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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATION, 2023/2024 ACADEMIC YEAR**  
**SECOND YEAR, SECOND SEMESTER EXAMINATION**  
**FOR THE DEGREE OF BACHELOR OF SCIENCE**  
**(BUSINESS ADMINISTRATION)**

Date: 17<sup>th</sup> April, 2023  
Time: 11.30am – 1.30pm

**KAC 102 - INTRODUCTION TO MANAGEMENT ACCOUNTING**

**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE (30 MARKS)**

- a) Discuss the assumptions of cost volume profit analysis. (6 Marks)
- b) The cost incurred in two periods are as follows:

| Period | Cost in Ksh | Units produced |
|--------|-------------|----------------|
| 1      | 25,000      | 2,000          |
| 2      | 30,000      | 2,500          |

Required:

Find the Fixed cost and Variable cost for these two periods (6 Marks)

- c) Budgetary control can be operated even without adoption of standard costing. Explain both budgetary control and the standard costing and show how the former is not dependent on the latter. (6 Marks)
- d) Nyota Ltd. Manufacturers liquid cleaning products from chemical raw materials. It uses the following standard costs for the production of a batch of its product Sparkleen.

**Materials**

|                  |                                    |
|------------------|------------------------------------|
| Ammonia solution | 200 litres at shs. 1.10 per litre  |
| Colouring        | 1000 litres at shs. 0.10 per litre |
| Fragrance agent  | 10 Litres at shs. 14.20 per litre  |

**Labour operations**

|                  |                                |
|------------------|--------------------------------|
| Blending         | 8 hours at shs. 12.00 per hour |
| Mixing           | 12 hours at shs. 8.00 per hour |
| The actual costs |                                |

**Material**

|                  |   |
|------------------|---|
| Ammonia solution | 240 litres costing shs. 216.00          |
| Colouring        | 950 litres costing shs. 85.50 per litre |
| Fragrance agent  | 11 litres costing shs. 165              |

**Labour operations**

|          |                             |
|----------|-----------------------------|
| Blending | 11 hours costing shs. 143   |
| Mixing   | 10 hours costing shs. 90.00 |

**Required**

Calculate the following variances .

- |      |                                      |           |
|------|--------------------------------------|-----------|
| i)   | Material price variances             | (3 Marks) |
| ii)  | Material usage variances             | (3 Marks) |
| iii) | Total direct material cost variances | (2 Marks) |
| iv)  | Labour rate variances                | (2 Marks) |
| v)   | Labour efficiency variances          | (2 Marks) |

**QUESTION TWO (20 MARKS)**

The following data relates to Kamau Ltd which processes a single data type of chemical. Overhead costs for processing is as follows.

| Period | Output Unit (000) | Overhead costs Shs (000) |
|--------|-------------------|--------------------------|
| 1.     | 120               | 770                      |
| 2.     | 150               | 820                      |
| 3.     | 160               | 810                      |
| 4.     | 170               | 830                      |
| 5.     | 200               | 960                      |
| 6.     | 170               | 900                      |
| 7.     | 200               | 940                      |
| 8.     | 200               | 950                      |
| 9.     | 180               | 940                      |
| 10.    | 160               | 870                      |
| 11.    | 140               | 800                      |
| 12.    | 150               | 820                      |
| 13.    | 140               | 790                      |

Required:

- Device a formula to assist in the preparation of overhead budget for the 13 accounting periods. (10 Marks)
- Calculate the coefficient of correlation. (6 Marks)
- Determine the coefficient of determination. (4 Marks)

**QUESTION THREE (20 MARKS)**

- A company makes a single product with a sales price of sh 10 and a marginal cost of sh 6. Fixed costs are shs 60,000 per annum  
Calculate
  - Number of units to break even (2 Marks)
  - Sales at break- even point (2 Marks)
  - Number of units will need to be sold to achieve a profit of sh 20000 p.a (2 Marks)
  - If the taxation rate is 40% how many units will need to be sold to make a profit after a tax of Sh 20,000 p.a (4 Marks)
- Discuss the decision making model under conditions of uncertainty

(10 Marks)

**QUESTION FOUR (20 MARKS)**

- a) The management accountant ABC Ltd made the following analysis of cost incurred to produce units.

| <b>Cost element</b>         | <b>Amount (shs)</b>    |
|-----------------------------|------------------------|
| Direct materials            | 400 000 (Variable)     |
| Direct Labour               | 500 000 (Variable)     |
| Depreciation                | 100 000 (Variable)     |
| Rent                        | 300 000 (Fixed)        |
| Repairs and Sales promotion | 600 000(1/3 is fixed)  |
| Electricity and water       | 200 000 (50% variable) |

**Required**

- i) Determine the variable cost per unit (4 Marks)
- ii) Derive the total cost function (2 Marks)
- iii) Estimate the total if 150,000 units are expected to be produced during next financial year. (4 Marks)
- b) Differentiate the following;
- i) Controllable and uncontrollable costs (2 Marks)
- ii) Product costs and period costs (2 Marks)
- c) Discuss the limitations of management accounting. (6 Marks)

**QUESTION FIVE (20 MARKS)**

- a) Explain the term “decentralization” and explain why companies decentralize their operations. (10 Marks)
- b) A company is considering whether to develop and market a new product. Development costs are estimated to be Shs 180,000 and there is a 0.75 probability that the development effort will be successful and a 0.25 probability that the development effort will be unsuccessful. If the development is successful the product will be marketed, and it is estimated that:-
- If the product is very successful profits will be Shs 540000
  - If the product is moderately successful profits will be Shs 100000
  - If the product is a failure, there will be a loss of Shs 400000
- Each of the above profit and loss calculations is after taking into account the development costs of sh 180,000. The estimated probabilities of each of the above events are as follows:
- Very successful 0.4
  - Moderately successful 0.3
  - Failure 0.3

Required: Use a decision tree to compute the expected payoffs.

(10 Marks)