KASNEB

CPA PART III SECTION 5

ADVANCED MANAGEMENT ACCOUNTING

WEDNESDAY: 24 May 2017. **Time Allowed: 3 hours.**

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

(a) Furahia Ltd., an events management company is considering whether to advertise an outdoor concert. The sale of tickets is dependent on the weather, as indicated below:

- If the weather is poor, it is expected that 5,000 tickets will be sold without advertising. There is a 70% chance that the weather will be poor.
- If the weather is good, it is expected that 10,000 tickets will be sold without advertising. There is a 30% chance that the weather will be good.
- If the concert is advertised and the weather is poor, there is a 60% chance that advertising will stimulate further demand and ticket sales will increase to 7,000.
- If the concert is advertised and the weather is good, there is a 25% chance that advertising will stimulate further demand and ticket sales will increase to 13,000.

The profit expected before deducting the cost of advertising at different levels of ticket sales are as follows:

Number of tickets sold	Profit Sh. "000"
5,000	(20,000)
6,000	(5,000)
7,000	35,000
8,000	55,000
9,000	70,000
10,000	90,000
11,000	115,000
12,000	130,000
13,000	150,000

The cost of advertising the concert is expected to be Sh.15,000,000.

Required:
Using a decision tree, advise the management of Furahia Ltd. on whether the outdoor concert should be advertised.
(12 marks)

(b) Samoa Ltd. has to decide which of the three new mutually exclusive products; X, Y and Z, to launch. The company's directors believe that the demand for the three products will vary depending on competitor's reaction. There is a 30% chance that the competitor's reaction will be strong, a 20% chance that the competitor's reaction will be normal and a 50% chance that the competitor's reaction will be weak. The company uses expected value to make this type of decision.

The net present values of the possible outcomes are as follows:

Competitor's reaction	Product X Sh. "000"	Product Y Sh. "000"	Product Z Sh. "000"
Strong	400	800	1,200
Normal	600	1,200	800
Weak	1,000	1,600	1,000

A market researcher believes that he could provide perfect information on potential competitor's reaction in the above market.

Required:
Advise the management of Samoa Ltd. on the maximum amount that should be paid for the information from the market researcher.
(8 marks)
(Total: 20 marks)

QUESTION TWO

(a) Evaluate three benefits that might accrue to an organisation that adopts Environmental Management Accounting (EMA). (6 marks)

(b) Jambo Ltd. is a multiproduct firm. The company intends to launch a new product branded "ZP" in the coming months.

Production will be in batches of 1,000 units throughout the life of the product. It is expected to achieve a 90% learning curve but the learning would cease after the 64th batch.

Other relevant data of product "ZP" is as follows:

Expected life (production)	256,000 units
	Sh.
Selling price per unit	123
Direct material cost per unit	36
Total direct labour cost (first batch)	52,500
Variable overhead costs per unit	24
Total specific fixed costs	3,875,000

The learning index for a 90% learning curve is -0.152.

Required:

(i) The expected profit to be earned from the product over its lifetime. (8 marks)

(ii) It has now been established that the learning effect will continue for all of the 256 batches that will be produced.

Required:

The "learning curve" required to achieve a lifetime product profit of Sh.10 million, assuming that a constant learning rate applies throughout the product's life. (6 marks)

(Total: 20 marks)

QUESTION THREE

(a) Explain the term "incremental budgeting", citing one of its major limitations as a budgeting technique. (4 marks)

(b) Discuss the three approaches of evaluating performance. (6 marks)

(c) You have been provided with the following operating statement which represents an attempt by a firm to compare the actual performance with the budget for the quarter which has just ended:

	Budget	**Actual**	**Variance**
Number of units sold	640,000	720,000	80,000
	Sh. "000"	**Sh. "000"**	**Sh. "000"**
Sales	1,024	1,071	47
Cost of sales (all variable):			
Materials	168	144	
Labour	240	288	
Overheads	32	36	
Total variable costs	440	468	(28)
Fixed labour cost	100	94	6
Selling and distribution costs:			
Fixed	72	83	(11)
Variable	144	153	(9)
Administrative costs:			
Fixed	184	176	8
Variable	48	54	(6)
	548	560	(12)
Net profit	36	43	7

Required:

(i) Using a flexible budgeting approach, redraft the operating statement so as to provide a more realistic indication of the variances. (8 marks)

(ii) Explain why the original operating statement was of little use to the management. (2 marks)

(Total: 20 marks)

QUESTION FOUR

(a) A pizza vendor buys pieces of pizza every morning at Sh.450 each by placing an order one day in advance and sells them at Sh.700 each.

Unsold pizza could be sold the following day at Sh.200 per piece and thereafter if still unsold the pizza is treated as waste.

The pattern of demand of the pizza is given below:

Fresh pizza:

Daily sale	100	101	102	103	104	105	106	107	108	109	110
Probability	0.01	0.03	0.04	0.07	0.09	0.11	0.15	0.21	0.18	0.09	0.02

One day old pizza:

Daily sale	0	1	2	3
Probability	0.70	0.20	0.08	0.02

Additional information:

1. The vendor adopts the rule that, if there is no stock of pizza at the end of the previous day, an order of 110 pieces is placed, otherwise an order of 100 or 105 pieces is placed whichever is nearest to the actual fresh pizza sale on the previous day.
2. Use the following set of random numbers:

Fresh pizza	37	73	14	17	24	35	29	37	33	68
One day old pizza	17	28	69	38	50	57	82	44	89	60

Required:

Starting with zero stock and a pending order of 105 pieces of pizza, simulate the transactions for 10 days and determine the vendor's profit or loss. (10 marks)

(b) Vesto Ltd. intends to launch a new product into the market. The management of the company is uncertain of some variables namely; selling price, variable cost and the annual sales volume of the product.

The following information relates to the possible values of the above variables and their associated probabilities:

Selling price per unit Sh.	Probability	Variable cost per unit Sh.	Probability	Sales volume (Units)	Probability
700	0.20	350	0.10	20,000	0.20
875	0.50	550	0.50	30,000	0.40
900	0.30	600	0.40	40,000	0.40

Additional information:

1. The sales volume is the estimated annual sales.
2. The uncertain variables are independent of one another.

Required:

Simulate the scenario above to determine the average annual contribution of the product.

Use the following random numbers: 80, 60, 43, 63, 21, 40, 36, 05, 69, 16, 73, 86, 28, 31, 61, 57, 39, 96, 49, 77, 26, 95, 82, 72.

(10 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Summarise four factors that should be taken into consideration in establishing the length of a proposed budget period. (4 marks)

(b) Reka Ltd. has two manufacturing divisions namely; A and B. Division A manufactures a single product branded "RR". Two-thirds of the output of "RR" is sold externally while the balance is transferred to division B where it is used as raw material in the manufacture of a product branded "TT".

The unit costs of product "RR" are as follows:

	Sh.
Direct material	12
Direct labour	6
Direct expenses	6
Variable manufacturing overheads	6
Fixed manufacturing overheads	12
Selling and packaging expense (variable)	2
	44

Additional information:

1. Annually, 10,000 units of product "RR" are sold externally at the standard price of Sh.90 per unit while 5,000 units are transferred to division B at an internal transfer charge of Sh.87 per unit.
2. The selling and packaging expense is not incurred for internal transfers.
3. The unit costs of product "TT" are as follows:

	Sh.
Transferred-in item ("RR")	87
Added direct materials	69
Direct labour	9
Variable overheads	36
Fixed overheads	36
Selling and packaging expense (variable)	3
	240

4. A recent study of the demand and sales relationship of the company's products by the sales division produced the following results:

- **Division A**

Selling price (Sh.)	60	90	120
Demand (units)	15,000	10,000	5,000

- **Division B**

Selling price (Sh.)	240	270	300
Demand (units)	7,200	5,000	2,800

5. The manager of division B has proposed that transfers from division A should be made at Sh.36 per unit which represents the variable costs plus a minimum mark-up.

Required:

Advise the management of Reka Ltd. on the following.

(i) The current effect of the transfer pricing system on the company's profits. (10 marks)

(ii) The effect on profit of adopting the above proposal from the manager of division B (6 marks)

(Total: 20 marks)

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