



# MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF BANKING, ACCOUNTING & FINANCE

..... YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF COMMERCE

BAC403 MANAGEMENT ACCOUNTING

DATE:

TIME:

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**INSTRUCTIONS:** Attempt Question One and any other Two Questions

## QUESTION ONE (30 MARKS)

- a) Explain the purpose of management accounting. (4 marks)
- b) Explain any four disadvantages of budgets. (4 marks)
- c) Explain any four reasons that a business person may have for holding stocks. (4 marks)
- d)
  - i) Assume that a company has an annual requirement of raw materials of 144,000 units, ordering costs of Sh.12,500 per order, purchase price per unit is sh.500 and annual holding costs are estimated at 20% of the purchase price. Calculate the Economic Order Quantity (EOQ). (3 marks)
  - ii) Calculate the number of orders needed per year. (3 marks)
- e) A company is planning to produce a certain product and the variable costs are estimated at sh.40 per unit. The fixed cost is Sh.240,000 and selling price is set at sh.80 per unit.
  - i. Calculate the Break Even Point. (5 marks)
  - ii. If 60,000 units will be sold find the profit that will be made. (5 marks)
- f) Explain the assumptions of the Economic Order Quantity (EOQ) analysis. (5 marks)

**QUESTION TWO (20 MARKS)**

- a) Assume that ABC Ltd produces two products, product A and B and the following budget has been prepared.

|                          | <b>A</b>       | <b>B</b>       | <b>Total</b>   |
|--------------------------|----------------|----------------|----------------|
| Sales in units           | 120,000        | 40,000         | 160,000        |
|                          | Sh.            | Sh.            | Sh.            |
| Sales @5/-, 10/-         | 600,000        | 400,000        | 1,000,000      |
| Variable cost @ 4/-, 3/- | <u>480,000</u> | <u>120,000</u> | <u>600,000</u> |
| Contribution @ 1/- 7/-   | <u>120,000</u> | <u>280,000</u> | 400,000        |
| Total fixed cost         |                |                | <u>300,000</u> |
| Profit                   |                |                | <u>100,000</u> |

**Required:**

- Compute the break-even point in total and for each of the products.
  - The company proposes to change the sales mix in units to 1:1 for products A and B. Advise the Co. on whether this change is desirable.
- b) Explain the limitations of linear programming as one of the methods of resource allocation.

**QUESTION THREE (20 MARKS)**

- Explain what a standard cost is? (2 marks)
- Explain the meaning of a variance (2 marks)
- Briefly explain the meaning of the following as used in variance analysis:
  - Material usage variance (2 marks)
  - Material price variance (2 marks)
  - Wage efficiency variance (2 marks)
  - Wage rate variance (2 marks)
- Calculate each of the above variances, using the following figures: (8 marks)

|                        |             |
|------------------------|-------------|
| Actual hours worked    | 5,000 hours |
| Standard rate per hour | Sh.10       |
| Actual wages paid      | Sh.55,000   |
| Standard hours allowed | 4,850 hours |
| Standard price per kg  | sh.2        |

|                           |             |
|---------------------------|-------------|
| Actual price per kg       | sh. 1/50    |
| Actual output             | 20,000units |
| Standard quantity allowed | 16,000kg    |
| Actual quantity used      | 15,000kg    |
| Actual quantity purchased | 16,500kg    |

#### QUESTION FOUR (20 MARKS)

A decision maker has three possible alternatives A, B and C, where the outcome of each of them can be affected by the occurrence of any one of the four possible events S1, S2, S3 and S4. The monetary payoffs of each of possible combinations are given in the following table:

| Events    | S1 | S2 | S3 | S4 |
|-----------|----|----|----|----|
| Actions A | 27 | 12 | 14 | 26 |
| B         | 45 | 17 | 35 | 20 |
| C         | 52 | 36 | 29 | 15 |

#### REQUIRED:

Advise on the optimal actions using:

- Maximin Criterion
- Maximax Criterion
- Regret Criterion
- Laplace Criterion

Note: Assume that probabilities are equally distributed

#### QUESTION FIVE (20 MARKS)

- ABC Ltd operates on a 250 days year and provides with the following information:

Annual demand in units = 16,000.

Ordering cost per order= sh.60.

Holding cost per unit =Sh.12.

- calculate the EOQ.
- Mean demand per day.
- Re-order level.

b) Further the following information is also provided:

- Stock out costs per unit =Sh.1

Annual distribution of demand during lead time:

| <u>Units</u> | <u>Probability</u> |
|--------------|--------------------|
| 0            | 0.05               |
| 150          | 0.1                |
| 300          | 0.1                |
| 450          | 0.15               |
| 600          | 0.25               |
| 750          | 0.15               |
| 900          | 0.1                |
| 1050         | 0.1                |

**Required:**

Determine the optimal level of safety stock and the revised re-order point for ABC Ltd.