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**CERTIFIED PUBLIC ACCOUNTANT**

**ADVANCED LEVEL 2 EXAMINATIONS**

**A2.2: STRATEGIC PERFORMANCE ANAGEMENT**

**FRIDAY: 6 DECEMBER 2019**

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**INSTRUCTIONS:**

1. **Time Allowed: 3 hours 45 minutes** (15 minutes reading and 3 hours 30 minutes writing).
2. This examination has one case study.
3. Marks allocated to each question are shown at the end of the question.
4. Show all your workings

## CASE SUDY

Amahoro Manufacturing Company (AMC) Ltd is a Company which was started by Jean Claude Mahoro over ten years ago. Claude is the Chairman of the board and the CEO of the Company. There are seven board members including the chairman. The board members consists of family members and two of these are friends. The family members of the board are also employees of the Company. The Board has not changed for the last 10 years of the operation of the company.

AMC Ltd has two divisions: Division A and Division B. Both divisions produce a single standard product. Division A produces a component X which is supplied to both Division B and external customers. Division B makes product Y which uses one unit of component X and other materials. The completed product Y is then sold to external customers and Division B has always bought component X from Division A.

**The following information is available for component X and product Y:**

	Component X Rwf	Product Y Rwf
Selling price	4,800	11,520
Direct materials		
- Component X	-	4,800
- Other materials	1,440	2,040
Direct labour (Rwf 360/hr)	720	1,080
Variable overheads	240	360
Selling and distribution costs	480	120
Contribution per unit	1,920	3,120
Annual fixed costs	60,000,000	24,000,000
Annual external demand (Units)	160,000	120,000
Capacity of plant (units)	300,000	130,000

Division A charges the same price for component X to both Division B and external customers. However, it does not incur the selling and distribution costs when transferring internally. Division B has been approached by a new supplier who has offered to supply it with component X for Rwf 4,560 per unit. Prior to this offer, the cheapest price at which division B could have bought component X from outside the group was Rwf 5,040 per unit.

The labour hours that are available for the both Division A and B are expected to be 800,000 labour hours in the coming period. Both divisions use the same labour.

### Performance Measurement

The two divisions have been operating separately as investment centres and each month each department/Division is supposed to prepare operating statement which is used as a basis of performance measurement of the divisions.

Senior management have decided to charge the head office costs to the divisions consequently, each division is now going to be required to deduct a share of the Head-office costs in its operating statement before arriving at net profit which is to be used to evaluate return on investment (ROI). Prior to this ROI has been calculated using controllable profit only.

The company ROI remain unchanged at 20% per year. Division A and B has maintained ROI's of 23% per year and 22% per year respectively resulting in the staff being awarded healthy bonuses. The company has a cost of capital of 10%.

The budgeted information for the month of December is shown below:

	Division A Rwf “000”	Division B Rwf “000”
Sales	12,000	10,400
Less Variable costs	6,400	5,600
<b>contribution</b>	<b>5,600</b>	<b>4,800</b>
Less Controllable fixed costs	1,824	1,072
<b>Controllable profit</b>	<b>3,776</b>	<b>3,728</b>
Less Apportionment of head office costs	1,440	1,240
<b>Net profit</b>	<b><u>2,336</u></b>	<b><u>2,488</u></b>
Divisional Net Assets	180,800	185,600

### Current Developments

The Profitability of AMC Ltd has been declining over the years and has had some financial problems of which have made the CEO worried about the sustainability of the company. The CEO has approached the Chief finance officer (CFO) for advice on the ways in which to turnaround the situation of the company. The CFO of AMC Ltd has come up with two

proposals so as to help divert the problem by ensuring that the performance of the company grows over the years. The information on the two proposals is given below.

### **Proposal 1 (Cost efficiency)**

In the first proposal the CFO has proposed to replace the existing machine being used in division B so as to increase efficiency and improve on quality. The CFO is faced with a dilemma on which machine to choose from as he is faced with a choice between two machines. Machine 1 has an initial cost of Rwf 2 million and will have a scrap value of Rwf 250,000 at the end of four years. Machine 2 has an initial cost of Rwf 2.25 million and will have a scrap value of Rwf 500,000 at the end of 3 years. Annual maintenance costs of the two machines are given as:

Year	1	2	3	4
Machine 1 (Rwf)	250,000	290,000	320,000	350,000
Machine 2 (Rwf)	150,000	200,000	250,000	-

Taxation and capital allowances should be ignored. AMC Ltd has a nominal before tax weighted average cost of capital of 12% p.a and nominal after tax weighted average cost of capital of 7% p.a.

### **Proposal 2 (Diversification)**

The CFO also proposes a second proposal which is more focussed on diversification in order to increase in revenues and performance in the future. The CFO proposes that they should introduce a third division (Division C) which will produce three different products, M, N & Z which can be sold to large wholesale chains. The three products are chemicals which are highly poisonous and harmful to the environment as well as their By-products. The production will be highly automated and will be done in batches. Goods will be delivered to customers in slightly smaller batches. The products will require a special delivery because of their nature.

Detail of expected typical monthly output is given as follows:

	M	N	Z
Units of output	10,000	20,000	45,000
Production machine hours per unit of output (PMH)	0.3	0.2	0.4
Production Batch size (Units)	250	400	750
Delivery Batch size (units)	200	200	500

There are two types of indirect labour that will be employed. These are 4 quality control inspectors (at a cost of Rwf 200,000 each per month) and 9 administrators (at a monthly cost of Rwf 175,000 each per month).

Each employee is expected to work a standard 180 hours per month.

The role of the quality control staff is to inspect a sample from each batch of output produced. The standard inspection time is expected to be 4 hours per batch. The administration will perform two tasks i.e. delivery processing work (which is supposed to take 3 hours per batch delivered) and monitoring of production (at the rate of 1 hour of an administration time for every 120 units of output)

In addition, the production machinery has a capacity of 20,000 production machine hours per month. There are two additional types of specialised machinery which are required to perform automated production set up and automated delivery loading procedures. The two machines expected capacity and usage is given below:

	<b>Monthly Capacity (Hours)</b>	<b>Usage rate</b>
Production set up machinery	160	1 hour per batch
Delivery loading machinery	104	0.4 hours per batch

The budgeted costs per month are given as:

Production Machinery cost	Rwf 22,500,000
Set up cost	Rwf 15,000,000
Delivery loading cost	Rwf 19,200,000

The expected selling price and cost per unit are given as:

	<b>M</b>	<b>N</b>	<b>Z</b>
	<b>Rwf</b>	<b>Rwf</b>	<b>Rwf</b>
Selling price	12,000	12,000	12,000
Direct material	4,000	5,500	4,500
Direct labour (Rwf 6,000/hr)	5,400	4,200	6,000

The CFO suggests that since this is a highly automated production process they will use just-in-time (JIT) system so as to eliminate material wastage and stock theft. Total quality management (TQM) will be implemented so as to ensure production of quality products with no wastage. AMC Ltd will also implement activity-based costing (ABC), Activity-based

budgeting (ABB) and standard costing and variance analysis systems especially for cost control and performance evaluation.

The CFO has approached the production manager for more information in order to ensure proper analysis of this proposal.

The production manager of AMC has got some resentment on the proposal because of environmental issues and hence he suggests that there should be provisions for environmental related costs. Also, he has suggested that due to automation and the products being highly poisonous, a new quality control procedure will be introduced to the production process, adding 20% of the expected time to complete a unit for each product. However, the labour rate is expected to reduce to Rwf 4,950 per hour.

The production Manager estimates that 68,000 direct labour hours will be required at a budgeted cost of Rwf 408,000,000 for the implementation of the proposal before considering the provisions suggested.

### **Way Forward**

After getting the suggestions of the CFO in collaboration with the suggestions from the production manager, the CEO is planning for a strategic change to its current business model while trying to make it sustainable. In order to assist in strategic change, the CEO is considering introducing the Balanced Score Card (BSC). The management Accountant of the Head office has been given the mandate to review the preliminary work on the development of a scorecard in order to ensure consistency with the goal of meeting the strategic objectives of the company by tying operational and strategic performance measurement into a coherent framework.

The CEO has shared the plans with a friend who is a CPA and has advised him that he can use the economic value added (EVA) to evaluate both economic and managerial performance of the units including the new proposal.

The CEO has appointed you and provided you with all information so as to help him make his report and presentation before the incoming Board meeting. The CEO is therefore awaiting a report from you ahead of the board meeting in two weeks' time.

**REQUIRED:**

**Prepare a report to the CEO addressing the following Issues:**

- (a) i) Using activity-based budgeting (ABB) assess whether the resources available are adequate for CFO's proposal 2. **(12 Marks)**
- ii) Critically evaluate the profitability of each product of the new division in proposal 2 and advice. **(12 Marks)**
- iii) Explain the challenges the AMC Ltd may face in implementing Activity based budgeting. **(6 Marks)**
- (b)(i) Critically assess the information provided by the production manager for the CFO's Proposal 2 and advice on the labour variances. **(10 Marks)**
- (ii) Explain to the CEO the relevance of consideration of environmental costs as suggested by the production manager. **(6 Marks)**
- (c) (i) Critically evaluate the CFO's proposal 1 and advice the choice of the machine in consideration of cost efficiency. **(8 Marks)**
- (ii) Explain the problems of economic and managerial performance evaluation in evaluating the CFO's proposal. **(4 Marks)**
- (d) (i) Evaluate the profitability of each division and the whole group in the current transfer price and advise. **(8 Marks)**
- (ii) Discuss the problems which may arise if the transfer price remains unchanged and advice on alternative suitable transfer price for component X. **(6 marks)**
- (iii) Advice on the production mix of component X and product Y given the available labour hours. **(6 Marks)**
- (e) (i) Discuss the expected performance of each of the two divisions, using both residual income (RI) and return on investment (ROI). Giving your opinion on whether the two divisions performed well. **(8 Marks)**
- (ii) Explain the impact of automation on the performance measurement to the CEO and how it may affect evaluation of CFO's proposals. **(4 Marks)**
- (f) (i) Discuss problems of corporate governance faced by AMC Ltd. **(4 Marks)**
- (ii) Describe the difficulties in implementing and using the balanced scorecard in AMC Ltd. **(6 Marks)**

**(Total 100 Marks)**

