TECHNICAL UNIVERSITY OF MOMBASA

School of Business

Department of Accounting & Finance

UNIVERSITY EXAMINATION FOR:

MASTERS OF SCIENCE IN FINANCE & BUSINESS ADMINISTRATION

BAC 5102: MANAGEMENT ACCOUNTING

END OF SEMESTER EXAMINATION

SERIES:JULY 2025

TIME: 3 HOURS

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt **Question One** and any THREE questions.

Do not write on the question paper.

Question One

a) Gyakie Ltd (Gyakie) operates a chain of fitness clubs in Nyali Area. Managers at the fitness clubs receive a quarterly bonus if their fitness club achieves or exceeds all of the following financial targets:

Return on Capital Employed (ROCE):	8% (based on net assets)
Asset turnover:	40%
Operating profit margin:	20%

Summary of the actual performance for Quarter 3 of the current year for one of the fitness club in Cinemax is detailed below:

	Sh.
Revenue	36,000
Staff costs	12,000
Other fixed costs	22,000
Net assets	110,000
Number of customers	600

The quarterly financial targets are set by the head office finance team and all fitness clubs are given the same target. Gyakie is currently forecasting the performance of its fitness clubs in Quarter 4. The following information will be used to forecast the performance for each of its fitness clubs in Quarter 4:

- The average revenue per customer will increase by 10% on Quarter 3.
- Customer numbers will increase by 5% on Quarter 3.
- Staff costs and net assets are expected to remain at the same level as Quarter 3.
- Other fixed costs are expected to decrease by 5% on Quarter 3.
- Staff and other costs are fixed (they are not related to the number of customers).

Required:
Justify whether the manager of the fitness club in Cinemax should receive a bonus in Quarter 4 based on the forecast performance. Your computation should include operating profit margin, ROCE and asset turnover for Quarter 4.

(10 marks)

b) The manager of the fitness club in Cinemax is dissatisfied with the quarterly bonus system and does not perceive it to be fair. He argues that the financial targets are based on a regional view of all Gyakie fitness clubs and do not take account of specific local circumstances. For instance, the fitness club in Cinemax is located in a less affluent area of the region. Managers also complain about using solely financial indicators in setting targets. The manager of fitness club in Cinemax would like to see participation from all fitness club managers in the development of quarterly financial and non-financial targets.

Required:

i) Discuss the potential impact on Gyakie for involving the fitness club managers in the preparation of their quarterly financial targets. **(4 marks)**

ii) Explain **THREE (3)** disadvantages of using financial performance indicators alone to assess performance. **(6 marks)**

c) Gyakie currently faces a tough competition with the major players in its market. To secure or increase its market position, the CEO has suggested benchmarking exercise although he has little knowledge in benchmarking exercise

Required:

Explain the meaning of the following types of benchmarking to the CEO.

i) Internal benchmarking

ii) Competitive benchmarking

iii) Functional benchmarking **(6 marks)**

(d) Mbuta ltd. is considering which product(s) to produce for year beginning 1stS Sept. 2018.
The following details have been availed to you.

	PRODUCTS			
	Apple	Ball	cow	Diet.
Contribution per bag	72	40	51	50.4
Direct Materials	2kgs	1.25kgs	1.5kgs	1.5kgs
Market demand (in bags)	5500	6500	8000	4000

The company can access up to 25,000kgs in a period.

Required:

(i) Advice the company on the product(s) to produce in order to maximize throughput.(7 marks)

(ii) Calculate the maximum throughput from the advice in a above. (7 marks)

Question Two

a) The Pikambi Hospital serves a community with a population of about 20,000.
For Out Patients Department (OPD) services, there are three basic stages to seeing the doctor which have been described below:

Stage 1
Records: This is where files of patients are kept. On arrival, a patient presents the identity card together with the National Health Insurance Scheme (NHIS) card. There are two biometric verification machines to confirm the validity of the card and recording of basic personal data on the claim forms. The process takes approximately 10 minutes per machine. Workers here work from 6:00 am to 4:00 pm.

Stage 2
Vitals: Here vital personal information about the patient's current health status is checked; i.e. temperature, pause, blood pressure, weight, and sugar levels. There is one machine with 5 nurses. It takes some 6 minutes for one patient to go through the process. The unit also works from 6:00 am to 4:00 pm.

Stage 3
Consultation: There are six doctors who run six-hour shift a day. Each doctor spends an average of 15 minutes to see a patient. The community has been complaining about the turnaround period and blames it on the incompetence of the nurses to the extent that sometimes patients stay in queues for long hours and return home unattended to.

Required:

i) With appropriate computations, evaluate and assess the bottleneck resource(s) at Pikambi Hospital. **(6 marks)**

ii) Suggest **THREE (3)** ways by which the turnaround time can be reduced at the hospital. **(6 marks)**

b) Drogo uses the Throughput Accounting technique for efficient allocation of scarce resources. In the second quarter of 2021, the throughput per bottleneck resource for its three products were given as follows: A-sh.4, B- sh.6 and C- sh.9
The total factory cost was *sh.*67,500 and the bottleneck resource was 15,000 machine hours.

Required:
Calculate and comment on the Throughput Accounting Ratios of the three products. **(3 marks)**

c) Standards are one of important quantitative tools that management uses to control and measure performance of business operations. Most often than not, it is the wish of management that actual results equate to standards. However, this is often not the case.

Required:
Explain **THREE (3)** advantages and **TWO (2)** disadvantages of standard costing. **(5 marks)**

Question Three

a) Plytimba manufactures high quality wooden chair using odum sourced from sustainable forests. The company began trading two years ago having identified a niche market for the product.
During the year, Plytimba was forced to purchase wood from a different company as the usual supplier did not have sufficient stock available. The company operates a standard variable costing system and details relating to the most recent financial period are shown below.

Budgeted information:

Production in units	134,400
	sh.
Direct materials: 10,080 square metres odum wood	282,240
Direct labour: 33,600 hours	483,840
Variable production overhead (based on direct labour hours)	225,792
Fixed production overhead	29,200

Actual information:

Production in units	135,000
	sh.
Direct materials: 10,800 square metres odum wood	300,240
Direct labour hours: 27,000 hours	486,000
Variable production overhead	194,400
Fixed production overhead	30,150

Required:

i) Prepare Standard Cost Card for one wooden chair. **(4 marks)**

ii) Calculate **SIX (6)** variances in as much detail as the information above permits. **(6 marks)**

b) Kankum industries is considering switching from Incremental Budgeting to Activity-Based Budgeting (ABB) because of the argued pricing specificity of ABB approach. The Chairman of the Finance Sub-Committee of the board, who does not have accounting background has contacted you for clarification on some key issues relating to ABB in order to assist in his explanation to the board.

Required:

In a report to the Chairman of the Finance Sub-Committee;

i) Differentiate between ***Activity Based Budgeting*** and ***Incremental Budgeting***. **(3 marks)**

ii) Explain the process in ABB. **(3 marks)**

iii) State **TWO (2)** arguments in favour and **TWO (2)** arguments against ABB. **(4 marks)**

Question Four

a) Phil Company is considering replacing its existing machine on the introduction of a new product. The existing machine would be sold for sh.2 million and replaced with a new machine at the beginning of the year at the cost of sh.16 million. This new machine would be sold at the end of year 4 for sh.1million.

A market research recently carried out at a cost of *sh.*1.5 million indicates a unit selling price of *sh.*300 in year 1, rising by 10% per annum. Sales volume for the four-year life of the project has been estimated as follows:

Year	**Units**
1	60,000
2	85,000
3	85,000
4	80,000

Possible unit variable costs are as follows:

Probability	*sh.*
0.4	240
0.6	260

Incremental fixed cost as a result of the project is GH¢15 per unit plus GH¢1,000,000 per annum staff cost.
The introduction of the new product is expected to reduce the market demand for an existing product by 5,000 units per annum. The existing product has a unit contribution of *sh.*75.
Other annual fixed costs associated with the new product include the following:

	sh.
Amortization of goodwill	50,000
Depreciation	250,000
	300,000

Phil Company's cost of capital is 12%.

Required:
Evaluate the acceptability of the project. **(14 marks)**

b) Most CEOs and their Deputies feel reluctant to allow employees of their entities to participate in the Budgeting Process. They are of the opinion that such "openness" may expose them to pressure from staff on what is due them.

Required:
Explain **THREE (3)** factors that will be considered when involving staff in the budgeting process. **(6 marks)**

Question Five

a) Kuntu Ltd manufactures one standard product, the standard marginal cost of which is as follows:

	sh.
Direct material per unit	10.00
Direct wages per unit	7.50
Variable production overhead	1.25
	18.75

The budget for the year includes the following:

Output (units)	80,000
	sh.
Total fixed Overheads:	

Production	1,000,000
Advertising	600,000
Marketing	500,000
Contribution	2,500,000

In reviewing the budget for the coming year, management is dissatisfied with the results likely to arise. Emergency board meeting was held to discuss possible strategies to improve the situation and the following strategies were proposed:

Strategy 1
The Production Manager suggested that the selling price of the product should be reduced by 10%. This could increase the output by 25%. It is estimated that these changes would result in increase of fixed production overhead and fixed marketing overhead by *sh.*50,000 and *sh.*25,000 respectively.

Strategy 2
The Director of Finance suggested that the selling price should be increased by 10%. Additionally, with increase in advertising cost by *sh.*400,000, sales units would increase to 90,000 units. It is also estimated that this strategy would increase the fixed production overhead by *sh.*25,000 and marketing overhead by *sh.*20,000.

Strategy 3
The Marketing Director suggested that with an appropriate increase in advertising expenditure, sales could be increased by 20% and a profit on turnover of 15% obtained. It is estimated that fixed production overhead would increase to *sh.*,040,000 and marketing overhead would increase by *sh.*25,000.

Strategy 4
The Managing Director seeks a profit of *sh.*600,000. He would like to know at what selling price the target profit could be achieved given the following estimates:
An increase in advertising expenditure by *sh.*360,000 would result in a 10% increase in sales. However, fixed production and marketing overheads would increase by *sh.*25,000 and *sh.*17,000 respectively

Required:

i) Prepare a forecast profit statement for **Strategy 1 and 2.** **(6 marks)**

ii) Estimate the additional expenditure on advertisement to achieve results in **Strategy 3.** **(5 marks)**

iii) Estimate the selling price that is required to achieve a profit of sh.600,000 in **Strategy 4.** **(5 marks)**

b) Cost measurement reflects the relationships between inputs and outputs. It is designed to provide more accurate information about production, support activities and product cost so that management can focus its attention on the products and processes with the most leverage for increasing profits.
Required:
Explain **FOUR (4)** reasons why organisations need to measure cost. **(4 marks)**