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UNDERGRADUATE UNIVERSITY EXAMINATIONS
SCHOOL OF MANAGEMENT AND LEADERSHIP
DEGREE OF BACHELOR OF COMMERCE / BACHELOR OF
MANAGEMENT AND LEADERSHIP

BML 108/BML 404/ ACC 312: MANAGERIAL ACCOUNTING

DATE: 10TH AUGUST 2023

DURATION: 2 HOURS

MAXIMUM MARKS: 70

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **THREE** questions.
6. Question **ONE** carries **25 MARKS** and the rest carry **15 MARKS** each.
7. **Write all your answers in the Examination answer booklet provided.**

QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

Kauzi Agro Mills Ltd: Decision Making in an Uncertain Environment

Kauzi Agro Mills Ltd (KAM) is considering whether to enter a very competitive market. In case KAM decided to enter this market it must either install a new forging process or pay overtime wages to the entire workers. In either case, the market entry could result in high sales, medium sales, low sales or no sales.

The management of KAM has estimated that if they enter the market there is a 60% chance of their stakeholders approving the installation of the new forge. (this means that there is a 40% chance of using overtime) a random sample of the current market structure reveals that KAM has a 40% chance of achieving high sales, a 30% chance of achieving medium sales, a 20% chance of achieving low sales and a 10% chance of achieving no sales.

Market analysts of KAM have indicated that a high level of sales will yield Kshs. 1,000,000 profit; a medium level of sales will result in a Kshs. 600,000 profit a low level of sales will result in a Kshs. 200,000 profit and a no sales level will cause KAM a loss of Kshs. 500,000 apart from the cost of any equipment. Entering the market will require a cash outlay of either Kshs. 300,000 to purchase and install a forge or Kshs. 10,000 for overtime expenses should the second option be selected.

Required:

- a) KAM is still brainstorming and considering the two alternatives highlighted in the case study above given the uncertain environment they operate in. Examine five key actions steps that will help the company make better decisions in an uncertain environment (5 marks)
- b) "The management of KAM has estimated that if they enter the market there is a 60% chance of their stakeholders approving the installation of the new forge. (this

means that there is a 40% chance of using overtime). A random sample of the current market structure reveals that KAM has a 40% chance of achieving high sales, a 30% chance of achieving medium sales, a 20% chance of achieving low sales and a 10% chance of achieving no sales." Construct a tree diagram showing clearly the outcomes if they opt to install a new forging process or pay overtime wages to the entire workers **(6 marks)**

- c) Advise the management of KAM whether to install a new forging process or pay overtime workers clearly showing the expected values of each decision alternative. **(10 marks)**
- d) Explain two methods that are used to analyse decision alternatives in uncertain environments other than the use of tree diagrams. **(4 marks)**

QUESTION TWO

- a) Examine three ways in which Management Accounting is similar to Financial Accounting. **(6 marks)**
- b) The management accountant for OBX Limited has provided you with the following information for the month of August 20X3.

Costs incurred	- Kshs. 13,800
Labour hours worked	- 780 hours
Actual production	- 360 units
Budgeted production	- 400 units
Standard cost per hour	- Kshs. 15
Standard hours per unit	- 2 hours

Required:

Calculate the following variances:

- i. Fixed Overhead Expenditure Variance **(3 marks)**

- ii. Fixed Overhead Volume Variance (3 marks)
- iii. Fixed Overhead Efficiency Variance (3 marks)

QUESTION THREE

- a) Company X is made up of two subsidiaries and four departments namely maintenance, accounting, finance, information technology, and human resources departments. With reference to the structure provided explain the difference between a cost centre and a profit centre (5 marks)
- b) The production manager of XYZ Company, is concerned about the apparent fluctuation in efficiency and wants to determine how labour costs (in Sh.) are related to volume. The following data presents results of the 12 most recent weeks.

Week No.	Units Produced(X)	Labour Costs(Y)
1	34	340
2	44	346
3	31	287
4	36	262
5	30	220
6	49	416
7	39	337
8	21	180
9	41	376
10	47	295
11	34	215
12	24	275

Required:

Estimate the cost function using regression analysis (10 marks)

QUESTION FOUR

- a) You are the Management Accountant for ABC Ltd and the Financial Accountant has provided you with the data below;

One unit takes ten hours to produce. The standard labour cost is Sh.5 per hour. In period one, 100 units are produced in 1,200 hours. In period six, 85 units are produced in 850 hours.

Required:

Prepare the Labour Efficiency Variances Report that will be presented in the next management meeting (7 marks)

- b) The following pay-off table has been provided on alternative selling prices to be set by Maendeleo Ltd;

Payoff table

State of Market Demand	Alternative Selling Prices		
	Kshs. 10	Kshs. 12	Kshs. 16
High	40,000	50,000	51,500
Moderate	30,000	36,000	24,000
Low	20,000	15,000	(3,500)

The probabilities associated with High, Moderate and Low demand are 0.3, 0.5 and 0.2 respectively.

Using appropriate analysis, determine the best selling price to set for the Company's product under each of the following criteria:

- i) Maximin criterion (3 marks)
- ii) Expected Monetary Value (EMV) (3 marks)

QUESTION FIVE

- a) Assume that you are planning to sell badges at the forthcoming Nairobi Show at Sh.9 each. The badges cost Sh.5 to produce and you incur Sh.2000 to rent a booth in the Show ground.

Required:

- i. Compute the breakeven point **(2 marks)**
- ii. Compute the margin of safety if 600 badges are sold **(3 marks)**
- iii. Compute the number of units that must be sold to earn a before tax profit of 20% of sales **(3 marks)**

- b) The assembly division of an automobile company, ABC Company, offers to purchase 50,000 tires from the tire division of the same company for \$100 per unit. The production costs per tire at a volume of 200,000 tires per year are as follows:

Item	Production Cost (\$)
Direct materials	50
Direct labor	20
Variable factory overhead	12
Fixed factory overhead	42
Total	124

The tire division typically sells 200,000 tires every year to arm's length customers at \$140 per unit. In addition, the capacity of the tire division is 300,000 batteries/year. The assembly division typically buys the tires from arm's length suppliers at \$125 per unit.

Required:

- i. Explain whether or not the tire division manager should accept the offer to purchase 50,000 tires and calculate the overall cost saved if any **(5 marks)**
- ii. Determine the price range for (i) above **(2 marks)**

QUESTION SIX

- a) A cargo plane has three compartments for storing cargo: front, centre and rear. These compartments have the following limits on both weight and space:

Compartment	Weight capacity (tonnes)	Space capacity (cubic metres)
Front	10	6800
Centre	16	8700
Rear	8	5300

Furthermore, the weight of the cargo in the respective compartments must be the same proportion of that compartment's weight capacity to maintain the balance of the plane. The following four cargoes are available for shipment on the next flight:

Cargo	Weight (tonnes)	Volume (cubic metres/tonne)	Profit (£/tonne)
C1	18	480	310
C2	15	650	380
C3	23	580	350
C4	12	390	285

Any proportion of these cargoes can be accepted.

Required:

Formulate a Linear Programming Problem if the total profit for the flight is to be maximised. (9 marks)

- b) Whilst budgets are widely used in business, most managers seem reluctant to participate fully in the budget preparation process. Critically assess why this is the case (6 marks)

