



CPA PART III SECTION 5

ADVANCED MANAGEMENT ACCOUNTING

WEDNESDAY: 28 November 2018.

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) Stating two examples in each case, distinguish between “internalised environmental costs” and “externalised environmental impacts”. (6 marks)
- (b) ABC Ltd. is a firm that is engaged in the repair and maintenance of property, plant and equipment. The firm has received an order from XYZ Ltd. to repair its property, plant and equipment.

The management accountant of ABC Ltd. has provided the following information:

	Note	Sh.“000”
Direct materials:		
100,000 welding rods at Sh.10 per rod	1.	1,000
300,000 welding rods at Sh.12 per rod		3,600
Other materials	2.	2,000
Labour cost:		
Skilled: 30,000 hours at Sh.30 per hour	3.	900
Unskilled: 20,000 hours at Sh.15 per hour	4.	300
Depreciation: General purpose machines	5.	400
Specific purpose machines	6.	200
Total cost		8,100
Profit		810
Suggested price		<u>8,910</u>

Additional information:

- The repair contract requires 400,000 welding rods of which 100,000 rods are already in inventory. These types of rods are about to be phased out of the market and hence if they are not used, they will have to be discarded.

If ABC Ltd. is awarded the contract, it will have to purchase an extra 300,000 welding rods of the new model at a cost of Sh.12 per rod.
- Other materials will have to be bought at the above price if the contract is to be undertaken.
- Skilled workers will have to be hired at the cost provided.
- ABC Ltd. has five unskilled workers who are currently idle. The cost shown above is the guaranteed salary payable to the five workers.
- The depreciation given is for the general purpose machines which are normally used to do other jobs including the special one if allocated.
- The depreciation given is for machines which will be bought specifically for this contract. After the contract is complete, the machines will be scrapped without any alternative use.
- ABC Ltd. aims to earn a profit mark up of 10% on cost on all work undertaken.

Required:

- Advise the management of ABC Ltd. on the minimum price to quote on this contract. (10 marks)
- Describe why in practice the minimum price is never actually used. (4 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Nion Ltd. wishes to determine whether it should be investigating its variances or not.

The following information is relevant for the decision to be undertaken:

- There is a 90% probability that the production processes will remain in control.
- The benefit of investigating variances is Sh.55,000.

3. It will cost Sh.1,500 to inspect the process at the investigation point.
4. If a correctable cause is discovered, it will cost Sh.10,000 to make the necessary adjustments.

Required:

Using a decision tree, evaluate whether the variances should be investigated.

(10 marks)

- (b) STM Ltd. intends to open a new outlet in the northern part of the country.

The following information relates to the outlet over the next four years:

1. The budgeted sales volume in the first year of operation is 18,000 units. This sales volume is expected to grow at the rate of 10% for years one, two and three but no further growth is expected from year four.
2. The selling price will be set at Sh.900 per unit for the first two years but then reduce by 5% per annum for each of the next two years.
3. Gross profit is expected to be 40% of sales in the first year, but will reduce as the sale price reduces. The purchase price on goods for resale will remain constant for the four years.
4. The overheads including depreciation are budgeted at Sh.5,250,000 for the first two years rising to Sh.6,000,000 in years three and four.
5. The new outlet requires an investment of Sh.7,500,000 at the start of its first year of trading.
6. STM Ltd. depreciates its non-current assets at the rate of 25% on cost with nil residual value expected.

Required:

For each of the four years, compute the following:

- (i) Net profit. (6 marks)
- (ii) Return on investment (ROI). (4 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Describe three roles that are played by a management accountant in environmental management accounting (EMA). (6 marks)
- (b) Vitabu Ltd. stocks books for sale. The company is concerned about high inventory cost and is therefore considering reviewing its current inventory management system.

Additional information:

1. Daily demand is probabilistic and follows the following distribution:

Demand (Units)	Probability
10	0.22
14	0.30
18	0.40
22	0.08

2. Lead time is also probabilistic and follows the following distribution:

Lead time (Days)	Probability
2	0.1
3	0.3
4	0.2
5	0.4

3. Ordering cost is Sh.1,000 per order.
4. Holding cost is Sh.50 per day while stock out cost is Sh.200 per unit.
5. The policy of the company is to order 55 books whenever stocks fall below 15 books.
6. The opening inventory on the first day was 55 books.
7. The following random numbers are provided:

94562406423947955223705699163168744270003

Required:

- (i) A simulation of the company's inventory balances for a period of 10 days. (10 marks)
- (ii) The average daily inventory cost. (4 marks)

(Total: 20 marks)

QUESTION FOUR

- (a) MWL Ltd. has in the past produced just one fairly successful product. However, a new version of this product has recently been launched. In the meantime, development works continue with the aim of adding a related product to the portfolio of products.

Given below are some details of the activities carried out during the month of October 2018:

Units produced:	Existing product	25,000
	New product	5,000
Production cost (Sh.):	Existing product	375,000
	New product	70,000
Sales revenue (Sh.):	Existing product	550,000
	New product	125,000
Hours worked:	Existing product	5,000
	New product	1,250
Development cost (Sh.)		47,000

Required:

Compute the performance indicators that could be used for each of the four perspectives on the balanced scorecard. (8 marks)

- (b) AZK Ltd., a manufacturing company, is planning to launch a new product model whose lifecycle is three years.

The following estimated data has been provided:

Details	1 January 2018	31 December 2018	31 December 2019	31 December 2020
Research and development cost (Sh.)	850,400	200,000	-	-
Production cost:				
Variable cost per unit (Sh.)	-	100	80	90
Total fixed cost (Sh.)	-	500,000	500,000	500,000
Marketing cost:				
Variable cost per unit (Sh.)	-	12	8	10
Total fixed cost (Sh.)	-	200,000	150,000	100,000
Distribution cost:				
Total fixed cost (Sh.)	-	120,000	120,000	120,000
Disposal of special equipment (Sh.)	-	-	-	300,000
Present value factor	1	0.89	0.80	0.71
Production (units)	-	20,000	20,000	20,000

The Marketing Director believes that customers could only pay Sh.120 per unit but the Finance Director believes this will not cover all projected costs throughout the product's lifecycle.

Required:

- (i) Evaluate the lifecycle cost per unit. (8 marks)

- (ii) Comment on the target price by the Marketing Director and suggest ways of reducing any cost gap. (4 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Explain four shortcomings of the traditional budgeting process. (4 marks)

- (b) Discuss four factors that could encourage the adoption of activity based costing (ABC) in a large service organisation. (8 marks)

- (c) Zed Ltd. has received an order to supply 30 units of Product Aye. So far, 14 units have been completed. The first unit required 40 direct labour hours and a total of 240 direct labour hours have been recorded for the 14 units.

Additional information:

- The production manager expects an 80% learning effect for this type of work.
- The company uses standard absorption costing.
- The costs attributable to the centre in which Product Aye is manufactured are as follows:

Direct materials	Sh.30 per unit
Direct labour	Sh.6 per hour
Variable overheads	Sh.0.50 per direct labour hour
Fixed overheads	Sh.6,000 per four-week operating period

Required:

- (i) The learning curve index. (2 marks)

- (ii) The unit cost. (6 marks)

(Total: 20 marks)