
Selling price	<u>494,375</u>

(b)

(Option 1

Sales 75 x 250 = 18,750

Less costs

Variable 13 x 250 = 3,250

Security 2 x 250 = 500 = 3,750

Contribution 15,000

Less fixed costs

Fixed 4,000

Band 2,000 = 6,000

Net income 9,000

Option II

Sales 75 x 250 = 18,750

Less costs

Variable 23 x 250 = 5,750

Security 2 x 250 = 500 = 6,250

Contribution 12,500