KASNEB
CPA
MANAGEMENT ACCOUNT

30TH NOV 2011

QUESTION ONE

a) XYZ Limited is in the process of introducing a new product branded "Zed". The market research department has provided the following estimates of sales demand for each possible unit selling price of Sh. 180, Sh. 190 and Sh. 200. These estimates are based on pessimistic, most likely and optimistic forecasts. Subjective probabilities have also been attached to the estimates:

Selling price per unit	**Sh. 180**		**Sh. 190**		**Sh. 200**	
	Units Sold	**Probability**	**Units Sold**	**Probability**	**Units Sold**	**Probability**
Pessimistic	65,000	0.3	55,000	0.1	25,000	0.4
Most Likey	75,000	0.5	65,000	0.7	55,000	0.5
Optimistic	85,000	0.2	85,000	0.2	65,000	0.1

Additional information:

1. The company intends to hire machinery to manufacture the product at a cost of Sh. 2 million per annum, but if the annual production is in excess of 55,000 units, then additional machinery would have to be hired at a cost of Sh. 0.8 million per annum.
2. The variable cost per unit is expected to be either Sh. 50 or Sh. 60 depending on the outcome of negotiations with suppliers of raw materials.
3. The probabilities for the variable costs per unit are 0.6 and 0.4 for variable cost per unit of Sh. 50 and Sh. 60 respectively.
4. The company's marketing director has signed an advertising contract with a local advertising agency to advertise the product for Sh. 350,000 per annum.

Required:

Using probability tree simulation, advice the company on the selling price and annual production combination to adopt based on the expected value of each outcome. (14 marks)

b) Analyze three applications of the learning curve. (6 marks)

(Total: 20 marks)

QUESTION TWO

a) Outline three benefits that would accrue to a decentralized organization operating a transfer pricing system. (3 marks)

b) Smart Designs Ltd, a designer clothes manufacturing company based in Kenya operates a wholesale clothes shop in Zambia.

The marginal tax rate in Kenya and in Zambia is 30 per cent and 35 per cent of net income respectively.

Additional information:

1. During the current financial year, the company incurred Sh. 2 million on production cost. Operational costs in Zambia amounted to an equivalent of Sh. 6 million.

2. Sales revenue from the wholesale shop in Zambia were Sh. Million. Similar clothes imported by independent companies in Zambia would cost an equivalent of Sh. 3 million.
3. The company's management accountant advised against that because of special controls in Kenya and the unique approach used by the company when manufacturing the design clothes, the appropriate transfer price is Sh. 10 million.
4. The company has the alternative of adopting either Sh. 3 million or Sh. 10 million as the transfer price of the design clothes.

Required:

i. Determine the company's total tax liability in both countries under the two alternatives. (6 marks)

ii. Advise the company on the transfer price to adopt. (1 mark)

c) Karibu Limited produces a single product branded "Y". The company operates three manufacturing divisions namely A, **B** and C.

The income statement for the year ended 30 September 2011 was as follows:

	A	**B**	**C**	**Total**
	Sh.'000'	**Sh.'000'**	**Sh.'000'**	**Sh.'000'**
Sales	10,000	40,000	20,000	70,000
Direct materials	2,000	8,000	4,000	14,000
Direct wages	2,000	9,000	3,500	14,500
Production overheads: Variable	500	3,000	1,500	5,000
Fixed	2,000	6,000	3,000	11,000
Selling overneads: Variable	250	2,000	1,000	3,250
Fixed	750	2,500	1,500	4,750
Administrative overheads (all fixed)	1,000	4,500	2,000	7,500
Head office costs (allocated)	500	2,000	1,000	3,500
Profit	1.000	3.000	2.500	6.500

Additional information:

1. The management of the company are considering the renewal of Sh. 500,000 per annum and continue production in all divisions.
2. The following options are available to the management:

Option A: Renew the lease at an additional amount of Sh. 500,000 per annum and continue production in all divisions.

Option **B:** Accept an offer from Hifadhi Limited, a competitor company to take over manufacture and sales in Division A. Hifadhi Limited would pay a commission of 0.3% on selling price for each unit sold to Karibu Limited.

Option C: Transfer the current production of Division A to Division **B.** This would lead to an additional annual supervision cost of Sh. 2,500,000 and transport cost per unit of Sh. 150 on Division **B.**

Option D: Transfer the current production of Division A to Division C. This would lead to an additional annual supervision cost of Sh. 2,000,000 and transport cost per unit of Sh. 200 on Division C.

3. The management estimates that the cost of closing down a division would be offset by the surplus obtained from the sale plant, machinery and stock in the division.
4. Fixed production overheads will be saved in case the management adopts closure of Division of A.
5. The selling price of product Y is Sh. 2,000 per unit.

Required:

Advise the management of Karibu Limited on the option to adopt in order to maximize profits. (10 marks)

(Total: 20 marks)

QUESTION THREE

The following was the budgeted income statement of product "X" for the month of October 2011:

	Sh.'000'	Sh.'000'	Sh.'000'
Sales (10,000 units)			750
Direct materials:			
Materials A (5,000 kilogrammes)	22.5		
Materials **B (** 5,000 kilogrammes)	52.5		
		75	
Direct labour:			
Skilled (4,500 hours)	202.5		
Semi-skilled (2,600 hours)	97.5		
		300	
Overhead costs			
Fixed	150		
Variable (Sh. 7.5)	75		
		225	
		600	
Opening stock (1,000 units @ Sh. 60)		60	
		660	
Closing stock (1,000 units @ Sh. 60)		60	
Cost of goods			600
Budgeted profit			150

During the month of October 2011, the actual production and sales were as follows:

	Sh.'000'	Sh.'000'	Sh.'000'
Sales: 7,000 units		525	750
4,000 units		285	
		810	

	Production costs		
	Direct materials:		
Materials A (8,000 kilogrammes)	24		
Materials B (5,000 kilogrammes)	60	84	
Direct labour:			
Skilled (6,000 hours)	265.5		
Semi-skilled (3,150 hours)	122.85		
		388.35	
Overhead costs			
Fixed		135.15	
Variable (Sh. 9.375)		112.5	
		720	
Opening stock (1,000 units @ Sh. 60)		60	
		780	
Closing stock (2,000 units @ Sh. 60)		120	660
Actual profit			150

Additional information:

1. The budgeted production was 10,000 units whereas actual production amounted to 12,000 units.
2. Stock is valued at standard cost of Sh. 60.

Required:

A statement reconciling the actual performance to the budgeted performance and showing the various variances. **(20 marks)**

QUESTION FOUR

a) Bondeni Animal Feeds Ltd buys and sells animal feeds on retail basis.
   The company has set a reorder level of 15 units and the order quantity of 20 units.
   The holding cost has been computed to be Sh. 10 per unit per week and the cost of placing an order is Sh. 25.
   The stock out cost has been dertermined at Sh. 100 per unit.
   The inventory at the beginning of the first week was 20 units.

Additional information:

The demand and lead time have been explained by the following probability distribution schedules respectively:

Demand (units) Number	Probability	Cumulative Probability	Distribution of random numbers
0	0.02	0.02	00-01

1	0.08	0.1	02-Sep
2	0.22	0.32	Oct-31
3	0.34	0.66	32-65
4	0.18	0.84	66-83
5	0.09	0.93	84-92
6	0.07	1	93-99

Demand (units) Number	**Probability**	**Cumulative Probability**	**Distribution of random numbers**
1	0.23	0.23	00-22
2	0.45	0.68	23-67
3	0.17	0.85	68-84
4	0.09	0.94	85-93
5	0.06	1	94-99

Required:

Simulate the problem for 14 weeks and determine the average weekly cost using the following random numbers:

68,52,50,90,59,08,72,44,95,85,81,93,28,89,15,60,03 (10 marks)

b) **DRP** Ltd is a large scale service organization in the telecommunications industry. The company's management accountant has recently attended a conference on activity-based costing (ABC) systems. He intends to introduce ABC systems to replace the traditional costing systems currently in use at the company.

Required:

i. Analyze three features of large scale service organizations that could pose challenges to the application of ABC systems in **DRP** Ltd. (3 marks)

ii. Argue the case for adoption of ABC systems by **DRP** Ltd. (3 marks)

iii. Justify the preference for usage of practical capacity to budgeted activity level as the denominator level for estimating cost driver rates. (4 marks)

(Total: 20 marks)

QUESTION FIVE

a) Young Electronics Company (YEC) developed a high-speed, low cost copying machine. Bulk copying caused a breakdown in certain components of the copiers. The copiers were warranted for two years regardless of the amount of usage. Consequently, the company experienced high costs of replacing the damaged components. Antony Kakwa the management accountant of the company has been requested by the board of directors to prepare a report on the situation for the next board meeting.

It is clear that the increased maintenance would significantly affect the company's profitability. Susan Birr, the production manager was concerned about the impact of the report on the board's view of management. Though she agrees with the analysis, she thinks the management would appear in bad-light and the product may be discontinued. She believes that the Engineering

Department would address the problem during production to enable bulk copying. Susan Birr proposed to Antony Kakwa that he deletes the part of the report dealing with component failure and orally informs the board about a potentially significant negative impact on the company's earnings.

Required:

i. Support the view that Susan Birr's proposal is unethical. (6 marks)

ii. Propose how Antony Kakwa should address the matter. (4 marks)

b) Explain three benefits that would accrue to an organization upon adoption of the Economic Value Added (EVA) approach. (6 marks)

c) Summarize four means of increasing the performance of EVA approach in an organization. (4 marks)

(Total: 20 marks)