



ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

WEDNESDAY: 21 August 2024. Afternoon Paper.

Time Allowed: 2 hours.

This paper consists of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks. Do NOT write anything on this paper.

1. Agano Ltd. uses an overhead absorption rate of Sh.35 per machine hour based on 64,000 budgeted machine hours for the period. During the same period, the actual total overhead expenditure amounted to Sh.1,088,750 and 60,000 machine hours were recorded as actual production. By how much was the total overhead under or over absorbed for the period?
- A. Sh.1,011,250 under absorbed
 - B. Sh.1,151,250 under absorbed
 - C. Sh.1,011,250 over absorbed
 - D. Sh.1,151,250 over absorbed
- (2 marks)

2. Which one of the following statements **BEST** describes a controllable cost?
- A. A specific cost of an activity or business which would be avoided if the activity or business did not exist
 - B. A cost which arises from the decision already taken, which cannot, in the short run, be changed
 - C. A cost which the behavior pattern can be easily analysed to facilitate valid budgetary control system
 - D. A cost which can be influenced by its budget holder
- (2 marks)

3. The management director of Annex Ltd., a manufacturing company has tasked the management accountant to coordinate the preparation of their functional budgets for the next financial year. The budgets were listed as follows:
- (1) Sales budget
 - (2) Cash budget
 - (3) Material purchases budget
 - (4) Production budget
 - (5) Material usage budget

In what order should the above budgets be prepared?

- A. (2), (3), (4), (5), (1)
 - B. (1), (5), (3), (4), (2)
 - C. (1), (4), (5), (3), (2)
 - D. (4), (5), (3), (1), (2)
- (2 marks)

4. An engineering firm operates a job costing system. Production overhead is absorbed at the rate of Sh.8.50 per machine hour. In order to allow for non-production overhead costs and profit, a mark-up of 60 percent of prime cost is added to the production cost when preparing price estimates.

The estimated requirements of job number 808 are as follows:

Direct materials	Sh. 10,650
Direct labour	Sh. 3,260
Machine hours	140

The estimated price notified to the customer for job number 808 will be _____.

- A. Sh.22,256
 - B. Sh.22,851
 - C. Sh.23,446
 - D. Sh.24,160
- (2 marks)

5. Kiwanja Ltd. has established a budgeted sales revenue amounting to Sh.5,000,000 with an associated contribution of Sh.2,750,000. The fixed production costs amount to Sh.1,375,000 while fixed selling costs are Sh.275,000. Calculate the break-even sales revenue.
- A. Sh.756,250
 B. Sh.907,500
 C. Sh.2,500,000
 D. Sh.3,000,000

(2 marks)

Use the information below to answer question 6, 7 and 8.

Mambo Enterprises produces three products; X, Y and Z which have the following details:

	Product X	Product Y	Product Z
	Per unit	Per unit	Per unit
Direct materials (at Sh. 5 per kg)	8 kgs	5 kgs	6 kgs
Contribution per unit	Sh.35	Sh.25	Sh.48
Contribution per kg of material	Sh.4.375	Sh.5	Sh.8
Demand in units (excluding special contract)	3,000	5,000	2,000

Mambo Enterprises must produce 1,000 units of product X for a special contract before meeting normal demand. Unfortunately, there are only 35,000 kgs of materials available.

6. Calculate the total quantity of materials needed in (kgs) to meet all the demand.
- A. 69,000 kgs
 B. 61,000 kgs
 C. 10,000 kgs
 D. 35,000 kgs

(2 marks)

7. Determine the order of priority in production considering that materials in kgs are in short supply.
- A. X, Z, Y
 B. Z, Y, X
 C. Y, X, Z
 D. Z, X, Y

(2 marks)

8. What is the optimum production level (in units) based on the materials available that will give maximum profit if all conditions are fulfilled?

	Product X	Product Y	Product Z
A.	1,000	4,600	2,000
B.	1,000	3,000	2,000
C.	2,875	-	2,000
D.	3,000	2,200	-

(2 marks)

Use the following information to answer question 9 and 10.

A transport service company is running five buses between two towns which are 50 kilometres apart. The seating capacity of each bus is 50 passengers. The following particulars were obtained from their books for the month of June 2024:

Wage of drivers, conductors and cleaners	480,000
Salaries of office staff	232,500
Diesel oil and other lubricants	700,000
Repairs and maintenance	160,000
Taxation and insurance	320,000
Depreciation	520,000
Interest and other expenses	400,000

During the month of June 2024, the passengers carried were 75% of seating capacity. All buses operated on all days of the month. Each bus made one round trip per day.

9. What is the total passenger - kilometres?
- A. 562,500
 B. 750,000
 C. 281,250
 D. 775,000

(2 marks)

10. What is the cost per passenger - kilometre?
- A. Sh.3.70
 - B. Sh.9.90
 - C. Sh.5.00
 - D. Sh.2.50
- (2 marks)

Use the following information to answer question 11 and 12.

A manufacturing enterprise uses process costing to value its output. The following information was recorded for the first week of August 2024:

Input materials	20,000 unit at Sh.45 per unit
Conversion costs	Sh. 133,400
Normal loss	5% of input valued at Sh.30 per unit
Actual loss	1,500 units

There was no opening inventories or closing inventories.

11. The abnormal loss/gain in units will be _____.
- A. abnormal gain; 1,500 units
 - B. abnormal loss; 1,500 units
 - C. abnormal gain; 500 units
 - D. abnormal loss; 500 units
- (2 marks)
12. What is the valuation of one unit of output?
- A. Sh.21.85
 - B. Sh.52.81
 - C. Sh.86.04
 - D. Sh.37.79
- (2 marks)

Use the following information to answer question 13 and 14.

Rahisi Ltd. makes plastic buckets. An analysis of their accounting records reveals the following:

Variables cost per bucket	Sh.200
Fixed cost	Sh.500,000 per year
Capacity	2,000 buckets per year
Selling price per bucket	Sh.700

13. What is the number of buckets to be sold in order to break-even?
- A. 2,000
 - B. 3,200
 - C. 1,600
 - D. 1,000
- (2 marks)
14. The number of buckets to be sold to earn a profit of Sh.300,000 will be _____.
- A. 2,000
 - B. 1,000
 - C. 1,600
 - D. 1,000
- (2 marks)
15. Which one of the following differences between management accounting and financial accounting is **FALSE**?
- A. Management accounting is for internal reporting while financial accounting is for external reporting
 - B. Management accounting is future oriented while financial accounting is historical
 - C. Management accounting is more detailed while financial accounting generates summarised reports
 - D. Management accounting reports are periodical while financial accounting reports are perpetual
- (2 marks)
16. Which one of the following classifications of cost is meant for distinction between direct cost and indirect costs?
- A. By function
 - B. By nature of elements
 - C. By cost behavior
 - D. By controllability
- (2 marks)
17. Minimax Ltd. sells smart phones. The selling and distribution department of Minimax Ltd. is its _____.
- A. profit centre
 - B. cost centre
 - C. revenue centre
 - D. investment centre
- (2 marks)

18. The type of short-term decision making where capacity constraints exists is known as _____.
- make or buy decision
 - accept or reject decisions
 - break-even analysis
 - limiting factor analysis
- (2 marks)
19. Which one of the following methods of secondary apportionment is also referred to as “continuous” apportionment?
- Step down method
 - Simultaneous method
 - Direct allocation method
 - Specified order method
- (2 marks)

Use the following information to answer questions 20 to question 22.

Spiro Ltd. makes superior vehicle leather seats. The management accountant of Spiro Ltd. intends to prepare a budgeted cost statement. The following budgeted data is provided:

- Budgeted output for the year is 24,500 units
- Standard details for one unit of productions is as follows:

Direct materials	100 square metres at Sh.450 per square metre
Direct wages:	
Fitting department	120 hours at Sh.150 per hour
Finishing department	80 hours at Sh.220 per hour
- Budgeted overhead costs and hours per annum were as follows:

Variable overhead:	Sh.	Hours
Fitting department	2,000,000	25,000
Finishing department	1,440,000	12,000
Fixed overheads:		
	Sh.	
Production overhead	196,000,000	
Selling and distribution overhead	122,500,000	
Administration overhead	61,250,000	

- Fixed overheads are absorbed based on budgeted output units.

Calculate the following:

20. Prime cost per unit.
- Sh.82,000
 - Sh.80,600
 - Sh.45,000
 - Sh.35,600
- (2 marks)
21. Variable production cost per unit.
- Sh.1,020
 - Sh.19,200
 - Sh.99,800
 - Sh.80,600
- (2 marks)
22. Total cost per unit.
- Sh.99,800
 - Sh.15,500
 - Sh.80,600
 - Sh.115,300
- (2 marks)

Use the following information to answer question 23 to question 26.

Masafa Enterprise is a sole motorcycle repair shop. The sole trader has decided to estimate the fixed and variable cost components associated with the repair activity per day. The following data has been collected for the past six months:

Number of motorcycles repaired	Total repair cost Sh.
10	800
20	1,100
15	900
12	900
18	1,050
26	1,250

Using linear regression function in the form $Y = a + bX$:

23. What is the value of **a**?
 A. Sh.27.84
 B. Sh.531.39
 C. Sh.25
 D. Sh.920 (2 marks)

24. Estimate the value of **b**.
 A. Sh.25
 B. Sh.27.84
 C. Sh.30
 D. Sh. 31.39 (2 marks)

25. What is the value of $\sum Y$?
 A. Sh.6,000
 B. Sh.105,700
 C. Sh.101,000
 D. Sh.1,869 (2 marks)

26. What is the value of Y if 30 motorcycles were repaired?
 A. Sh.834.9
 B. Sh.1,670
 C. Sh.1,366.59
 D. Sh.1,754.9 (2 marks)

27. Economic order quantity is that quantity at which cost of holding and ordering inventory is _____.
 A. maximum and equal
 B. minimum and equal
 C. maximum and unequal
 D. minimum and unequal (2 marks)

28. You are provided with the following information:

Opening inventory:

- August 1: 50 units @ Sh.40

Receipts:

- August 5: 100 units @ Sh.50
- August 12: 200 units @ Sh.45

Issues:

- August 2: 30 units
- August 18: 150 units

Calculate the value of the closing inventory using first in first out (FIFO) method of inventory valuation:

- A. Sh.7,650
- B. Sh.8,050
- C. Sh.7,860
- D. Sh.14,800

29. Which one of the following is an assumption of break-even analysis?
- All costs are classified as fixed costs
 - The selling price per unit varies with level of output
 - At break-even point, the profit is maximised
 - A single product or a single salesmix
- (2 marks)

Use the following information to answer question 30 and 31.

Promo Products Ltd. is in the process of preparing its master budget. Promo Products Ltd. expects to have 10,000 units in inventory as at 31 December 2024. The company has a policy of carrying 60% of the following month's projected sales in inventory. The following is the budgeted data for the year 2025:

	January 2025	February 2025
Budgeted sales (units)	24,000	20,000
Sales price per unit	Sh.750	Sh.950
Direct labour hours per unit	4 hours	5.5 hours
Direct labour hourly rate	Sh.110	Sh.120
Direct material cost per unit	Sh.150	Sh.150

For the month of January 2025:

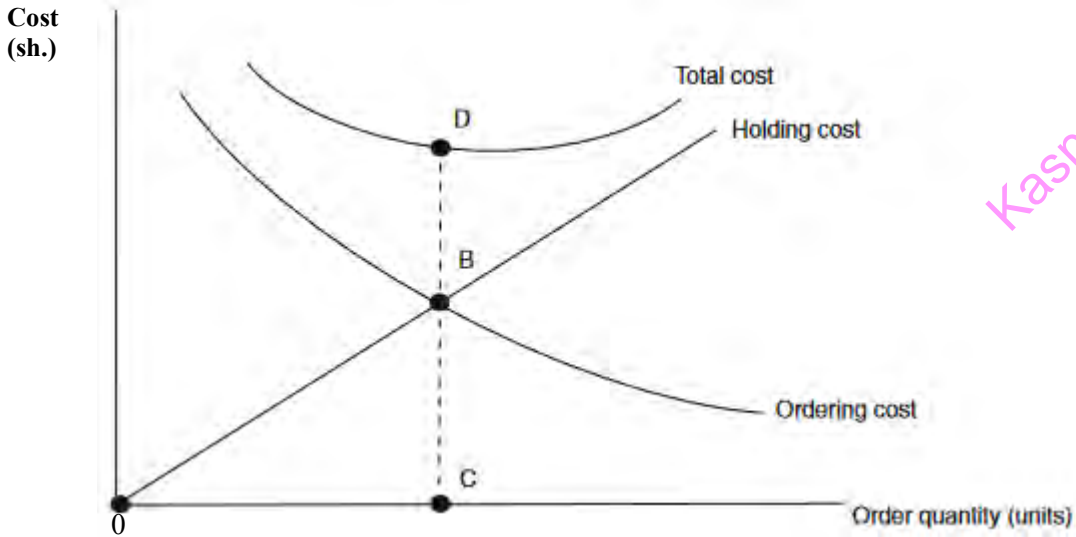
30. Determine the production budget in units.
- 24,000 units
 - 20,000 units
 - 26,000 units
 - 22,000 units
- (2 marks)
31. Determine the direct labour cost budget in shillings.
- Sh.11,440,000
 - Sh.140,000
 - Sh.9,680,000
 - Sh.10,560,00
- (2 marks)
32. Factory overhead includes _____.
- all manufacturing costs
 - all manufacturing costs except direct materials and direct labour
 - indirect materials but not indirect labour
 - indirect labour but not indirect materials
- (2 marks)
33. In order to identify costs that relate to specific product, an allocation base should be chosen that _____.
- does not have cause and effect relationship
 - has a cause and effect relationship
 - considers variable costs and but not fixed costs
 - considers direct materials and direct labour but not factory overheads
- (2 marks)
34. In the absence of more realistic information, supervision overheads should be split up according to _____.
- Floor area occupied
 - The number of employees
 - Replacement value of plant and equipment
 - The number of kilowatt hours
- (2 marks)
35. A company has under absorbed fixed production overhead for the period by Sh.630,000. The fixed production overhead absorption rate was Sh.490 per unit and is based on the normal level of activity of 35,000 units. Actual production was 38,500 units. What was the actual fixed production overhead incurred?
- Sh.16,520,000
 - Sh.18,235,000
 - Sh.17,780,000
 - Sh.19,495,000
- (2 marks)

36. The following information relates to a company's cutting process for the month of July 2024:
- | | |
|------------------------------------|-------------------------------------|
| Output to finished goods inventory | 16,224 units valued at Sh.2,676,960 |
| Normal loss. | 828 units |
| Actual loss. | 336 units |
- All losses have a scrap value of Sh.75 per unit and there was no opening or closing work in progress. Compute the value of input during the period.
- A. Sh.2,595,780
 B. Sh.2,657,880
 C. Sh.2,676,960
 D. Sh.2,739,060
- (2 marks)

37. Brown Ltd. uses standard absorption costing to value inventory. Its fixed overhead absorption rate is Sh.240 per labour hour and each unit of production takes 4 hours. In a recent period where there was no opening inventory of finished goods, 40,000 units were produced using 100,000 labour hours and 36,000 units were sold. The actual profit was Sh.9,280,000.
- Determine the amount of profit that would have been earned under a standard marginal costing system.
- A. Sh.5,440,000
 B. Sh.8,320,000
 C. Sh.6,880,000
 D. Sh.13,120,000
- (2 marks)

38. One of the fundamental principles of ethical behavior that should be observed by a management accountant is 'integrity'. Which one of the following statements **BEST** describes integrity in the context of management accounting?
- A. Maintaining the skills required to ensure a competent professional service
 B. Compliance with relevant laws and regulations
 C. Being straightforward and honest when dealing with clients or employing organisation
 D. Not being biased or prejudiced
- (2 marks)

39. The following graph represents the economic order quantity model:



Which point on the graph indicates the value of the Economic Order Quantity (E.O.Q)?

- A. 0
 B. D
 C. B
 D. C
- (2 marks)

40. Budgeted costs and revenues for an output level of 20,000 units are provided below:

	Sh.Per unit
Selling price	1,500
Variable cost	900
Fixed cost	<u>200</u>
Profit	<u>400</u>

It is known that after an output level of 25,000 units, there is a step-up in fixed cost of Sh.50,000. What is the flexed budget profit at an output level of 30,000 units?

- A. Sh.11,950,000
 - B. Sh.12,000,000
 - C. Sh.13,950,000
 - D. Sh.14,000,000
- (2 marks)

41. A sales man is paid a fixed monthly salary of Sh.45,000 plus an extra 2% commission of the monthly sales value. How would this type of cost be classified?
- A. Stepped labour cost
 - B. Fixed selling cost
 - C. Semi-variable labour cost
 - D. Variable distribution cost
- (2 marks)

42. The purchase price of an item of inventory is Sh.4, 400 per unit. In each six-month period, the usage of the item is 200,000 units. The annual holding cost associated with one unit equates to 3% of the purchase price. The cost of placing an order for the item is Sh.600. What is the Economic Order Quantity (E.O.Q) for the inventory item to the nearest whole number?
- A. 1,348
 - B. 1,907
 - C. 3,303
 - D. 20,010
- (2 marks)

43. Tim Company has two processes namely; cutting and finishing. There is an expected loss of 5% of input in cutting process and 7% of input in finishing process. Activities during the month of June 2024 were as follows:

	Cutting	Finishing
Material input (kgs)	60,000	84,000
Output (kgs)	55,500	78,300

For each process, is there an abnormal loss or gain?

- | | Cutting | Finishing |
|----|----------------|------------------|
| A. | Abnormal gain | Abnormal gain |
| B. | Abnormal loss | Abnormal gain |
| C. | Abnormal gain | Abnormal loss |
| D. | Abnormal loss | Abnormal loss |

(2 marks)

44. The following data relates to work undertaken in the finishing department of a certain factory in your country:

Normal working day	7 hours
Basic rate of pay per hour	Sh.1200
Standard time allowed to produce one unit	4 minutes
Premium bonus payable at the basic rate	70% of time saved

On a particular day, an employee finished 180 units. What was his gross pay for the day?

- A. Sh.8,400
 - B. Sh.12,600
 - C. Sh.4,200
 - D. Sh.14,400
- (2 marks)

45. Which one of the following statements about predetermined overhead absorption rates is **TRUE**?
- A. Using predetermined overhead absorption rate offers the administrative convenience of recording production cost sooner
 - B. Using a predetermined overhead absorption rate avoids problems of under or over absorption of overheads because the overhead rate is constant
 - C. Using predetermined overhead absorption rate avoids the problems associated with choosing an appropriate absorption base
 - D. Predetermined overhead absorption rates are more difficult to use in product costing as compared to actual rates
- (2 marks)

46. Which one of the following statements is **TRUE** about marginal and absorption costing profit in a period when sales in units are greater than production units?
- A. Marginal costing profit will be less than absorption costing profit
 - B. Marginal costing profit will be greater than absorption costing profit
 - C. Both marginal and absorption costing profits will be the same
 - D. There will be over absorption of overheads under absorption costing
- (2 marks)

47. Which one of the following cost categories is **NOT** a functional cost classification?
- A. Administrative cost
 - B. Production cost
 - C. Direct cost
 - D. Selling cost
- (2 marks)

48. Sabuni Ltd. manufactures liquid soap for the local market. Which of the following costing methods is most likely to be used by Sabuni Ltd.?
- A. Batch costing
 - B. Job costing
 - C. Process costing
 - D. Service costing
- (2 marks)

49. A manufacturing organisation's records shows that the cost of manufacturing batches of products in the last five accounting periods has been as follows:

Period	Number of batches	Total cost "Sh.000"
1	1,300	34,250
2	1,880	35,600
3	2,520	37,300
4	1,980	35,960
5	2,300	36,720

Using high-low method and ignoring inflation, what is the estimated cost in period 6 if production is estimated to be 1,700 batches?

- A. Sh.35,030,000
 - B. Sh.35,140,000
 - C. Sh.35,250,000
 - D. Sh.35,360,000
- (2 marks)
50. Which of the following is the **MAIN** purpose for cost estimation?
- A. Cost reduction
 - B. Cost prediction
 - C. Cost classification
 - D. Cost accumulation
- (2 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

WEDNESDAY: 24 April 2024. Afternoon Paper.

Time Allowed: 2 hours.

This paper is made up of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks. Do NOT write anything on this paper.

- Which one of the following statements describe margin of safety?
 - The total sales units up to the break-even sales volume
 - The difference in units between the expected sales volume and the break-even sales volume
 - The difference between the total cost and the fixed costs at break-even sales volume
 - The difference between fixed cost and variable cost at breakeven point(2 marks)
- Which of the following elements is **UNLIKELY** to be found in a budget manual?
 - Selling overhead budget
 - Objectives of the budgetary process
 - Administrative details of budget preparation
 - Organisational structure(2 marks)

Use the information below to answer question 3 to question 5.

Tundra Ltd. uses job-order costing system. The company has two departments through which most jobs go through. Selected budgeted and actual data for the year ended 31 December 2023 is as follows:

Cost Centre	Mixing	Blending
Budgeted overhead	Sh.1,000,000	Sh.5,000,000
Actual overhead	Sh.1,100,000	Sh.5,200,000
Budgeted direct labour hours	50,000 hours	10,000 hours
Budgeted machine hours	10,000 hours	50,000 hours
Actual direct labour hours	51,000 hours	9,000 hours
Actual machine hours	10,500 hours	52,000 hours

During the year, several jobs were completed. Data pertaining to job number JFC is as follows:

Direct materials	Sh.	2,000,000
Direct labour cost:		
Mixing cost centre (5,000 hours at Sh.600 per hour)		3,000,000
Blending cost centre (1,000 hours at Sh.600 per hour)		600,000
Machine hours used:		
Mixing cost centre		100
Blending cost centre		1,200
Units produced		10,000

- Determine the overhead absorption rate (OAR) of mixing department using direct labour hours basis.
 - Sh.0.5
 - Sh.22
 - Sh.20
 - Sh.2(2 marks)

4. Determine the overhead absorption rate (OAR) of blending department using machine hour basis.
- A. Sh.500
B. Sh.100
C. Sh.520
D. Sh.200 (2 marks)
5. Compute the overhead over/(under) absorbed for mixing department.
- A. Sh.100,000 over-absorbed
B. Sh.80,000 over-absorbed
C. Sh.80,000 under-absorbed
D. Sh.100,000 under-absorbed (2 marks)
6. A management consultancy recovers overheads on chargeable consulting hours. Budgeted overheads were Sh.2,460,000 and actual consulting hours were 32,150. Overheads were under-recovered by Sh.140,000. If the actual overheads were Sh.2,776,300, compute the budgeted overhead absorption rate per hour.
- A. Sh.76.52
B. Sh.82.00
C. Sh.86.35
D. Sh.90.71 (2 marks)
7. Which one of the following statements define cost classification?
- A. The use by several companies of the same costing method
B. The sum of all cost incurred
C. The allotment of items of cost to cost centers
D. The grouping of costs according to their common characteristics (2 marks)
8. Digo Ltd. uses batch costing and has an order of 900 units which will be made in a single batch, batch number 68B. The following information is available for batch number 68B.

Direct materials Sh. 60,000
Direct labour 450 hours at Sh.80 per hour

Digo Ltd.'s budgeted fixed overhead costs for the year 2024 amount to Sh.1,200,000 based on 60,000 labour hours. Overhead is absorbed based on labour hours. Determine the cost per unit of the product.

- A. Sh.116.67
B. Sh.109.46
C. Sh.103.71
D. Sh.129.63 (2 marks)
9. An organisation has four types of cost identified as W, X, Y and Z. The total cost for each type of two different production levels have been analysed by the cost accountant as follows:

Cost type	Total cost for 250,000 units (Sh.)	Total cost for 360,000 units (Sh.)
W	12,500,000	18,000,000
X	18,750,000	24,800,000
Y	11,250,000	16,200,000
Z	14,250,000	20,520,000

Which cost type would be classified as semi-variable?

- A. X
B. Z
C. W
D. Y (2 marks)

10. A company manufactures a single product whose unit cost is as follows:

	Cost per unit (Sh.)
Variable production cost	295
Fixed production cost	162
Variable selling cost	48
Fixed selling cost	107

400,000 units of the product were manufactured in a period, during which 394,000 units were sold. There was no inventory of the product at the beginning of the period.

Using marginal costing, what is the total value of the finished goods inventory at the end of the period?

- A. Sh.2,742,000
 B. Sh.2,058,000
 C. Sh.1,770,000
 D. Sh.3,672,000 (2 marks)

11. Which one of the following statements is a feature of job costing?

- A. It is associated with continuous production of large volumes of low-cost items
 B. Production is carried out in accordance with the wishes of the customer
 C. It takes a longer period (more than one accounting year)
 D. It establishes the cost of the services rendered (2 marks)

Use the information below to answer question 12 to question 15.

Lengo Ltd. makes three products; X – 6,000 units, Y – 4,000 units and Z – 2,000 units. The cost per unit and selling price of each product is as follows:

Product	X	Y	Z
	Sh.	Sh.	Sh.
Raw material	3	4	5
Direct wages	3	5	4
Variable overhead	5	5	7
Fixed cost	5	5	7
Total cost	15	17	18
Selling Price	20	25	22

12. Calculate the contribution per unit of each product.

- A. X: Sh.5 Y: Sh.8 Z: Sh.4
 B. X: Sh.35 Y: Sh.42 Z: Sh.40
 C. X: Sh.10 Y: Sh.13 Z: Sh.11
 D. X: Sh.10 Y: Sh.12 Z: Sh.11 (2 marks)

13. Calculate the total net profit of each product.

- A. X: Sh.30,000 Y: Sh.32,000 Z: Sh.8,000
 B. X: Sh.210,000 Y: Sh.168,000 Z: Sh.80,000
 C. X: Sh.66,000 Y: Sh.52,000 Z: Sh.22,000
 D. X: Sh.54,000 Y: Sh.48,000 Z: Sh.22,000 (2 marks)

14. Which of the above products should be discontinued based on profitability?

- A. X
 B. Y
 C. Z
 D. None (2 marks)

15. Determine the break-even point in units of product X.

- A. 6,000 units
 B. 36,000 units
 C. 3,000 units
 D. 2,400 units (2 marks)

Use the information below to answer question 16 to question 18.

Jomvu Factory incurred the following types of cost which were classified according to cost behaviour.

	Sh. "000"
Direct materials	190,000
Direct labour	150,000
Electricity (variable cost Sh.35,000,000)	60,000
Rent (fixed)	80,000
Transport (1/3 variable)	45,000
Warehouse (variable)	20,000
Depreciation	10,000

The total number of kilograms produced was 20,000 kilograms.

16. Compute the total fixed costs.
- A. Sh.145,000,000
 - B. Sh.310,000,000
 - C. Sh.350,000,000
 - D. Sh.135,000,000
- (2 marks)
17. Calculate the variable cost per kilogram.
- A. Sh.75,000
 - B. Sh.15,500
 - C. Sh.7,250
 - D. Sh.17,500
- (2 marks)
18. Using cost estimation equation in the form $Y = a + bx$, estimate the total cost if 10,000 kilograms were produced.
- A. Sh.160,500,000
 - B. Sh.300,000,000
 - C. Sh.310,000,000
 - D. Sh.455,000,000
- (2 marks)
19. Which one of the following is **NOT** an inventory cost?
- A. Carrying cost
 - B. Out of pocket cost
 - C. Set-up costs
 - D. Sunk cost
- (2 marks)
20. Which one of the following is an advantage of centralised material purchasing and storage?
- A. Close control is possible on inventory
 - B. Less risk of duplication
 - C. Stock taking is easier
 - D. Better understanding of local knowledge of suppliers
- (2 marks)

Use the following information to answer question 21 to question 23.

Victoria Garments Ltd. makes ladies wedding gowns. The company outsources the fabric material from Golden Cotton Factory. The following data is provided:

- Annual demand 22,500 metres
 - The cost of placing an order Sh.200,000
 - The purchase price of the raw material Sh.5,000 per metre
 - The re-order period 3 to 5 weeks
 - Minimum consumption per week 100 metres
 - Maximum consumption per week 800 metres
 - Average consumption per week 450 metres
 - The carrying cost of inventory is 20% of the purchase price per unit per annum
- Assume 50 weeks in a year

21. What is the optimal economic order quantity (EOQ) in metres?
 A. 800
 B. 5,000
 C. 3,000
 D. 450 (2 marks)
22. What is the re-order level in metres?
 A. 3,000
 B. 4,000
 C. 2,250
 D. 22,500 (2 marks)
23. Calculate the maximum inventory level in metres.
 A. 5,650
 B. 7,000
 C. 800
 D. 6,700 (2 marks)

Use the following information to answer question 24 to question 26.

Marsha Hospital is in the process of estimating its inpatient cost for the month of May 2024. Past data for the Admitting Department's costs and the number of patients admitted during the immediately preceding eight months are given in the following table:

Month	Number of patients admitted	Inpatient cost Sh. "000"
September 2023	1,150	7,150
October 2023	1,400	7,950
November 2023	1,280	8,350
December 2023	1,250	7,425
January 2024	890	5,730
February 2024	900	5,800
March 2024	700	5,150
April 2024	1,060	5,450

Using High-Low method:

24. Calculate the inpatient variable cost per patient.
 A. Sh.4
 B. Sh.40
 C. Sh.400
 D. Sh.4,000 (2 marks)
25. Estimate the fixed inpatient cost per month.
 A. Sh.2,350,000
 B. Sh.235,000
 C. Sh.23,500
 D. Sh.2,350 (2 marks)
26. Estimate the total inpatient cost of admitting 1,010 patients in May 2024.
 A. Sh.4,040,000
 B. Sh.9,200,000
 C. Sh.2,350,000
 D. Sh.6,390,000 (2 marks)
27. Which of the following managers is responsible for revenues and expenses?
 A. Investment centre manager
 B. Profit centre manager
 C. Cost centre manager
 D. Revenue centre manager (2 marks)

28. The type of process loss that arises due to difference between “expected output” and “actual output” is known as _____.
- A. Normal loss
 B. Actual loss
 C. Standard loss
 D. Abnormal loss

(2 marks)

29. Which of the following costs is **NOT CORRECTLY** classified to its type of cost?

	Type of cost	Example of cost
A.	Cost behaviour	Direct material
B.	Nature classification	Historical cost
C.	Decision making	Opportunity cost
D.	Inventory cost	Holding cost

(2 marks)

Use the following information to answer question 30 and question 31.

Amani Ltd. sells tinned fish at a selling price of Sh.750 per tin. The sales budget for the first four months of the year 2024 is presented below:

	Units sold	Sales budget
		Sh.
January	200,000	150,000,000
February	240,000	180,000,000
March	220,000	165,000,000
April	200,000	150,000,000

The company policy requires that ending inventories for each month be 35% of next month’s sales. At the beginning of January 2024, the inventory of tinned fish amounted to 38,000 tins.

30. Which one of the following shows the production budget in units for the month of January 2024?

- A. 200,000
 B. 284,000
 C. 246,000
 D. 154,000

(2 marks)

31. Which one of the following shows the production budget in units for February 2024?

- A. 240,000
 B. 277,000
 C. 233,000
 D. 247,000

(2 marks)

32. The process of distributing common overhead costs to cost centres on the basis of benefit received is called overhead _____.

- A. Accumulation
 B. Absorption
 C. Apportionment
 D. Allocation

(2 marks)

33. Maria Mueni is employed as a chief chef at Mlo Cafeteria. Maria earns Sh.150 per hour up to 400 units of production per day. If she produces more than 400 units per day, she will receive additional piece-rate of Sh.25 per unit. In the last week of March 2024, she worked the following hours and produced the following units:

Day	Hours worked	Units produced
Monday	8	400
Tuesday	8	380
Wednesday	8	440
Thursday	8	450
Friday	8	360

Calculate the total earnings received by Maria Mueni at the end of the week.

- A. Sh.6,000
 - B. Sh.2,250
 - C. Sh.20,000
 - D. Sh.8,250
- (2 marks)

34. The term labour turnover as used in labour costing refers to _____.

- A. Total sales in labour costing
 - B. Rate at which employees join or leave employment
 - C. The total labour cost per revenue received
 - D. The rate of promoting employees from low level to high level
- (2 marks)

35. In which of the following methods of material pricing and issues do costs lag behind the current economic values?

- A. Weighted average price method
 - B. Replacement price method
 - C. First in first out price method
 - D. Last in first out price method
- (2 marks)

36. Which one of the following is **NOT** a salient feature of process costing?

- A. The output of preceding process is the input of the succeeding process
 - B. The goods produced per process are in uniform batches
 - C. The goods produced per process are homogeneous
 - D. Normal loss is calculated as a percentage of input material of each process
- (2 marks)

37. A company has the following budget for the next month:

Finished product:

Sales units	7,000 units
Production units	7,200 units

Materials:

Usage per unit	3 kgs
Opening stock	400 kgs
Closing stock	500 kgs

What is the material purchases budget for the month?

- A. 20,900 kgs
 - B. 21,100 kgs
 - C. 21,500 kgs
 - D. 21,700 kgs
- (2 marks)

38. Which one of the following statements is **NOT** a major assumption of break-even analysis?

- A. Production level is equal to sales level
 - B. Sales prices vary in line with levels of activity
 - C. Fixed costs are the same in total and unit variable costs are the same at all levels of output
 - D. It can only apply to one product or a constant sales mix
- (2 marks)

39. Which of the following statements about management accounts is/are true?

- (i) The format of management accounts is largely determined by law
- (ii) Management accounting serves as a future planning tool and are not used as a historical record
- (iii) There is a legal requirement to prepare management accounts
- (iv) Management accounts are used internally by the managers in planning, control and decision making

- A. (i) and (iii)
 - B. (ii) and (iii)
 - C. (iv) only
 - D. (ii) and (iv)
- (2 marks)

40. Which one of the following costs could **NOT** be classified as a production overhead cost in a food processing company?
- A. The salary of the factory manager
 - B. The cost of factory rent
 - C. Depreciation of cooking equipment
 - D. The cost of ingredients
- (2 marks)
41. Which one of the following statements is **FALSE**?
- A. Management accounting cannot substitute financial accounting
 - B. Financial accounting information can be used for internal reporting purpose
 - C. Cost accounting can only be used to provide inventory valuations for internal reporting
 - D. Management accounting provides information relevant to decision making, planning, control and evaluation of performance
- (2 marks)
42. Which one of the following statements **BEST** describe a flexible budget?
- A. A monthly budget which is changed to reflect the number of days in the month
 - B. A budget which shows variable production costs only
 - C. A budget that is updated halfway through the year to incorporate the actual results for the first half of the year
 - D. A budget which shows sales revenues and costs at different levels of activity
- (2 marks)
43. Which of the following costing methods would be most suitable for an accounting firm?
- A. Batch costing and uniform costing
 - B. Job costing and service costing
 - C. Process costing and service costing
 - D. Job costing and batch costing
- (2 marks)
44. The branch of accounting that is concerned with providing special purpose reports within the organisation for the top management to make informed decision is called _____.
- A. Management accounting
 - B. Cost accounting
 - C. Financial accounting
 - D. Forensic accounting
- (2 marks)
45. Fixed costs are conventionally deemed to be _____.
- A. Irrelevant costs
 - B. Variable in the short-run
 - C. Constant per unit of output
 - D. Outside the control of management
- (2 marks)
46. Which of the following statements is **NOT** an argument in favour of marginal costing?
- A. It is simple to operate
 - B. Closing inventory is valued in accordance with International Accounting Standard (IAS 2)
 - C. There is no under or over absorption of overheads
 - D. The information from this costing method can be used in decision making
- (2 marks)
47. In make or buy decision, it is profitable to buy from outside only when the supplier's price is below the firm's own _____.
- A. Fixed cost
 - B. Variable cost
 - C. Total cost
 - D. Prime cost
- (2 marks)
48. Which one of the following statements is **NOT** an assumption of cost- volume- profit (CVP) analysis?
- A. Total cost and total revenue are linear functions of output
 - B. The cost behaviour applies to a relevant range only
 - C. All costs are classified into variable and fixed costs
 - D. The company produces more than one product
- (2 marks)

49. Under marginal costing principles, the opening inventory, production units and closing inventory are valued at _____.
- A. Full cost per unit
 - B. Variable production cost per unit only
 - C. Variable production and variable selling cost per unit
 - D. Fixed cost only
- (2 marks)

50. Which one of the following statements **CORRECTLY** describe a direct cost?
- A. A cost that cannot be clearly associated with specific activities or products
 - B. A cost that can be clearly associated with specific activities or products
 - C. A cost that is past and should not be considered for future decisions
 - D. A cost that will change as a result of a decision under consideration
- (2 marks)
-

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 4 December 2023. Afternoon Paper.

Time Allowed: 3 hours

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings. Do NOT write anything on this paper.

QUESTION ONE

(a) Highlight **FOUR** arguments against introduction of a management accounting system in a business organisation. (4 marks)

(b) Sauti Electronics is a popular car radio retailer. The following information was obtained from one of its outlets:

Average sales	750 units per day
Maximum sales	950 units per day
Minimum sales	500 units per day
Lead time	12 - 18 days
Re-order quantity	17,500 units

Required:

Determine the following:

- (i) The level of stock that a replenishment order will be required. (2 marks)
- (ii) The minimum level of stock possible. (2 marks)
- (iii) The maximum level of stock possible. (2 marks)
- (iv) The average level of stock. (2 marks)
- (c) Rolly Motors Ltd. is a manufacturer of quality trucks which they sell at Sh.3,500,000 each. The cost of the company can be separated into fixed and variable costs.

The following is a budgeted data for the first six months of the year 2024:

Months	Sales (Trucks)	Costs (Sh.)
January	9	23,500,000
February	10	25,000,000
March	15	32,500,000
April	11	26,500,000
May	12	28,000,000
June	8	22,000,000

Fixed costs for the six months have been spread evenly over the period under review to arrive at the monthly projections.

Required:

- (i) Calculate the total fixed costs for the period using high-low method. (4 marks)
- (ii) Determine break-even-point (BEP) in units and sales revenue. (4 marks)

(Total: 20 marks)

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QUESTION TWO

- (a) Chanzo Ltd. operates a factory which has four operators working in department RPM400. The company uses time-rate system of labour remuneration to compensate its workers.

The data about the four employees for the month of November 2023 is as follows:

Employee Name	PIN No.	Basic salary	Salary advance	Loan repayment
		Sh.	Sh.	Sh.
Angel Chebet	A08522F	50,000	6,000	10,000
Bob Munene	A086538K	45,000	5,000	12,000
Chris Lemayan	A106587J	30,000	0	0
Diana Nina	A258850H	48,000	9,000	15,000

Additional information:

- Affordable housing levy (AHL) tax of 1.5% is charged on gross income per month.
- NSSF is deducted at a rate of 5% of the gross income
- NHIF is deducted at a rate of 3% of the basic pay.
- PAYE is charged at a rate of 30% of gross income.
- Housing allowance is provided at a rate of 15% of the basic pay.
- Gross income is the total of basic pay plus house allowance but before any deductions.

Required:

Prepare a payroll to show the take-home net pay for the month of November 2023 for the four operators. (8 marks)

- (b) Dodoma Ltd. has submitted the following data relating to component “T” that it currently manufactures:

Total cost of making 10,000 units of component “T”

	Sh.
Direct material	100,000
Direct labour	80,000
Indirect labour	40,000
Depreciation	60,000
Repairs and maintenance	<u>50,000</u>
Total cost	<u>330,000</u>

Additional information:

- The Management Accountant of Dodoma Ltd. analysed each item of the expense according to cost behaviour pattern into variable and fixed elements. The analysis is as follows:

	Unit variable cost	Total fixed cost
	Sh.	Sh.
Direct material	10	
Direct labour	8	
Indirect labour		40,000
Depreciation		60,000
Repairs and maintenance	<u>2.50</u>	<u>25,000</u>
Total cost	<u>20.50</u>	<u>125,000</u>

- Dodoma Ltd. has determined that Sh.30,000 of fixed indirect labour cost is an unavoidable cost even if component “T” is outsourced.
- RVD Ltd. has offered to supply 10,000 units of component “T” to Dodoma Ltd. for Sh.16 per unit.
- All variables costs are avoidable costs if component “T” is bought from RVD Ltd.

Required:

- Advise Dodoma Ltd. whether to make or buy component “T” from RVD Ltd. (8 marks)
- Summarise **FOUR** overriding considerations to be met before accepting “make” or “buy” decision. (4 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Explain **FOUR** features of service costing. (8 marks)
- (b) The following information relates to the books of Digital Watches Ltd. that produced watches in batches during the three months of September, October and November 2023:

Month	Batch output (Units)	Material cost (Sh.)	Labour cost (Sh.)
September 2023	2,500	937,500	250,000
October 2023	3,000	1,275,000	300,000
November 2023	2,000	750,000	200,000

Additional information:

- Each watch retails at Sh.1,500.
- Labour is paid at a rate of Sh.200 per hour.
- Overheads are charged at a rate per labour hour.
- Budgeted overheads and labour hours were as follows:

Month	Overheads (Sh.)	Total labour hours
September 2023	1,200,000	4,000
October 2023	900,000	4,500
November 2023	1,500,000	5,000

Required:

- (i) Total profit per batch for each month. (6 marks)
- (ii) Cost per watch. (3 marks)
- (iii) Profit per watch. (3 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) Identify **SIX** types of costs classified by function. (6 marks)
- (b) Dawa Ltd. is a pharmaceutical company which manufactures antibiotic drugs. Dawa Ltd. has two production departments namely; factory plant and assembly department. The company has also two service departments namely; laboratory that deals with efficacy and chemist that is concerned with stocking of the drugs.

The overhead analysis sheet showing primary allocation of overheads analysed to production and service departments are as follows:

	Production departments		Service departments	
	Factory plant	Assembly	Laboratory	Chemist
	Sh.	Sh.	Sh.	Sh.
Indirect labour	1,080,000	2,500,000	1,500,000	1,000,000
Indirect material	300,000	720,000	200,000	200,000
Lighting and heating	350,000	550,000	200,000	100,000
Property taxes	280,000	470,000	300,000	200,000
Salary to factory manager	<u>380,000</u>	<u>670,000</u>	<u>400,000</u>	<u>300,000</u>
Total overheads	<u>2,390,000</u>	<u>4,910,000</u>	<u>2,600,000</u>	<u>1,800,000</u>

Additional information:

- Budgeted direct labour hours were 23,780 hours for factory plant department and 15,050 hours for assembly department.
- The budgeted direct labour rate per hour is Sh.300 in factory plant department and Sh.510 in the assembly department.

3. The total overheads of the service departments are to be apportioned to production departments as follows:
- | | |
|-------------|---------------------------------|
| Laboratory: | 50% to Factory plant department |
| | 30% to Assembly department |
| | 20% to Chemistry department |
| Chemist: | 60% to Factory plant department |
| | 30% to Assembly department |
| | 10% to Laboratory department |

Required:

- (i) Secondary apportionment of service department total overheads using stepwise method. (8 marks)
- (ii) Compute the overhead absorption rate (OAR) for each production department. (2 marks)
- (iii) A special order of antibiotics capsules has been received from a customer. The management accountant has estimated the costs as follows:

Direct material		Sh. 225,000
Direct labour:	Factory plant	300 direct labour hours
	Assembly	160 direct labour hours

Required:

- Calculate the total cost of the special order. (4 marks)
- (Total: 20 marks)**

QUESTION FIVE

- (a) Describe the following types of functional budgets:
- | | |
|----------------------------------|-----------|
| (i) Sales budget. | (2 marks) |
| (ii) Production budget. | (2 marks) |
| (iii) Material purchases budget. | (2 marks) |
| (iv) Cash budget. | (2 marks) |
- (b) Summarise **FOUR** applications of marginal costing. (4 marks)
- (c) AMA Ltd. is a company that concentrates wholly on the production of refined vegetable oils for exports and domestic markets. In the year ended 31 August 2023, the company produced 100,000 tonnes of oil out of which 90,000 tonnes were sold.

The balance was returned to store. The production cost was as follows:

	Sh. "000"
Direct materials	3,200,000
Direct labour	1,480,000
Production overheads	<u>800,000</u>
	<u>5,480,000</u>

Additional information:

1. 60% of the production overheads are fixed.
2. The average selling price for each tonne of oil was Sh.80,000.
3. Selling and administration expenses for the year amounted to Sh.1,200,000,000 of which Sh.300,000,000 were fixed.
4. There was no opening or closing stock of work-in-progress.

Required:

- (i) Statement of profit or loss for the year ended 31 August 2023 under direct costing method. (6 marks)
- (ii) Minimum number of tonnes of oil that must be produced and sold in order to breakeven. (2 marks)
- (Total: 20 marks)**
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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 21 August 2023. Afternoon Paper.

Time Allowed: 3 hours

Answer ALL questions. Marks Allocated to each question are shown at the end of the question. Show ALL your workings. Do not write anything on this paper.

QUESTION ONE

- (a) List **FOUR** examples of costs that are relevant for decision making process. (4 marks)
- (b) A product is manufactured by passing it through three processes namely: Process I, II and III respectively. For the first week of July 2023, the actual data included the following:

Process	Process I	Process II	Process III
Normal loss of output	5%	10%	5%
Scrap value per unit (Sh.)	1.50	2.00	4.00
Output (units)	5,760	5,100	4,880
Direct costs:	Sh. "000"	Sh. "000"	Sh. "000"
Direct material (6,000 units)	12,000	-	-
Direct material added in process	5,000	9,000	4,220
Direct labour	4,000	6,000	2,200
Direct expenses	1,000	1,800	2,411

Additional information:

- Budgeted production overhead for the week is Sh.30,500,000 and are absorbed based on direct labour cost.
- Budgeted direct wages for the week amounted to Sh.12,200,000.

Required:

- (i) Process I account. (5 marks)
- (ii) Process II account. (5 marks)
- (iii) Process III account. (6 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Rindo Ltd. is considering the type of remuneration scheme to adopt for its employees. The following information is availed to you for your analysis:

Employees	A	B	C
Actual hours worked	38	36	40
Hourly rate of pay (Sh.)	200	150	230
Output (units) : Product			
X	50	150	-
Y	80	80	80
Z	100	-	80

Additional information:

1. The standard time allowed per unit is 10 minutes for product X, 20 minutes for product Y and 30 minutes for product Z respectively.
2. For the calculation of piece-rates system, the company values each minute at the rate of Sh.8.

Required:

Calculate the earnings for each employee using:

- (i) Basic guaranteed time rates. (3 marks)
 - (ii) Piecework rates. (6 marks)
- (b) The following information has been extracted from the books of Delta Ltd. for the year to 31 July 2023:

Production	30,000 units
Sales	24,000 units
Production cost incurred:	
	Sh. '000'
Direct materials	7,200
Direct labour	1,800
Variable overheads	1,500
Fixed overheads	2,700
Selling and administrations costs:	
Salaries of sales staff	450
Variable sales commission	300
Promotion and advertising	480
Administration costs	720

The company's unit selling price is Sh. 550.

Required:

Prepare statement of profit or loss using the following costing techniques:

- (i) Marginal costing. (5 marks)
 - (ii) Absorption costing. (6 marks)
- (Total: 20 marks)**

QUESTION THREE

- (a) Describe **FOUR** distinguishing features between "financial accounting" and "management accounting". (4 marks)
- (a) Mwangaza Factory Ltd. manufactures fluorescent bulbs. The factory has taken a sample of eight employees from its production department for quality assurance.

The following data relate to the number of weeks of experience in the wiring of components and the number of components which were rejected as unsatisfactory last year:

Employee	A	B	C	D	E	F	G	H
Weeks of experience (X)	4	5	7	9	10	11	12	14
Number of rejects (Y)	21	22	15	18	14	14	11	13

Additional information:

ΣX	=	72
ΣY	=	128
ΣXY	=	1,069
ΣX^2	=	732

Required:

- (i) The least squares regression equation of rejects on experience in the form of $Y = a + bx$. (4 marks)
- (ii) Predict the number of rejects you would expect from employee K with one week of experience. (2 marks)
- (iii) If each rejected unit costs the factory Sh.55, compute the total rejection cost of employee K with one week of experience. (2 marks)

- (c) Fashion Dressmakers Ltd. makes ladies dresses using job costing method. Two jobs namely “ABC” and “XYZ” use predetermined overhead rates to apply manufacturing overhead to production departments. Job ABC is based on machine hours while job XYZ is based on percentage of materials cost.

Budgeted production and cost data for the two jobs are as follows:

	Job ABC	Job XYZ
Production overhead	Sh.304,000	Sh.220,000
Units produced	10,000	20,000
Machine hours	16,000	7,500
Materials cost	Sh.150,000	Sh.400,000

Additional information:

- At the end of the year 2022, Job ABC had incurred production overhead cost amounting to Sh.305,000 and had produced 9,800 units using 15,990 machine hours and materials costing Sh.147,000.
- Job XYZ had incurred production overhead cost amounting to Sh.216,000 and had produced 20,500 units using 7,550 machine hours and materials costing Sh.395,000.

Required:

- Compute the predetermined overhead absorption rates (OAR) for Job ABC and Job XYZ. (4 marks)
- Determine the extent of over/under absorption of overhead for each job. (4 marks)

(Total: 20 marks)

QUESTION FOUR

- Evaluate **FOUR** advantages of centralised material purchasing by an organisation. (8 marks)
- Shauri Moyo Bakery Ltd. planned production and sales for the next seven months for the financial year 2023/2024 is as follows:

Month	Production (units)	Sales demand (units)
November 2023	1,000	800
December 2023	1,200	1,000
January 2024	1,200	1,200
February 2024	1,400	1,300
March 2024	1,500	1,400
April 2024	1,500	1,600
May 2024	1,600	1,500

Additional information:

- The selling price per unit will be Sh.30,000 throughout the period. 40% of the sales are normally made on one month’s credit. The other 60% are settled in cash within the month of sale.
- Purchases of raw materials are Sh.10,000 per unit of production and will be paid after one month delay.
- Direct wages is Sh.6,000 per unit of production. Time lag in payment of wages is 50% in the month of sale and the balance in the month following month of sale.
- During the period, the business plans to advertise its products. Payment for advertisement of Sh.10,000,000 and Sh.15,000,000 will be made in January and March 2024 respectively.
- Production overheads during the period to 31 December 2023 had been at Sh.18,000,000 a month and are expected to rise by Sh.2,000,000 per month.
- A new baking oven machine will be bought and delivered in December 2023. The machine will cost Sh.66,000,000. This will be paid in three equal installments in January, February and March 2024.
- A loan of Sh.100,000,000 is being issued in December 2023 and the amount is expected to be received in early February 2024. Interest on loan at a rate of 1% per month shall be charged from February 2024.
- An outstanding tax liability of Sh.16,000,000 is due in March 2024. In the same month the company intends to dispose of surplus baking ovens with a net book value of Sh.11,000,000 for Sh.6,000,000.
- A depreciation expense is expected to be 5% of actual sales per month.
- The bank balance as at 1 January 2024 is expected to be Sh.15,000,000 deficit.

Required:

A cash budget for the four months ending 30 April 2024.

(12 marks)

(Total: 20 marks)

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QUESTION FIVE

- (a) Explain the relevance of the following terms as used in management accounting:
- (i) Break-even analysis. (2 marks)
- (ii) Responsibility centre. (2 marks)
- (iii) Batch costing. (2 marks)
- (b) Analyse **FOUR** limitations that a firm would encounter when operating a marginal costing system. (8 marks)
- (c) Tausi Tours Ltd. is a transport service company that runs five buses between two towns which are 50 kilometres apart. Seating capacity of each bus is 50 passengers. The following particulars were obtained from the books of the company for the month of March 2023:

Particulars	Fixed cost Sh. "000"	Variable cost Sh. "000"
Wages of drivers and conductors		24,000
Salaries of office staff	10,000	
Diesel and other oils		35,000
Repairs and maintenance		8,000
Taxation and insurance	12,000	
Depreciation	30,000	
Interest expense on loan	<u>20,000</u>	
Total cost	<u>72,000</u>	<u>67,000</u>

Additional information:

- Actual passengers were 75% of seating capacity.
- All buses operated on all 30 days of the month.
- Each bus made one round trip per day.

Required:

Calculate the cost per passenger per kilometre per day.

(6 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 24 April 2023. Afternoon Paper.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings. Do NOT write anything on this paper.

QUESTION ONE

- (a) Distinguish between “process costing” and “batch costing”. (4 marks)
- (b) Tegemeo Battery Ltd. manufactures long lasting batteries for both domestic and commercial vehicles. The following information is provided for the year ended 31 December 2022:

	Sh. “000”
Fixed cost	4,500,000
Total variable cost	7,500,000
Total sales	15,000,000
Target profit	6,000,000

Required:

- (i) The contribution to sales (C/S) ratio. (2 marks)
- (ii) The break-even point (BEP) in sales value. (2 marks)
- (iii) Amount of sales required to achieve the target profit. (2 marks)
- (iv) Sales value to cover extra Sh.1.5 million advertising expenditure. (2 marks)
- (c) Bongo Ltd.’s budgeted overheads for the forthcoming period applicable to its production departments; A and B are as follows:

Production department	Sh. “000”
A	240,000
B	180,000

The budgeted total costs for the same period for the service departments C and D are as follows:

Service department	Sh. “000”
C	86,000
D	44,000

Additional information:

1. The proportionate use of the services has been estimated as follows:

Production department		Service department	
A	B	C	D
50%	35%	-	15%
40%	40%	20%	-

2. Overheads are absorbed based on the following bases and hours:

Production department	Absorption basis	Budget hours
A	Direct labour hours	1,952 labour hours
B	Machine hours	1,362 machine hours

Required:

- (i) Reapportion the service departments cost to production departments using simultaneous equation method. (6 marks)
- (ii) The overhead absorption rate (OAR) of each production department. (2 marks)
- (Total: 20 marks)**

QUESTION TWO

- (a) In the context of budgetary control:
- (i) Outline **FOUR** objectives of budgeting. (4 marks)
- (ii) Highlight **FOUR** criticisms of budgeting. (4 marks)
- (b) Pamoja Enterprises Ltd. makes and sells a single product branded "PMJ" using a single type of raw materials and two types of labour.

The firm is now preparing its budget for the first quarter of the year 2023. The following information has been identified for product "PMJ".

Month	January 2023	February 2023	March 2023	April 2023
Sales demand (units)	1,000	1,500	2,500	3,200

Additional information:

- Selling price per unit will be Sh.2,500 in January 2023. It will increase by 10% per month.
- The various cost elements for production are as follows:

Raw material:	Sh.
X: (5 kgs per unit at Sh.100 per kg)	500
Labour:	
Skilled (6 hours per unit at Sh.150 per hour)	900
Semi-skilled (6 hours per unit at Sh.190 per hour)	<u>1,140</u>
Total cost	<u>2,540</u>
- Closing inventory of finished goods is 30% of the monthly sales demand. The closing inventory for December 2022 was 450 units.
- Closing inventory of raw material is 20% of the next month's requirement. The closing inventory for December 2022 was 850 units.

Required:

- (i) Production budget in units. (4 marks)
- (ii) Material purchase budget in shillings. (4 marks)
- (iii) Direct labour budget for skilled labour only. (4 marks)
- (Total: 20 marks)**

QUESTION THREE

- (a) The following information relates to several tasks at Ayub Ltd. for the month of March 2023:

1. The company received four tasks and incurred the following costs on them:

Details	Task 1 Sh."000"	Task 2 Sh."000"	Task 3 Sh."000"	Task 4 Sh."000"
Direct material issued	8,000	5,000	3,000	2,000
Direct material transferred	(1,000)	(500)	1,300	200
Direct labour cost	3,000	2,500	1,500	1,000

- Factory production overheads are absorbed at the rate of 50% of prime cost.
- On completion of a task, the company charges administration, selling and distribution cost at the rate of 30% of total factory cost.
- During the month, Tasks 1, 2 and 3 were completed.
- The company's policy is to earn a profit margin of 20% on every task completed.

Required:

- (i) Compute the total factory cost for each task done in the month of March 2023. (8 marks)
- (ii) Determine the invoice price for each of the completed task. (3 marks)
- (b) Malimali Ltd. is considering the possibility of outsourcing component “Zed” which it currently makes from Topdown Suppliers. Topdown Suppliers will supply the component which has the following requirements of an economic order quantity model:
- Annual requirement 20,000 units
 - Ordering cost Sh.1,000 per order
 - Purchase price per unit Sh.40
 - Carrying cost per annum per unit 16% of the purchase price

Additional information:

1. If Malimali Ltd. continues to make 20,000 units per annum of component Zed, its cost budget will be as follows:

	Cost per unit
	Sh.
Direct material	25
Direct labour	20
Production overheads (60% variable)	25
Distribution overheads (50% fixed)	<u>40</u>
	<u>110</u>

2. The fixed overheads above are absorbed based on a budgeted production and sales capacity of 25,000 units.
3. If Malimali Ltd. continues to make product “Zed”, then the cost of direct material will rise by 2% but direct labour cost will fall by 2%.
4. Fixed distribution overheads are unavoidable costs if Malimali Ltd. outsource the component but fixed production overheads will go down by 30%

Required:

- Advise Malimali Ltd. whether to make or buy component “Zed” from Topdown suppliers. (9 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) Highlight **FOUR** advantages of time rate system over piece rate system of labour remuneration. (4 marks)
- (b) Vendit Ltd. obtains component “K” from a specialist supplier. The daily usage for the component and the time between placing and receiving an order can vary as follows:

Economic order quantity	12,000 kgs
Average usage	600 kgs per day
Minimum usage	400 kgs per day
Maximum usage	800 kgs per day
Maximum lead time	14 days
Normal lead time	12 days
Minimum lead time	10 days

Required:

- (i) Reorder level. (2 marks)
- (ii) The maximum inventory level. (2 marks)
- (iii) The minimum inventory level. (2 marks)
- (c) A company currently remunerates its factory workers on time basis and is now considering the introduction of alternative methods of remuneration.

The following information relates to two employees for one week:

	Ali	Baba
Hours worked	44	40
Rate of pay per hour	Sh.1,200	Sh.1,400
Units of output achieved	480	390

Additional information:

1. The time allowed for each unit of output is seven standard minutes.
2. For purposes of piecework calculations each minute is valued at Sh.16.

Required:

Compute the earnings of the employees using:

- (i) Piecework rates with earnings guaranteed at 80% of pay calculated on an hourly basis. (4 marks)
- (ii) Premium bonus scheme in which bonus is based on 75% of time saved and added to pay calculated on an hourly basis. (6 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Summarise **FOUR** salient features of process costing systems. (4 marks)
- (b) Explain **TWO** costs that could be classified under the time bases of cost classification. (2 marks)
- (c) Highlight **FOUR** benefits that a firm would derive from establishing a good cost accounting system. (4 marks)
- (d) Roma Ltd. is preparing its budgets for the year ending 31 December 2024. It makes and sells a single product, which has budgeted costs and selling price as follows:

	Sh. Per unit
Selling price	45
Direct materials	11
Direct labour	8
Production overheads:	
Variable	4
Fixed	3
Selling overhead:	
Variable	5
Fixed	2
Administrative overhead:	
Fixed	4

Additional information:

1. Fixed overhead costs per unit are based on a normal annual activity level of 96,000,000 units.
2. These costs are expected to be incurred at a constant rate throughout the year.
3. Activity levels during the months of January 2024 and February 2024 were expected to be:

	January	February
	(units)	(units)
Sales	7,000,000	8,750,000
Production	8,500,000	7,750,000

4. Assume that there will be no stock held on 1 January 2024.

Required:

Prepare in columnar format, profit statements for each of the two months of January 2024 and February 2024 using:

- (i) Direct costing method. (5 marks)
- (ii) Indirect costing method. (5 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 5 December 2022. Afternoon Paper.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings. Do NOT write anything on this paper.

QUESTION ONE

- (a) Outline **FOUR** disadvantages of using the scatter graph as a method of cost estimation. (4 marks)
- (b) Remah Ltd has established the following information for the costs and revenues for the month of October 2022 at an activity level of 500 units:

	Sh. "000"
Direct materials	16,250
Direct labour	32,500
Production overheads	6,500
Selling costs	<u>8,125</u>
Total costs	63,375
Sales revenue	<u>113,750</u>
Profits	<u><u>50,375</u></u>

Additional information:

- All direct costs are variable costs.
- 20% of selling costs and 50% of the production overheads are fixed over all levels of activity respectively.

Required:

- (i) Determine cost estimation equation in the form $Y = a + bx$ using the account analysis method. (4 marks)
- (ii) Calculate the total profit at an activity level of 1,000 units. (3 marks)
- (c) Moyalematt supermarket maintains a variety of inventory.

The following information is given for stock item "Z":

1. Consumption in kilograms per month:

Month	Kilograms
January	15,000
February	6,000
March	22,000
April	20,000
May	10,000
June	15,000
July	17,000
August	12,000
September	9,000
October	8,000
November	6,000
December	10,000

2. Lead time is 5 - 8 days.

3. Annual holding cost per unit per annum is Sh.26.60.
4. The purchase price is Sh.200 and discounts are not allowed.
5. The ordering cost per order is Sh.798.
6. The annual demand is the accumulated monthly consumption.

Required:

- (i) The optimal economic order quantity (EOQ). (3 marks)
- (ii) Frequency of placing orders. (2 marks)
- (iii) Reorder level. (2 marks)
- (iv) Maximum inventory level. (2 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Outline **FOUR** assumptions of cost volume profit (CVP) analysis. (4 marks)
- (b) Highlight **FOUR** factors influencing wage rate determination. (4 marks)
- (c) Toto enterprise manufactures dolly kits for children. It is currently considering various techniques of overhead absorption that are more efficient to apply to job costing:

Cost centre	P Sh.	Q Sh.
Direct material cost	800,000	600,000
Direct labour cost	600,000	500,000
Factory overheads	600,000	400,000
Direct labour hours	40,000	50,000
Machine hours	120,000	7,500

Required:

Calculate the overhead absorption rate (OAR) on the following basis:

- (i) Percentage of direct material cost basis for cost centre P. (2 marks)
- (ii) Direct labour hours basis for cost centre Q. (2 marks)
- (iii) A particular job marked as Job number JB22 consumed the following inputs during the year:

Cost centre	P Sh.	Q Sh.
Materials issued	5,000	15,000
Direct labour cost	4,800	4,000
Direct labour hours	400	500
Machine hours	1,500	100

Additional information:

1. Administration overheads are absorbed at the rate of 20% on factory costs.
2. Profit mark-up is $33\frac{1}{3}$ % on cost.

Required:

Calculate the total cost and total sales for Job number JB22. (6 marks)

- (iv) Assuming the job number JB22 consists of 50 items, calculate the selling price per unit. (2 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Explain **FOUR** functions of management accounting in decision making. (8 marks)
- (b) Identify **FOUR** sources of loss in process costing. (4 marks)
- (b) Oilivya Ltd. manufactures an industrial lubricant, which is formed by subjecting certain crude oil chemicals to two successive processes namely; P and Q. The output of process P is passed to process Q where it is blended with other chemicals.

The process costs for period 3 were as follows:

Process P:

Material	3,000 kg at Sh.25 per kg
Labour	Sh.12,000
Process plant time:	12 hours at Sh.2,000 per hour

Process Q:

Material	2,000 kg at Sh.40 per kg
Labour	Sh.13,840
Process plant time	20 hours at Sh.1,350 per hour

Additional information:

- General overhead cost for the period amounted to Sh.27,200 and is absorbed into process costs on a process labour basis.
- The normal output of process P is 80% of input, while that of process Q is 90% of input.
- Waste matter scrapped from process P is sold for Sh.2 per kg, while that from process Q is sold for Sh.3 per kg.
- The output for period 3 were as follows:
 - Process P 2,300 kg
 - Process Q 4,000 kg
- There was no stock or work in progress at either the beginning or the end of the period, and it may be assumed that all available waste matter had been sold at the prices indicated.

Required:

Prepare the following process accounts:

- (i) Process P. (4 marks)
- (ii) Process Q. (4 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) Kandogo guest house operates service costing system.

The following costs were incurred during a 30-week year:

1. Weekly cost incurred per guest was as follows:

	Sh.
Food	25,000
Electricity for heating and cooking	3,000
Laundry and cleaning expenses	5,000
Transport expenses	10,000

- The hotel operates for 30 weeks a year.
- Fifteen guests are received per week.
- Each guest is charged Sh.100,000 per week.
- Fixed salary and supervision expenses are Sh.11,000,000 per annum.
- Rent and rates for the property per annum is Sh.4,000,000.
- Recreation and accommodation fixed costs are Sh.1,000,000 per annum.

Required:

- (i) Total cost per annum. (4 marks)
- (ii) Cost per guest per week. (3 marks)
- (iii) Hotel profit/(loss) per guest per week. (3 marks)
- (b) Furahia Ltd. operates in the entertainment and event organising industry and one of its activities is to promote concerts at locations through-out the county.

The company is examining the viability of a concert in Raha County.

Selling price, fixed costs and variable costs will comprise of the following cost structure:

	Sh.
1. Selling price per ticket	1,160
2. Variable cost:	
Per ticket	340
Sales commission	58
3. Estimated fixed costs comprise:	
Fixed hiring costs	19,815,000
Fixed administrative expenses	43,050,000
4. Expected sales were 90,000 tickets.	

Required:

- (i) The number of tickets that must be sold to break-even. (4 marks)
- (ii) The number of tickets to be sold to earn Sh.5,715,000 target profit. (2 marks)
- (iii) The profit, assuming 85,000 tickets are sold. (2 marks)
- (iv) The number of additional tickets that must be sold to cover extra cost of television advertising of Sh.13,335,000. (2 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) By citing **ONE** example for each, define the following types of costs:
- (i) Avoidable costs. (2 marks)
- (ii) Prime costs. (2 marks)
- (iii) Marginal costs. (2 marks)
- (b) Derap Enterprise wishes to prepare a master budget for the forthcoming period. Information regarding products, costs and sales levels is as follows:

Product	Q	M
Materials required:		
T (kilograms)	5	7.5
Z (litres)	2.5	10
Labour hours required		
Skilled (hours)	10	5
Semi-skilled (hours)	5	12.5
Sales level (units)	8,000	6,000
Opening inventory (units)	1,200	1,400

Additional information:

1. Opening inventory of material T was 14,075 kilograms and for material Z was 15,750 litres.
2. Closing inventory of finished goods will be sufficient to meet 20% of sales demand.
3. Closing inventory of materials will be sufficient to meet 25% of production requirements.
4. Material prices are Sh.15 per kilogram for material T and Sh.12 per litre for material Z.
5. Labour costs are Sh.120 per hour for the skilled workers and Sh.80 per hour for the semi-skilled workers.

Required:

Prepare the following functional budgets:

- | | | |
|-------|---|-----------|
| (i) | Production budgets in units only. | (3 marks) |
| (ii) | Material usage budget in kilograms and litres. | (3 marks) |
| (iii) | Material purchases budget in kilograms, litres and shillings. | (4 marks) |
| (iv) | Labour budget in hours and shillings. | (4 marks) |

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 26 November 2018.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

(a) XYZ Ltd. deals in the purchase and sale of hardware products. The company recorded the following transactions in relation to product JL-40 during the month of September 2018:

Date	Purchases		Sales	
	Quantity (Units)	Sh. per unit	Quantity (Units)	Sh. per unit
September 2	10,000	30.00		
4	6,000	32.00		
7			10,000	40.00
12	8,000	31.00		
15			3,000	42.00
17			6,000	41.00
24	10,000	28.00		
28	5,000	30.50		
29			9,000	40.00
30			5,000	40.50

Additional information:

- The opening stock of product JL-40 on 1 September 2018 comprised 7,000 units purchased at a cost of Sh.27 per unit.
- On 9 September 2018, the company reported a shortage of 400 units.
- On 20 September 2018, 1,000 units sold on 15 September 2018 were returned by a customer.
- Operating expenses for the month of September 2018 amounted to Sh.250,000.

Required:

Using the First In First Out (FIFO) method prepare:

- Stores ledger card for product JL-40 for the month of September 2018. (8 marks)
- Income statement for product JL-40 for the month ended 30 September 2018. (4 marks)

(b) The total maintenance cost and machine hours of Jumbo Ltd. for ten months were as follows:

Month	Machine Hours	Maintenance Cost Sh.,"000"
January	400	960
February	240	880
March	80	480
April	400	1,200
May	320	800
June	240	640
July	160	560
August	480	1,200
September	320	880
October	160	440

Required:

Using the least squares method, formulate the cost function.

(8 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Explain the following terms as used in management accounting:
- (i) Cost audit. (2 marks)
 - (ii) Continuous costing. (2 marks)
 - (iii) Conversion costs. (2 marks)
- (b) Generations Ltd. base their inventory levels at cost and sales value at the end of each month.

The following information relates to the months of September 2018 to December 2018:

	Opening inventory Sh.	Sales Sh.
September	687,500	-
October	550,000	1,100,000
November	675,000	875,000
December	600,000	1,050,000

Additional information:

1. The cost of goods sold is 60% of sales.
2. Purchases for the months of August 2018 and September 2018 were Sh.625,000 and Sh.450,000 respectively.
3. Payment for each month's purchases were made as follows:
 - 10% during the month of purchase.
 - 80% the following month of purchase.
 - Balance after two months of purchase.

Required:

For the months of October 2018 to December 2018, prepare:

- (i) Purchases budget schedule. (6 marks)
 - (ii) Purchases payment schedule. (6 marks)
- (c) Describe two uses of functional budgets. (2 marks)

(Total: 20 marks)

QUESTION THREE

- (a) A factory requires 1,500 units of an item per month, each costing Sh.27. The ordering cost is Sh.150 per order and the inventory carrying cost is 20 percent of the unit purchase cost. Assume a 360 day year.

Required:

- (i) Economic Order Quantity (EOQ). (2 marks)
 - (ii) The number of orders per year. (2 marks)
 - (iii) The time-lag between orders. (2 marks)
 - (iv) The total relevant cost. (2 marks)
- (b) Mauzo Ltd. manufactures an equipment which requires four components namely: A, B, C and D. The budgeted production in units and costs for each component are presented below:

	Component			
	A	B	C	D
Production (Units)	2,000	4,000	8,000	6,000
Variable cost per unit (Sh):				
Direct materials	8	10	4	8
Direct labour	16	18	8	12
Overheads	4	6	2	4
Total specific fixed cost (Sh."000")	12	10	12	30

Additional information:

1. General fixed cost amounts to Sh.60,000 per annum.
2. Mauzo Ltd. can instead of manufacturing the components, purchase one or all of them from a dealer at the price of Sh.24, Sh.42, Sh.20 and Sh.28 for components A, B, C and D respectively.

Required:

- (i) Advise Mauzo Ltd. on the component(s) that should be purchased rather than manufactured internally. (10 marks)
 - (ii) State any other factor(s) that Mauzo Ltd. should consider in the make or buy decision. (2 marks)
- (Total: 20 marks)**

QUESTION FOUR

XL Ltd. manufactures a product that passes through three processes to completion. During the month of October 2018, the cost of production was as follows:

Cost element	Total cost Sh.	Process		
		1 Sh.	2 Sh.	3 Sh.
Direct materials	333,280	100,480	169,920	62,880
Direct labour	176,320	40,400	59,360	76,560
Direct expenses	18,720	187,720	-	-
Production overheads	176,320	-	-	-

Additional information:

1. 500 units at Sh.480 per unit were issued to process 1.
2. Normal loss of units per process was estimated as follows:

Process	Rate (%)
1	10
2	10
3	5
3. Losses represent scrap which could be sold to merchants at a value as follows:

Process	Sh.
1	160
2	320
3	400
4. Actual output of each process was as follows:

Process	Units
1	440
2	400
3	382
5. There was no stock of materials or work-in-progress in any process, either at the beginning or at the end of the period.
6. The output of each process passes direct to the next process and finally to finished goods stock.
7. Production overheads are allocated to each process on a basis of 100% of the cost of direct labour.

Required:

- (a) Process 1 account. (4 marks)
 - (b) Process 2 account. (4 marks)
 - (c) Process 3 account. (4 marks)
 - (d) Finished goods stock account. (2 marks)
 - (e) Abnormal loss account. (3 marks)
 - (f) Abnormal gain account. (3 marks)
- (Total: 20 marks)**

QUESTION FIVE

- (a) Evaluate four major challenges that might be faced by a medium sized organisation in applying budgetary control. (8 marks)
- (b) Using suitable examples, discuss the following types of costs:
- (i) Fixed costs. (3 marks)
 - (ii) Variable costs. (3 marks)
 - (iii) Step cost. (3 marks)
 - (iv) Out of pocket costs. (3 marks)
- (Total: 20 marks)**
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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 4 April 2022. Afternoon paper.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings. Do NOT write anything on this paper.

QUESTION ONE

- (a) Using a suitable example in each case, explain the meaning of the following types of cost:
- (i) Differential costs. (2 marks)
 - (ii) Out of pocket costs. (2 marks)
 - (iii) Sunk costs. (2 marks)

- (b) Everest Company manufactures a single product branded “solo”.

The following information relates to the month of March 2022 for an output level of 100,000 units:

	Sh.
Direct materials	1,000,000
Direct labour costs	1,400,000
Indirect labour	300,000
Depreciation	150,000
Repairs and maintenance (50% fixed)	<u>100,000</u>
	<u>2,950,000</u>

Unit selling price Sh.80

Target profit Sh.50,000

Required:

- (i) Formulate a predictor equation in the form $y = a + bx$. (6 marks)
- (ii) Estimate the cost of producing 95,000 units. (2 marks)
- (iii) Compute the level of sale at which the company will recover all the costs. (2 marks)
- (iv) Summarise four limitations of the accounts analysis method. (4 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Management accounting system acts as a “decision support system” for providing the right information to the right people at the right time.

With reference to the above statement, discuss five characteristics of management accounting that makes it a key tool for decision making. (10 marks)

- (b) Blaze Techz Ltd. manufactures small assemblies to order and has the following budgeted overheads for the year, based on normal activity levels:

Department	Budgeted overheads (Sh.)	Overheads absorption base
Blanking	18,000	1,500 labour hours
Machining	43,000	2,500 machine hours
Welding	20,000	1,800 labour hours
Assembly	15,000	1,000 labour hours

Additional information:

1. Selling and administration overheads are 20% of factory costs.
2. An order for 250 assemblies type XR200, were made as Batch AA5901 and incurred the following costs:

Materials	Sh.3,107
Labour:	128 hours Blanking Shop at Sh.10 per hour
	452 hours Machining Shop at Sh.11 per hour
	90 hours Welding Shop at Sh.10 per hour
	175 hours Assembly Shop at Sh.9 per hour
3. A special X-ray equipment for testing the welds was hired at Sh.525.
4. The time of booking in the machine shop was 643 machine hours.
5. Selling price was Sh.150 per assembly.

Required:

- (i) Total cost of the batch. (8 marks)
- (ii) Unit cost of each assembly. (1 mark)
- (iii) Profit per assembly. (1 mark)

(Total: 20 marks)

QUESTION THREE

- (a) Bridge Ltd.'s budget included the following estimated costs for the financial year 2021 with respect to its manufacturing activities.

	Sh. "000"
Depreciation on manufacturing equipment	17,200
Cost of manufacturing supplies	3,000
Direct labour cost	86,400
Rent on manufacturing facility	7,600
Direct material cost	74,000
Manufacturing utilities cost	6,000
Maintenance cost for manufacturing facility	5,200
Administrative salaries cost	30,000

The company uses a predetermined overhead absorption rate based on machine hours. It was estimated that machine hours usage for the year 2021 would be 30,000 hours.

Required:

- (i) Identify the manufacturing overhead costs that Bridge Ltd. would use to calculate the predetermined overhead rate. (6 marks)
 - (ii) Calculate the predetermined overhead absorption rate. (2 marks)
 - (iii) Assuming that Bridge Ltd., actually used 29,200 machine hours during the financial year 2021, determine the amount of manufacturing overheads it would have applied to the work in progress during the period. (2 marks)
- (b) Bondeni Manufacturing Ltd. pays its production managers a bonus based on the company's profitability. During the two most recent years, the company maintained the same cost structure to manufacture its products.

The details are provided below.

Year	Units produced	Units sold
2020	4,000	4,000
2021	6,000	4,000

Cost data:

Direct materials	Sh.80 per unit
Direct labour	Sh.120 per unit
Manufacturing overheads (variable)	Sh.40 per unit
Manufacturing overheads (fixed)	Sh.720,000
Variable selling and administrative expenses	Sh.40 per unit sold
Fixed selling and administrative expenses	Sh.300,000

Bondeni Ltd.'s sales revenue for both years amounted to Sh.2,300,000.

Required:

Prepare income statements based on absorption costing for the years 2020 and 2021.

(10 marks)

(Total: 20 marks)

QUESTION FOUR

- (a) In the context of labour remuneration, summarise five conditions necessary for successful operation of incentive schemes. (5 marks)
- (b) In a factory, three processes are employed. The output of process A is transferred to process B and the output of process B to process C. It has been the experience that the wastage of process A is 2%, process B 5% and process C 10%. The scrap value of wastage in process A and B is Sh.200 per unit while process C wastage is Sh.500 per unit.

The expenses incurred in the month of March 2022 were as follows:

	Process		
	A	B	C
	Sh."000"	Sh."000"	Sh."000"
Materials	10,000	8,000	6,000
Wages	5,000	4,000	3,000
Manufacturing expenses	3,000	3,000	1,000
Overheads	2,000	2,000	500

In process A, 5,000 units of materials added were purchased for Sh.10,000,000. The output of each process was as follows:

Process:	Units
A	4,500
B	4,400
C	3,500

Required:

- (i) Process A account. (5 marks)
- (ii) Process B account. (5 marks)
- (iii) Process C account. (5 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Explain five limitations of cost-volume-profit (CVP) analysis. (5 marks)
- (b) Pendo Ltd. which manufactures product "wye" has prepared the following sales budget for the first five months of the year 2022:

Month	Sales budget (units)
January	10,800
February	15,600
March	12,200
April	10,400
May	9,800

Additional information:

- Inventory of finished goods at the end of every month is to be equal to 25% of the sales estimate for the next month.
- On 1 January 2022, there were 2,700 units of the product "wye" on hand.
- There is no stock of work-in-progress at the end of any month.
- Every unit requires two types of materials in the following quantities:
Material A: 4kgs
Material B: 5kgs
- Materials equal to one half of the requirements for the next month's production are to be in hand at the end of every month. This requirement was met on 1 January 2022.

Required:

Prepare the following budgets for the quarter ended 31 March 2022:

- (i) Production budget. (6 marks)
- (ii) Materials purchases budget. (9 marks)

(Total: 20 marks)



**ATD LEVEL III
PILOT PAPER**

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

December 2021.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

- (a) Define “management accounting” and give reasons why it is important to study the subject as an accounting student. (4 marks)
- (b) Define the following terms:
- (i) Direct costs. (2 marks)
 - (ii) Indirect costs. (2 marks)
 - (iii) Break-even point. (2 marks)
- (c) Bagasse company produces a liquid with the following direct costs:
- 1. Materials Sh. 42.
 - 2. Labour Sh.18.
 - 3. The company has capacity to produce 40,000 units of the liquid product. The fixed costs are Sh.1,500,000.
 - 4. The product selling price is Sh.100.

Required:

- (i) The break-even point for the product. (4 marks)
- (ii) The company receives an order of 40,000 units but the customer is requesting for a discount of 10%. should the company accept or reject the order? Justify your answer. (6 marks)

(Total: 20 marks)

QUESTION TWO

- (a) (i) Define break-even analysis. (2 marks)
- (ii) List the limitations of break-even analysis. (4 marks)
- (b) The following information was obtained from a company producing Product Zed:

	Sh.
Fixed factory overhead costs	6,000,000
Fixed selling overhead costs	120,000
Variable manufacturing cost/unit	120
Variable selling cost/unit	30
Selling price per unit	240

Required:

- (i) Calculate the break-even point for the product. (4 marks)

- (ii) Calculate the number of units required to produce a profit of Sh.280,000.00 (4 marks)
- (c) Drake Ltd. has provided projected sales and costs for the next financial year as follows:

Fixed costs (Sh.)	100,000,000
Variable costs (Sh.)	75,000,000
Production units	37,500
Selling price per unit (Sh.)	5,000

Required:

- (i) The projected profit for the year. (3 marks)
- (ii) The management wishes to lower the selling price by 20% to increase sales by 20%. Advise whether it is prudent. (3 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Describe the features of a budget. (4 marks)
- (b) Omran produces two products. The following estimates relate to the financial year ending December 2022:

Product	X	Y
Selling price per unit (Sh.)	240	350
Direct materials (kgs)	5	4
Direct labour required (hours)	4	3
Sales units	38,000	46,000
Finished products:		
01.01.2022 year beginning (units)	3,200	1,000
31.12.2022 year ending (units)	2,000	1,500

Additional information:

- Direct material cost/kg = Sh 12.00
- Labour cost/hour = Sh 20.00
- The stock of direct material at the beginning and closing of the year are expected to be 10,000 kgs and 500 kgs respectively.

Required:

- (i) Sales budget.
- (ii) Production budget.
- (iii) Labour cost budget.
- (iv) Material usage budget.
- (v) Material purchase budget.

(16 marks)

(Total: 20 marks)

QUESTION FOUR

- (a) Highlight the advantages of perpetual stores management system. (4 marks)
- (b) The following information was obtained from a stores card for four months as follows:

Month	Units purchased	Cost (Sh per unit)
January	60,000	72
February	70,000	74
March	80,000	78

April	60,000	81
Month	Sales	Price (Sh per unit)
January	70,000	82
February	60,000	84
March	70,000	88
April	65,000	91

Additional information:

1. The operating costs for the year was Sh.6,000,000.00 which was evenly distributed throughout the year.
2. The opening stock was 30,000 units which had been purchased at a price of Sh.70 per unit.
3. The organisation used FIFO method in stock management.

Required:

- (i) Outline the advantages of FIFO method in stores management. (2 marks)
 - (ii) Calculate the closing stock for the above organisation. (3 marks)
 - (iii) Prepare a store card for the organisation using FIFO method. (6 marks)
 - (iv) Calculate the profit for the company during the 4 months. (5 marks)
- (Total: 20 marks)**

QUESTION FIVE

- (a) Explain some of the challenges that have affected manufacturing businesses due to the COVID-19 pandemic. (6 marks)
- (b) Biafra Ltd. provided the following information for machine maintenance for the past eight months:

Period	Machine hours	Maintenance cost
1	10	24
2	6	22
3	2	12
4	9	28
5	8	20
6	7	19
7	4	14
8	12	30

Required:

- (i) Estimate the cost of a machine that can be repaired for 25 hours using the high low method. (4 marks)
 - (ii) Highlight the advantages of using graphs in management accounting. (3 marks)
- (c) Explain the importance of the following to a management accountant:
 - (i) Internet. (4 marks)
 - (ii) Tax expert. (3 marks)
- (Total: 20 marks)**
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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

WEDNESDAY: 15 December 2021.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

- (a) The following information was obtained from the stores record of Bandari Ltd., a retail outlet that distributes Kokakora brands in the coastal region for the month of February 2021:

Date	Receipts	
	Number of crates	Price per crate (Sh.)
4	400	550
10	500	565
15	300	575
20	400	565
25	350	550

Date	Issues	
	Number of crates	Price per crate (Sh.)
8	550	850
17	850	800
27	700	825

Additional information:

- On 31 January 2021, there were 300 crates which were valued at Sh.500 per crate.
- Bandari Ltd. uses First in First Out (FIFO) method for valuing inventories.

Required:

Stores ledger card for the month of February 2021.

(8 marks)

- (b) Best Value Ltd. manufactures three products namely; Smart, Cool and Fit. The following budget information is relevant for the year ended 30 April 2021:

	Smart	Cool	Fit
Selling price per unit (Sh.)	4,000	6,000	8,000
Variable cost per unit (Sh.)	3,200	4,800	6,400
Fixed costs (Sh.)	14,000,000	20,000,000	26,000,000
Maximum sales (Units)	35,000	15,000	50,000
Direct labour hours per unit	2	5	3
Direct materials in (kgs) per unit	16	30	20

Additional information:

- It has been estimated that the maximum direct labour hours available for the year will be 300,000 hours.
- It will neither be possible to employ additional workers nor work overtime.
- The direct materials which is imported from Saudi Arabia will be limited to a total of 1,480,000 kilograms due to an import quota imposed on the material.
- All opening and closing inventories will be zero.

Required:

- Using suitable computations, identify the limiting factor for Best Value Ltd. (4 marks)
- Compute the sales mix that will maximise profits for Best Value Ltd. (6 marks)
- Compute the resulting profit from the sales mix in (b) (ii) above. (2 marks)

(Total: 20 marks)

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Out of 4

QUESTION TWO

- (a) Smart Designs Ltd., a company that specialises in making men’s suites is in the process of planning for production cost for the next financial year. The budgeted production is estimated to be 50,000 suites. The overhead costs have been classified as either fixed or variable and are provided below:

Overheads	Cost (Sh.)
Indirect materials	450,000 (variable)
Rent	150,000 (fixed)
Electricity	40,000 (Sh.10,000 fixed)
Supplies	600,000 (variable)
Indirect labour	400,000 (Sh.150,000 fixed)
Depreciation	100,000 (fixed)
General support	200,000 (Sh.75,000 variable)

Required:

- (i) Using the accounts analysis method, formulate overhead cost function in the form of $Y = a + bx$ taking the number of suites produced as the cost driver. (6 marks)
- (ii) Using the equation obtained in (a) (i) above, estimate the overhead cost to be incurred assuming production turns out to be 60,000 suites. (2 marks)
- (b) Masenoku Electronics Ltd. has two production departments namely; A and B and two service departments; X and Y.

During the year ended 31 August 2021, the following budget details were agreed on by the company’s management:

	Production departments		Service departments	
	A	B	X	Y
	Sh.“000”	Sh.“000”	Sh.“000”	Sh.“000”
Direct materials cost	45,280	49,250		
Direct labour cost	50,000	45,000		
Total overheads	38,000	24,000	16,000	18,000
Production per direct labour hour (units)	25	20		

Additional information:

- The direct wages rate in both production departments is Sh.62.5 per hour.
- The service department costs are apportioned to the production departments as follows:

Production department:		Service department	
		X	Y
		(%)	(%)
A		60	50
B		40	50

Required:

- (i) Budgeted overheads to be absorbed by the production departments. (4 marks)
- (ii) Overhead absorption rates for each production department based on rate per unit produced and direct materials percentage. (8 marks)
- (Total: 20 marks)**

QUESTION THREE

- (a) Highlight four implications of high labour turnover in a business organisation. (4 marks)
- (b) Premier Products Ltd. manufactures three products namely; A, B and C. The company uses three types of materials; E, F and G.

The following data has been assembled for the company’s budget preparation for the month of October 2021:

Sales forecast	Product A	Product B	Product C
Sales (units)	4,000	3,000	2,000
Selling price per unit (Sh.)	250	300	350

Standard material cost per kilogram:

Material	Sh.
E	8
F	10
G	12

Standard material Requirements in kilograms:

Product:		Material		
		E	F	G
A		5	2	3
B		3	2	4
C		4	3	2

Inventories:

	Product			Material		
	A	B	C	E	F	G
1 October 2021	500	1,000	1,500	25,000	20,000	15,000
31 October 2021	1,000	1,500	2,000	35,000	30,000	25,000

Required:

For the month of October 2021, prepare:

- Sales budget in value. (3 marks)
- Production budget in units. (4 marks)
- Materials usage budget in units. (3 marks)
- Materials purchase budget in units and in value. (6 marks)

(Total: 20 marks)

QUESTION FOUR

- Outline four features of process costing technique. (4 marks)
- Lengo Ltd. manufactures a single product which passes through two processes namely; 1 and 2. The output of process 1 becoming the input of process 2. Normal losses and abnormal losses are defective units having a scrap value and cash is received at the end of the period for all such units.

The following information relates to the month of November 2021:

- Raw materials issued to process 1 was 3,000 units at a cost of Sh.50 per unit.
- There were no opening or closing work-in-progress but opening and closing stocks of finished goods were 2,000 units and 2,300 units respectively.
- Additional information on process 1 and process 2:

	Process 1	Process 2
Normal loss as a percentage of input	10%	5%
Output in units	2,800	2,600
Scrap value per unit	Sh.20	Sh.50
Additional materials	Sh.10,000	Sh.7,800
Direct wages incurred	Sh.40,000	Sh.60,000
Direct expenses incurred	Sh.100,000	Sh.140,000
Production overheads as a percentage of direct wages	75%	125%

Required:

- Process 1 account. (6 marks)
- Process 2 account. (6 marks)
- Abnormal loss account. (2 marks)
- Abnormal gain account. (2 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Explain five characteristics of a good cost accounting system. (10 marks)
- (b) List four purposes of overhead cost analysis. (4 marks)
- (c) Describe three objectives of transport costing. (6 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 30 August 2021.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

- (a) Outline six methods used in cost classification. (6 marks)
- (b) Samaki Ltd. is a company based in the industrial area that manufactures fishing hooks and fishing nets. The Company uses predetermined overhead absorption rates in applying overheads to production orders. In this respect, it uses the cost of labour in applying overheads incurred in department A while in department B it uses machine hours utilised in the department.

The company made the following projections at the commencement of the year ending 30 June 2021:

	Department A	Department B
	Sh.	Sh.
Direct materials	1,800,000	400,000
Direct labour	1,200,000	250,000
Production overheads	<u>960,000</u>	<u>220,000</u>
	<u>3,960,000</u>	<u>870,000</u>
Machine hours	96,000	22,000
Direct labour hours	80,000	25,000

During the month of June 2021, Job B25 consumed the following inputs:

	Department A	Department B
Materials issued (Sh.)	11,000	2,500
Direct labour cost (Sh.)	9,600	2,000
Machine hours	768	176
Direct labour hours	640	200

Required:

- (i) The overhead absorption rate for department A and department B. (4 marks)
- (ii) The total cost of production of Job B25. (6 marks)
- (iii) At the end of June 2021, the actual factory cost incurred amounted to Sh.944,000 in department A and Sh.231,000 in department B.

Determine the over or under absorbed overhead for each department and for the entire factory. (4 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Describe five conditions that must be satisfied for an effective costing system to operate in an organisation. (10 marks)
- (b) ABC Ltd. produces three products namely X, Y and Z. The following data relates to the three products:

Details	Product			Total
	X	Y	Z	
	Sh.	Sh.	Sh.	Sh.
Sales	250,000	180,000	150,000	580,000
Total costs	<u>200,000</u>	<u>200,000</u>	<u>120,000</u>	<u>520,000</u>
Profit (loss)	<u>50,000</u>	<u>(20,000)</u>	<u>30,000</u>	<u>60,000</u>

Additional information:

- Total costs comprise 75% variable and 25% fixed.
- The directors of ABC Ltd. consider Product 'Y' as a loss making and therefore should be discontinued.

Required:

Using suitable computations, advise the management of ABC Ltd. on whether to discontinue production of product 'Y'.
(10 marks)

(Total: 20 marks)**QUESTION THREE**

Makao Ltd. values, advertises and sells residential properties on behalf of its customers. The company has been in business for only a short time and is preparing a cash budget for the first four months of the year 2022.

The expected sales of residential properties are as follows:

Year	2021	2022	2022	2022	2022
Month	December	January	February	March	April
Units sold	10	10	15	25	30

Additional information:

- The average price of each property is Sh.18,000,000 and Makao Ltd. charges a fee of 3% of the value of each property sold.
- The company receives 10% of the charged fee in the month of sale and remaining balance in the following month.
- The company has 9 employees who are paid on a monthly basis. The average salary per employee is Sh.3,500,000 per year.
- If more than 20 properties are sold in a given month, each employee is paid in that month a bonus of Sh.14,000 for each additional property sold.
- Variable expenses are incurred at the rate of 0.5% of the value of each property sold and these expenses are paid in the month of sale.
- Fixed overheads of Sh.430,000 per month are paid in the month in which they arise.
- Makao Ltd. pays interest every three months on a loan of Sh.20,000,000 at an interest rate of 6% per annum. The last instalment payment in each year is paid in the month of December.
- An outstanding tax liability of Sh.9,580,000 is due to be paid in the month of April 2022. In the same month, Makao Ltd. intends to dispose of surplus vehicles, with a net book value of Sh.1,500,000 for Sh.2,000,000.
- The cash balance at the beginning of January 2022 is expected to be a deficit of Sh.4,000,000.

Required:

Prepare a monthly cash budget for the months of January 2022 to April 2022.

(20 marks)**QUESTION FOUR**

The following information relates to Product "XX", the only product manufactured and sold by Acumen Ltd.

	Price per unit
	Sh.
Selling price	70
Direct material cost	25
Direct labour cost	20
Variable production overhead	5
Variable sales and marketing overhead	2

The following levels of activity took place over the first three months of the product's life:

	Sales units	Production units
September 2020	4,750	5,000
October 2020	5,500	6,000
November 2020	6,500	7,000

Additional information:

- Budgeted fixed production overhead was Sh.300,000 per annum.
- Actual fixed production overhead for the period was Sh.25,000 per month.
- Sales and marketing overheads of Sh.25,000 per month and administration overhead of Sh.18,750 per month were in line with the budget for that period.

4. All fixed overhead costs are budgeted on the basis of a projected volume of 75,000 units per year and all costs are expected to be incurred at a constant rate throughout the year.
5. The business does not expect to have any inventory as at 1 September 2020.

Required:

- (a) Statement of profit or loss for each month using each of the following methods:
 - (i) Absorption costing. (7 marks)
 - (ii) Marginal costing. (7 marks)
 - (b) Calculate the under/over absorbed fixed production overhead for each month. (3 marks)
 - (c) Explain the reason for any difference in the reported profit under the two method for each month. (3 marks)
- (Total: 20 marks)**

QUESTION FIVE

- (a) Outline four advantages of piece rate method of labour remuneration. (4 marks)
- (b) An employee is compensated on differential piece rate basis. The following schedule is applied to determine his remuneration:

Number of units produced	Wage rate per unit Sh.
1 - 250	65
251 - 500	72.5
501 - 1,000	75
Over 1,000	77.5

James Karanja completed 1,680 units during the month of July 2021.

Required:

Determine the wages payable to him.

(4 marks)

- (c) Best Ways Product Kenya Ltd. operates cost and financial accounting system. The following balances from the final accounts of the company for both systems are available to you as the company's financial and management accountant for the year ended 31 December 2020.

	Sh. "000"
Net profit as per financial accounts	95,670
Net profit as per cost accounts	100,140
Dividends paid	1,800
Loss due to theft and pilferage charged to financial accounts	390
Stock depreciation charged to financial accounts	1,290
Stores adjustment credited in financial accounts	630
Bank interest credited in financial accounts	345
Tax provision in financial accounts	900
Interest received not included in cost accounts	675
Depreciation recovered in cost accounts	5,925
Depreciation charge in financial accounts	5,490
Excess administration costs recovered	6,375
Factory costs under recovered	8,550

Required:

A reconciliation statement of the cost accounts and financial accounts profits for the year ended 31 December 2020.

(12 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 17 May 2021.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

- (a) Describe four assumptions of cost-volume-profit (C-V-P) analysis. (4 marks)
- (b) Westwood Holdings Ltd. is a manufacturer of camping trailers. The factory is located near Kakamega town in Kenya and nearly 70% of the company's output is exported to Uganda, Rwanda and Burundi.

The fixed costs are Sh.200,000,000 per annum while the variable costs are Sh.600,000 per trailer. The trailers are sold at Sh.800,000 each.

Required:

- (i) Explain the term "contribution". (1 mark)
- (ii) The contribution made by each trailer. (2 marks)
- (iii) The number of trailers that Westwood Holdings Ltd. should sell in order to break-even. (3 marks)
- (iv) The profit to be made by Westwood Holdings Ltd. assuming 2,000 trailers are sold. (3 marks)
- (v) Due to a new entrant in the market, Westwood Holdings Ltd. is forced to lower its selling price to Sh.700,000 per trailer in the coming year.
- Evaluate the impact that this price cut will have on the company's annual profit. (4 marks)
- (vi) Summarise three limitations of the cost-volume-profit (C-V-P) analysis. (3 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Cost classification is the grouping of related costs for the purposes of cost control to facilitate cost prediction and to aid decision making. With regard to this statement, identify and explain the following bases of cost classification:

- (i) Relevance. (2 marks)
- (ii) Traceability. (2 marks)
- (iii) Controllability. (2 marks)
- (iv) Discretion. (2 marks)

- (b) Bondeni Ltd. is a manufacturing company which is divided into two production departments namely; A and B and two service cost centres X and Y.

The following is the summary of overhead costs for the month of September 2020:

	Sh.	Sh.
Works manager's salary		40,000
Power		210,000
Contribution to provident fund		90,000
Plant insurance		40,000
Depreciation of plant and machinery		200,000
Canteen expenses		120,000
Rent		60,000
Indirect wages:		
A	122,000	
B	96,000	
X	100,000	
Y	<u>50,000</u>	
		<u>368,000</u>
		<u>1,128,000</u>

The following information is also provided from the various departments:

	Department			
	Production		Service	
	A	B	X	Y
Number of employees	16	8	4	4
Area occupied (in square feet)	2,000	3,000	500	500
Value of plant (Sh.)	750,000	1,000,000	250,000	-
Wages (Sh.)	40,000	20,000	10,000	5,000
Horse power ratio	3	3	1	-

Required:

Apportion the above overhead costs to the various departments using the most suitable bases. (12 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Explain two differences between "interlocking cost book keeping system" and "integrated cost book keeping system". (4 marks)
- (b) The Knickers Company manufactures rocking chairs. Budgeted sales for the first five months of the year 2021 are as follows:

	Budgeted sales (units)
January	200
February	240
March	180
April	160
May	240

Each rocking chair requires 10 square feet of Oak wood at a cost of Sh.2,000 per square foot. The company wants to maintain an inventory of chairs equal to 25% of the following month's sales. At the beginning of the year, 40 chairs were in stock.

Assume the company maintains an inventory of Oak wood equal to 10% of the next months' needs. At the beginning of the year, 240 square feet of Oak wood were in stock. Inventory of Oak wood as at 31 March 2021 is estimated to be 180 square feet.

Required:

- (i) Production budget, in units, for each of the first four months. (8 marks)

- (ii) Purchases budget, in shillings, for each of the first three months. (8 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Explain four applications of marginal costing in an organisation. (8 marks)

(b) Modern Computers Ltd. deals in new and refurbished computers. The old computers are repaired and then sold at a slightly lower price. Repair costs have been fluctuating greatly and the management wants to establish a predictable cost relationship for cost control purposes.

The following details have been obtained from the records of the company for the past eight weeks regarding the number of computers repaired and total cost incurred:

Week	Number of computers repaired	Total cost incurred Sh."000"
1	300	232
2	200	195
3	600	320
4	500	290
5	400	248
6	450	240
7	450	230
8	350	230

Required:Formulate the cost function in the form of $y = a + bx$ using:

(i) The high-low method. (4 marks)

(ii) The regression analysis method. (6 marks)

(iii) In week 9, the company expects delivery of 550 computers to be repaired. Using the equation obtained in (b) (ii) above, estimate the total cost to be incurred. (2 marks)

(Total: 20 marks)**QUESTION FIVE**

(a) Explain three objectives of material control in an organisation. (6 marks)

(b) Ng'arisha Chemicals Limited produces a range of products including a detergent branded "Ng'ara" which passes through three processes before completion and transfer to finished goods stock.

During the month of April 2020, data relating to Ng'ara was as follows:

	Process			Total Sh.
	1 Sh.	2 Sh.	3 Sh.	
Basic raw material (10,000 units)	6,000	-	-	6,000
Materials added	8,500	9,500	5,500	23,500
Direct wages	4,000	6,000	12,000	22,000
Direct expenses	1,200	930	1,340	3,470
Production overheads	-	-	-	16,500
Output (units)	9,200	8,700	7,900	
Expected loss (%)	10	5	10	

Additional information:

1. There was no stock of work-in-progress at the beginning or at the end of any process.

2. Normal process loss was scrapped as follows:

Process	Price per unit (Sh.)
1	0.2
2	0.5
3	1.0

3. Production overheads are absorbed as a percentage of direct wages.

Required:

(i) Process 1 account. (4 marks)

(ii) Process 2 account. (4 marks)

(iii) Process 3 account. (4 marks)

(iv) Abnormal gain account. (2 marks)

(Total: 20 marks)



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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 23 November 2020.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

- (a) Max Ltd. manufactures a product branded "Maxim". Some of the manufacturing expenses are easily identifiable as fixed or directly variable with production.

The following information relates to the first 10 months of production:

Month	Number of units produced (Sh.)	Factory overheads (Sh.)
1	1,500	800
2	2,000	1,000
3	3,000	1,350
4	2,500	1,250
5	3,000	1,300
6	2,500	1,200
7	3,500	1,400
8	3,000	1,250
9	2,500	1,150
10	1,500	800

Required:

Formulate the cost function in the form of $Y = a + bX$ using:

- (i) The high-low method. (4 marks)
- (ii) The ordinary least squares method. (8 marks)
- (b) A manufacturing company has disclosed a net loss of Sh.8,750,000 as per the cost accounting records for the year ended 31 March 2020. However, their financial accounting records disclosed a net loss of Sh.7,192,500 for the same period.

A scrutiny of the data of both sets of books of accounts revealed the following information:

	Sh.
Factory overheads (over-absorbed)	475,000
Administration overheads (under-absorbed)	327,500
Depreciation charged in financial accounts	2,250,000
Depreciation charged in cost accounts	2,422,500
Interest on investments not included in cost accounts	627,500
Income tax provided in financial accounts	72,500
Transfer fees (credit in financial accounts)	125,000
Preliminary expenses written off	275,000
Under-valuation of opening stock in cost accounts	62,500
Under-valuation of closing stock in cost accounts	175,000

Required:

A statement reconciling the net loss as per cost accounts and the net loss as per financial accounts.

(8 marks)

(Total: 20 marks)

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QUESTION TWO

- (a) Explain five differences between financial accounting and management accounting. (10 marks)
- (b) Robin Highlands Ltd. imports a high value component for its manufacturing process. The following data relating to the component, has been extracted from Robin Highlands records for the last twelve months:

Maximum usage in a month	300 units
Minimum usage in a month	200 units
Average usage in a month	225 units
Maximum lead time	6 months
Minimum lead time	2 months
Re-order quantity	750 units

Required:

- (i) Re-order level. (2 marks)
- (ii) Maximum stock level. (3 marks)
- (iii) Minimum stock level. (3 marks)
- (iv) Average stock level. (2 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Cost accounting and management accounting specialises in providing information that firm managers find useful for internal management of operations.

In light of the above statement, highlight four tasks that managers are able to perform by utilising the said information. (4 marks)

- (b) A small manufacturing firm produces a single product branded "Zed". The budgeted sales for the month of December 2020 is for 10,000 units at a selling price of Sh.2,000 per unit.

Additional information:

1. Two components of inputs are used in the production of one unit of product Zed.

Component (Input)	Number	Unit cost of each component	
		Sh.	
X	5	20	
Y	3	10	

2. Stocks at the beginning of the month are budgeted as follows:

- 4,000 units of finished goods at a unit cost of Sh.1,050
- Component X: 16,000 units at a cost of Sh.20
- Component Y: 9,600 units at a unit cost of Sh.10

3. Production of each unit of product Zed requires the following labour hours:

Department	Hours per unit	Labour rate per hour	
		Sh.	
Production	4	100	
Finishing	2	140	

4. Factory overhead is absorbed into unit cost on the basis of direct labour hours. The budgeted factory overheads for the month of December 2020 amount to Sh.1,920,000.

5. The administration, selling and distribution overheads for the month are budgeted at Sh.5,500,000.

6. The company plans a reduction of 50% in quantity of finished stock at the end of the month and an increase of 25% in the quantity of each input component.

Required:

For the month of December 2020 prepare:

- (i) Sales budget. (1 mark)
- (ii) Production quantity budget. (3 marks)
- (iii) Material usage budget. (2 marks)
- (iv) Material purchases budget. (3 marks)
- (v) Direct labour budget. (3 marks)
- (vi) Budgeted income statement. (4 marks)

(Total: 20 marks)

QUESTION FOUR

- (a) Costs for decision making could be classified according to relevance. A cost is relevant if it can be changed by a decision taken.

In reference to the above statement and using suitable examples, explain the meaning of the following costs and state whether they are relevant or not relevant for decision making:

- (i) Sunk cost. (3 marks)
- (ii) Opportunity cost. (3 marks)

- (b) Evanda Ltd. operates three segments. The income statement below for the segments imply that the company could improve profitability if segment X is eliminated.

Income statement for the year ended 31 March 2020:

Segment	X Sh. "000"	Y Sh. "000"	Z Sh. "000"
Sales	87,000	210,000	200,000
Cost of goods sold	(67,000)	(82,000)	(85,000)
Sales commission	(12,000)	(22,000)	(20,000)
Contribution margin	8,000	106,000	95,000
General fixed overheads	(20,000)	(20,000)	(20,000)
Advertising expenses	(6,000)	(18,000)	-
Net income	(18,000)	68,000	75,000

Additional information:

- The general fixed overheads relates to the salary of the Chief Executive Officer (CEO) which has been allocated equally to the segments.
- The advertising expenses are specific to the individual segments.

Required:

- Prepare comparative income statements for the company as a whole under the two alternatives, that is, when segment X is retained and when segment X is eliminated. (10 marks)
 - Advise the management of Evanda Ltd. the effect on profitability assuming segment X is eliminated. (4 marks)
- (Total: 20 marks)**

QUESTION FIVE

- (a) In the context of labour remuneration, examine six limitations of co-partnership and profit sharing scheme. (6 marks)
- (b) "NF" is an industrial lubricant which is formed by subjecting certain crude chemicals to two successive processes. The output of process 1 is passed to process 2 where it is blended with other chemicals.

The process cost for the month of April 2020 were as follows:

Process 1

Material:	3,000 kgs at Sh.25 per kg.
Labour:	Sh.12,000
Process plant time:	12 hours at Sh.2,000 per hour

Process 2

Material:	2,000 kgs at Sh.40 per kg.
Labour:	Sh.8,400
Process plant time:	20 hours at Sh.1,350 per hour

Additional information:

- General overheads for the month of April 2020 amounted to Sh.35,700 and is absorbed into process costs based on process labour.
- The normal output of process 1 is 80% of input, while that of process 2 is 90% of input.

3. Waste matter from process 1 is sold for Sh.20 per kg while that from process 2 is sold for Sh.30 per kg.
4. The output for the month of April 2020 was as follows:
- | | |
|-----------|-----------|
| Process 1 | 2,300 kgs |
| Process 2 | 4,000 kgs |
5. There was no stock or work-in-progress at either the beginning or the end of the period.

Required:

- (i) Process 1 account. (4 marks)
- (ii) Process 2 account. (4 marks)
- (iii) Abnormal gain account. (2 marks)
- (iv) Abnormal loss account. (2 marks)
- (v) Normal loss account. (2 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

TUESDAY: 26 November 2019.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

- (a) Summarise six objectives of management accounting. (6 marks)
- (b) Mantex Ltd. has two production departments namely: assembly and finishing. The company has been using a plantwide predetermined overhead rate based on direct labour hours.

The following estimates were made for the year ended 30 June 2019:

	Assembly	Finishing	Total
Manufacturing overheads (Sh.)	200,000	100,000	300,000
Direct labour hours	40,000	35,000	75,000
Machine hours	5,000	16,000	21,000

Mantex Ltd. started and completed Job I005 during the year. The job order cost sheet indicated the following:

Material requisitioned	Sh.18,000
Direct labour cost	Sh.16,000
Direct labour hours:	
Assembly	1,700
Finishing	1,300
Machine Hours:	
Assembly	1,000
Finishing	700

A total of 2,000 units were produced on Job I005.

Required:

Determine the total cost and the unit cost for each of the 2,000 units produced by Job I005 assuming that Mantex Ltd. uses:

- (i) A plantwide predetermined overhead rate based on direct labours. (6 marks)
- (ii) Separate department overhead rates, based on direct labour hours for assembly department and machine hours for finishing department. (8 marks)
- (Total: 20 marks)

QUESTION TWO

- (a) Explain four advantages of using simple linear regression analysis method. (8 marks)
- (b) Safiri Tours and Travel Ltd. operates tourist travel services in the game parks around East Africa. The company is in the process of purchasing a tour van. The following details relating to the van are provided:

	Sh.
Cost of the van	5,500,000
Trade-in price after 2 years or 60,000 Kilometres is expected to be	1,500,000
Spare parts per 1,000 kilometres	20,000
Maintenance every 6 months costing	60,000
Vehicle licence per annum	80,000
Insurance per annum	150,000

Additional information:

1. The company purchases petrol in barrels at a cost of Sh.1,900 per barrel.
2. The average mileage per barrel is 25 kilometres.

Required:

A cost analysis schedule for mileages of 5,000, 10,000, 15,000 and 30,000 kilometres per annum showing the following details:

- | | | |
|--------------------------|------------------------------|-----------|
| (i) | Total variable cost. | (2 marks) |
| (ii) | Variable cost per kilometre. | (2 marks) |
| (iii) | Total fixed cost. | (2 marks) |
| (iv) | Fixed cost per kilometre. | (2 marks) |
| (v) | Total cost. | (2 marks) |
| (vi) | Total cost per kilometre. | (2 marks) |
| (Total: 20 marks) | | |

QUESTION THREE

(a) Citing appropriate examples, explain the meaning of the following terms as used in cost classification:

- | | | |
|------|-------------------|-----------|
| (i) | Imputed cost. | (3 marks) |
| (ii) | Incremental cost. | (3 marks) |

(b) Jane Atieno has developed a new product that she has decided to produce and market. To proceed with the project, Jane will have to quit her present job, where she earns Sh.300,000 per month.

Jane has found premises to rent for Sh.50,000 per month that will house the production facilities. In addition, she will lease equipment that will be used to manufacture the product, at Sh.10,000 per month.

Jane had purchased all other required tools five years ago for Sh.150,000. Material costs to make the product are estimated at Sh.300 per unit while monthly advertising costs for the product are estimated at Sh.60,000.

Required:

Complete the chart below by placing an "X" under each heading that helps to identify the costs involved. There can be "Xs" placed under more than one heading for a single cost.

	Opportunity cost	Sunk cost	Variable cost	Fixed Cost	Prime cost	Conversion cost	Period cost	Differential cost
Rent for building								
Original cost of tools								
Equipment leased								
Material cost								
Present salary								
Advertising								

(7 marks)

(c) Bullock Ltd. assembles bicycles for sale in the local market. They produce 4,050 bicycles annually.

The tyres used in these bicycles (2 for each bicycle) are purchased from an outside supplier at a unit cost of Sh.450. The annual holding cost is 10% of the value per tyre while the cost of making an order from the supplier is Sh.1,000.

Required:

- (i) Determine the number of the tyres that should be ordered in each order if the relevant costs are to be minimised. (4 marks)
- (ii) Calculate the minimum total relevant cost if orders are made according to the plan established in (c) (i) above. (3 marks)

(Total: 20 marks)

QUESTION FOUR

- (a) The standard cost per unit of product "J" manufactured by Design Manufacturing Ltd. is provided below:

	Sh.
Direct material	120
Direct labour	130
Variable overheads	150
Fixed overheads	<u>200</u>
Total production cost	600
Standard profit	<u>150</u>
Selling price	<u>750</u>

Additional information:

1. The actual data for the month of October 2019 was as follows:

	Units
Opening stock	14,000
Closing stock	12,500
Sales (Sh.700 per unit)	25,000

2. Actual fixed overheads incurred amounted to Sh.4,500,000.

Required:

Income statement using:

- (i) Marginal costing. (8 marks)
- (ii) Absorption costing. (8 marks)
- (b) Reconciliation statement for the profits obtained in (a) (i) and (a) (ii) above. (4 marks)
- (Total: 20 marks)**

QUESTION FIVE

- (a) The following information was extracted from the books of Imara Ltd. from the forecasts made for the last five months of the year ended 31 December 2018:

Month	Sales Sh."000"	Purchases Sh."000"	Overheads Sh."000"	Depreciation Sh."000"	Wages Sh."000"
August	42,000	24,000	4,200	320	13,000
September	26,000	25,000	3,200	320	9,000
October	28,000	14,000	3,600	320	9,600
November	32,000	16,000	3,400	320	12,000
December	38,000	18,000	3,800	320	12,000

Additional information:

- All purchases are on credit and suppliers are paid two months after the date of transaction.
- 25% of the sales are on credit. Debtors are expected to settle their accounts the month after which sales took place.
- Wages are paid in cash as they become due.
- The bank balance on 1 October 2018 was estimated to be Sh.3,600,000.
- Overheads are paid in the month in which they are incurred.
- Depreciation expense is included in the overheads provided above.

Required:

Cash budget for the fourth quarter showing the months of October, November and December 2018. (12 marks)

- (b) Baraka manufacturers operate separate financial accounts and cost accounts. The cost accountant maintains the cost ledgers while the chief accountant maintains the financial ledgers.

The financial accounting profit for the year ended 30 September 2019 amounted to Sh.29,250,000 while the cost accounting profit for the same period amounted to Sh.36,270,000.

The following information relating to the year ended 30 September 2019 is provided:

1. Debenture interest of Sh.5,070,000 was paid during the year.
2. Rent of Sh.9,750,000 was received during the year.
3. Goodwill amounting to Sh.7,800,000 was written off.
4. Machinery with a net book value of Sh.5,850,000 was sold for Sh.8,190,000.
5. Notional rent charge of Sh.5,460,000 was charged in the cost accounts.
6. Discounts allowed amounted to Sh.2,730,000 while discounts received amounted to Sh.1,950,000.
7. Overheads absorbed in cost accounts amounted to Sh.78,000,000 while actual overheads incurred amounted to Sh.85,800,000
8. Valuation of stocks using two approaches are provided below:

	Financial accounts	Cost accounts
	Sh.	Sh.
Opening stock of raw materials	6,240,000	8,190,000
Opening stock of finished goods	18,330,000	16,380,000
Closing stock of raw materials	10,530,000	13,260,000
Closing stock of finished goods	15,210,000	15,600,000

Required:

A statement reconciling the cost profit and financial profit for the year ended 30 September 2019.

(8 marks)

Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 20 May 2019.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

- (a) Describe four characteristics of a good labour remuneration system. (8 marks)
- (b) Bidii Enterprises applies an incentive scheme of labour remuneration.

The following data is provided for three employees:

Details	Jane	Peter	Anne
Time allowed per unit (Hours)	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{2}$
Units produced	474	684	175
Time taken (Hours)	78	72	80
Basic pay per hour (Sh.)	600	600	300
Rejected units	54	84	25

Additional information:

- Bonus is paid at 50% of the normal wage rate for every hour saved.
- No penalty is imposed on rejected output.

Required:

For each of the above employees, determine:

- (i) Bonus payable. (5 marks)
- (ii) Gross wages payable. (4 marks)
- (iii) Wages cost per unit made. (3 marks)
- (Total: 20 marks)**

QUESTION TWO

- (a) Distinguish between "period costs" and "irrelevant costs". (4 marks)

- (b) AMC Ltd. manufactures three products namely; A, B and C. The processes by which they are manufactured are independent of one another and the sales of any one product are in no way affected by the prices or volume of sales of the other products.

The company's budgeted income statement is as follows:

Details	Product		
	A Sh.	B Sh.	C Sh.
Sales	30,000	20,000	150,000
Production cost:			
Variable	(16,000)	(8,000)	(96,000)
Apportioned fixed	<u>(2,000)</u>	<u>(6,000)</u>	<u>(32,000)</u>
Gross profit	12,000	6,000	22,000
Selling costs:			
Variable	(5,400)	(5,200)	(5,400)
Apportioned fixed	<u>(1,400)</u>	<u>(1,400)</u>	<u>(1,200)</u>
Net profit/(loss)	<u>5,200</u>	<u>(600)</u>	<u>15,400</u>

Required:

Advise the management of AMC Ltd. on whether Product B should be discontinued.

(8 marks)

- (c) Corneril Ltd. has a weekly demand of 16 units of Product Zed. The unit cost of Product Zed is Sh.55 while fixed cost per order is Sh.4,400.
 Corneril Ltd. is financed at a cost of 20% per annum. The company works for 50 weeks in a year.
Required:
 The annual total inventory costs. (8 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Jaribu Ltd. has been facing challenges in the control of operating costs. A consultant has advised the management that they need to understand the behaviour of the costs for control purposes.

The management accountant has provided the following data which relates to the production of 250 units:

	Sh.
Direct materials cost	80,000
Direct labour cost	120,000
Indirect labour cost (fixed)	3,000
Indirect materials cost (fixed)	18,000
Depreciation cost (fixed)	7,000
Rent (fixed)	15,000

- Required:**
 Formulate a cost function in form of $Y = a + bx$ using accounts analysis method. (6 marks)

- (b) Kamama Ltd. operates separate cost accounting and financial accounting systems.

The following information for the year ended 30 April 2019 is available:

	Sh.
Cost of finished goods produced	512,050
Cost of goods sold	493,460
Direct materials issued	197,750
Direct wages	85,480
Production overhead (as per financial accounts)	208,220
Direct materials purchases	216,590

Additional information:

1. In the cost accounts, additional depreciation of Sh.12,500 per year is to be charged.
2. Production overheads are absorbed at the rate of 250% of direct wages.
3. The following were the balances as at 1 May 2018:

	Sh.
Stores control account	54,250
Work-in-Progress control account	89,100
Finished goods control account	42,075

- Required:**
- (i) Stores control account. (3 marks)
 - (ii) Work-in-Progress control account (5 marks)
 - (iii) Finished goods control account (3 marks)
 - (iv) Production overhead control account. (3 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) Identify four differences between job order costing and process costing. (8 marks)
- (b) BetterCare Ltd. is a health facility that operates two branches in the country namely; Tibu and Afya.

For the month of April 2019, the following information was available:

	Branch	
	Tibu	Afya
Number of beds	780	500
Number of inpatients	23,472	8,165
Average stay (days)	7.5	19
Number of outpatients	216,500	63,920

Details	Costs breakdown			
	Tibu branch		Afya branch	
	Inpatient Sh.	Outpatient Sh.	Inpatient Sh.	Outpatient Sh.
Supplies and drugs	1,821,520	693,600	1,551,350	285,450
Medical staff	8,729,100	3,308,950	6,832,700	1,975,050
Support services	2,210,500	2,563,700	1,845,380	1,591,620
General services	<u>3,524,470</u>	<u>1,721,800</u>	<u>1,937,410</u>	<u>635,600</u>
Total costs	<u>16,285,590</u>	<u>8,288,050</u>	<u>12,166,840</u>	<u>4,487,720</u>

Required:

For each branch, compute:

- (i) Cost per inpatient. (6 marks)
- (ii) Cost per outpatient. (6 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Summarise six functions of a budget committee. (6 marks)
- (b) Anwa Ltd. manufactures two products: XL and YL, using two types of materials; M and N.

The following information relates to the production activities of the company in the month of March 2019:

1. Budgeted sales:

Product	Quantity (Kgs.)	Price per unit (Sh.)
XL	1,250	215
YL	3,111	302

2. Budgeted materials to be used per unit:

Material	M	N
Unit cost (Sh.)	90	60
Quantity (Kgs.):		
XL	6	4
YL	2	2

3. The following inventories are expected:

Finished products	Opening inventories (Kgs.)	Closing inventories (Kgs.)
XL	200	501
YL	443	333
Materials:		
M	221	100
N	50	155

Required:

- (i) Sales budget in value. (2 marks)
- (ii) Production budget. (4 marks)
- (iii) Material usage budget. (4 marks)
- (iv) Material purchases budget. (4 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 21 May 2018.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

- (a) Highlight four characteristics of a good cost and management accounting system. (4 marks)
- (b) Brokem Ltd. manufactures three products namely; Red, Green and Yellow. The following budget information is relevant for the year ending 31 December 2018:

	Red	Green	Yellow
Selling price per unit (Sh.)	400	600	800
Variable cost per unit (Sh.)	320	480	640
Fixed cost (Sh.)	14,000,000	20,000,000	26,000,000
Maximum sales in units	350,000	150,000	500,000
Direct labour hours per unit	2	5	3
Direct materials in kilograms per unit	16	30	20

Additional information:

1. It has been estimated that the maximum direct labour hours available for the year will be 3,000,000.
2. It will not be possible to employ additional workers nor work overtime.
3. The direct materials which are imported will be limited to a total of 14,800,000 kilograms.
4. All opening and closing stocks will be nil.

Required:

- (i) Determine which will be the limiting factor for Brokem Ltd. between labour hours and direct materials for the year ending 31 December 2018. (4 marks)
- (ii) Compute the sales mix that will maximise profits for the year ending 31 December 2018. (8 marks)
- (iii) Determine the profit at the maximum sales production. (4 marks)
- (Total: 20 marks)

QUESTION TWO

- (a) Using appropriate examples, explain the following bases of cost classification:
- (i) Cost behaviour. (2 marks)
- (ii) Identity with stock. (2 marks)
- (iii) Controllability. (2 marks)
- (b) A manufacturing company has disclosed a net loss of Sh.213 million as per the cost accounting records for the year ended 31 December 2017. However, the financial accounting records disclosed a net loss of Sh.258 million for the same period.

The scrutiny of data from the two sets of accounts revealed the following information:

	Sh. "000"
Factory overheads under-absorbed	5,000
Administrative overheads over-absorbed	3,000
Depreciation charged in financial accounts	70,000
Interest on investments not included in cost accounts	20,000
Depreciation charged in cost accounts	80,000
Income tax provided in financial accounts	65,000
Transfer fees credited in financial accounts	2,000
Preliminary expenses written off in the financial accounts	3,000
Over-valuation of closing stock of finished goods in cost accounts	7,000

Required:

Prepare a memorandum reconciliation account. (6 marks)

- (c) Q Ltd. manufactures a single product and uses absorption costing method. The following data relates to the performance of the entity during the month of April 2018:

	Sh. "000"
Profit	37,000
Over-absorbed overheads	24,000
Sales (48,000 units)	720,000
Non-production overheads (all fixed costs)	275,000
Opening inventory	144,000
Closing inventory	162,000

Additional information:

- Units of inventory are valued at Sh.9,000 each, consisting of a variable cost of Sh.3,000 and a fixed overhead cost of Sh.6,000.
- All overhead costs are fixed costs.

Required:

- Determine the actual production overhead cost for the month of April 2018. (4 marks)
- Compute the profit that would have been reported in April 2018 if Q Ltd. had used marginal costing method. (4 marks)

(Total: 20 marks)

QUESTION THREE

- Discuss four limitations of a budgetary control system in a county government. (8 marks)
- Alltime Supplies Ltd. has approached Realtime Bank Ltd. for an overdraft facility to meet its cash requirements.

The following information is provided:

Month	Sales (Sh.)	Purchases (Sh.)	Wage (Sh.)
June 2018	1,800,000	2,000,000	200,000
July 2018	2,600,000	3,000,000	400,000
August 2018	3,000,000	2,600,000	600,000
September 2018	4,000,000	4,200,000	800,000
October 2018	4,200,000	4,000,000	1,000,000
November 2018	4,800,000	4,600,000	1,200,000
December 2018	5,000,000	4,000,000	1,200,000

Additional information:

- 50% of credit sales are realised in the month following the sales and the remaining 50% in the second month following the sales.
- 75% of purchases are cash purchases. The balance is credit purchases. Creditors are paid in the month following the month of purchase.
- Monthly rent payment is Sh.50,000.
- Overheads are 10% of purchases, paid in cash in the same month.

5. Advance income tax is usually paid in the month of November every year.
6. Bonus payable to workers relating to the previous year amounts to Sh.1,200,000. The management has decided to pay Sh.1,000,000 of the bonus during the month of October 2018 and the balance to be paid in December 2018.
7. Plant and machinery costing Sh.500,000 shall be purchased during the month of September 2018. However, this payment shall be paid in October 2018. Additional installation expenses amounting to Sh.50,000 are payable in November 2018.
8. Interest on 12% of Sh.500,000 debentures is received by Alltime Supplies Ltd. in the month of September every year.
9. The company's books of account reflect an existing overdraft with Realltime Bank Ltd. The accountant to the company forecasts the balance of the overdraft at Sh.200,000 as at 1 September 2018.
10. The bank has stipulated the condition that the amount of overdraft at the end of November 2018 should not exceed Sh.5,000,000. For any excess amount, the directors have agreed to give a loan to the company at the end of November 2018, where necessary.

Required:

- (i) A cash budget for the period from September 2018 to November 2018, indicating the extent of overdraft the company requires at the end of each month. (8 marks)
 - (ii) Determine the forecasted amount of outstanding debtors and creditors at the end of November 2018. (4 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) In the context of cost classification, differentiate between the following costs:

- (i) "Differential costs" and "opportunity costs" . (4 marks)
- (ii) "Replacement costs" and "imputed costs". (4 marks)

- (b) Tamarin Manufacturing Company has provided you with the following information about their operations for the year ending 31 March 2018:

Production	20,000 units
Sales	15,000 units

Production costs:	Sh.
Direct materials	4,800,000
Direct labour	1,200,000
Variable overheads	1,000,000
Fixed overheads	600,000

Selling and administration costs:

Salaries (fixed)	300,000
Sales commission (variable)	200,000
Advertising and promotion (fixed)	320,000
Other costs (fixed)	480,000

Additional information:

1. The unit selling price for the company's product is Sh.500.
2. There were no stocks in the store at the beginning of the period.

Required:

Income statement using:

- (i) Marginal costing. (6 marks)
- (ii) Absorption costing. (6 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Explain the accounting treatment of normal losses and abnormal losses in process costing. (4 marks)
- (b) The following information was obtained from the books of Samid Processing Company Ltd. for the fourth quarter of the year 2017 relating to Process I:

Input of raw materials	1,000 units at Sh.200 per unit
Direct materials added	Sh.40,250
Direct wages	Sh.60,000
Production overheads	Sh.60,000
Actual output transferred to Process II	900 units
Normal loss	5%
Scrap value	Sh.80 per unit

Required:

- (i) Process I account. (8 marks)
- (ii) Normal loss account. (3 marks)
- (iii) Abnormal loss account. (3 marks)
- (c) Highlight two factors that might cause abnormal loss in (b)(iii) above. (2 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 27 November 2017.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

Juventus Ltd. is a manufacturing company with three departments namely; A, B and C.

The following are the monthly budgeted overheads for the month of December 2017:

Department	Variable Overheads Sh."000"	Fixed Overheads Sh."000"
A	8,400	5,200
B	10,800	3,600
C	3,200	800

Budgeted labour hours for the month are as follows:

Department	Labour hours
A	800,000
B	1,200,000
C	400,000

The wage rates in the three departments are as follows:

Department	Wage rate per hour (Sh.)
A	9
B	6
C	8

General administration overheads are expected to be Sh.8,400,000 for the month.

Required:

- (a) The variable and fixed overheads absorption rates for each department using direct labour hour basis. (9 marks)
- (b) The administration overheads absorption rate using direct labour hour basis. (4 marks)
- (c) The following information relates to Job No. 333 received from Tevin Ltd.:

Material costs: 80 kgs at Sh.35 per kg.

Direct labour:

Department	Hours
A	50
B	120
C	26

Required:

Calculate the selling price of Job No.333 if Juventus Ltd. loads profit at 20% of the selling price. (7 marks)

(Total: 20 marks)

QUESTION TWO

- (a) In the context of cost estimation, describe three advantages of simple linear regression method. (6 marks)
- (b) Bine Ltd. operates separate cost accounting and financial accounting systems. The following is the list of opening balances as at 1 July 2016 in the cost ledger:

	Debit Sh. "000"	Credit Sh. "000"
Stores ledger control account	53,375	
Work-in-progress (W-I-P) control account	104,595	
Finished goods control account	30,780	
Cost ledger control account		188,750

Transactions during the year were as follows:

	Sh. "000"
Materials purchased	26,700
Materials issued to production	40,000
Materials issued for factory repairs	900
Factory wages paid (including indirect wages Sh.23,000,000)	77,500
Production overheads incurred	95,200
Production overheads under-absorbed and written off	3,200
Sales	256,000

Additional information:

- The company's gross profit is 25% on factory cost.
- At the end of the year work-in-progress (W-I-P) stocks increased by Sh.7,500,000.

Required:

Prepare the relevant ledger accounts.

(14 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Epitech Academy has been using their own van to transport students to and from school. The new principal feels that this arrangement is costly and proposes that the school hires out transport services.

The school accountant has provided the following data:

	Sh.
Cost of the van	3,500,000
Annual insurance	345,000
Annual repairs	220,000
Driver's monthly salary	45,000
Annual road licence	50,000
TLB levy per annum	54,000
Scrap value of the van	800,000
Tyres and tubes annual expenditure	63,000
Inspection cost per annum	5,000
Petrol cost per kilometre	68

Additional information:

- The van is estimated to cover 20,000 kilometres per year. It has an estimated useful life of 6 years.
- A new traffic rule has been issued requiring all passenger vehicles, including school vans to be fitted with speed governors and seat belts. This will cost Sh.120,000. The school plans to apportion this cost over the useful life of the van.
- Hired monthly transport will cost Sh.253,000 out of which Sh.210,000 is attributed to the van, the driver will earn a monthly salary of Sh.25,000 while the conductor who helps the children alight will earn Sh.18,000 per month.

Required:

Advise the principal of Epitech Academy on whether to use own transport or hired transport services.

(12 marks)

(b) The following details were obtained from the books of Turbo Ltd., a manufacturing company:

	Sh.
Variable cost per unit	300
Fixed expenses	1,000,000
Selling price per unit	500

Required:

- (i) Break-even point in units. (2 marks)
- (ii) The selling price per unit, if the break-even point is brought down to 4,000 units. (3 marks)
- (iii) If the present sales volume is Sh.4,000,000, compute the margin of safety. (3 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Explain four types of functional budgets that could be prepared by an organisation. (8 marks)

(b) Tesugu Ltd. is a company in the manufacturing industry. The company engages casual workers in its factory. Tesugu Ltd. has three grades of casual workers namely; skilled, semi-skilled and unskilled.

The details relating to their remuneration are as follows:

Grade	Wage rate per hour (Sh.)	Number of hours in a day	Number of workers
Skilled	450	4	125
Semi-skilled	375	6	153
Unskilled	250	8	198

During the first week of October 2017, the workers worked for only four days.

Required:

The remuneration payable to each of the three grades of workers and the take home pay per worker in each grade during the first week of October 2017. (12 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Explain three limitations of financial accounting that might be solved by management accounting. (6 marks)

(b) Beauty Care Ltd. has for some years manufactured a product which sells for Sh.100 per unit in the domestic market. Production is carried on at two separate factories.

The budgeted profit and loss statements for both factories are given below:

	Factory A		Factory B	
	Sh.	Sh.	Sh.	Sh.
Sales at Sh.100 per unit		4,200,000		3,900,000
Materials	840,000		780,000	
Labour	1,050,000		850,000	
Production overheads	<u>620,000</u>	<u>(2,510,000)</u>	<u>632,000</u>	<u>(2,262,000)</u>
		1,690,000		1,638,000
Administration and selling cost		<u>(800,000)</u>		<u>(850,000)</u>
Net profit		<u>890,000</u>		<u>788,000</u>
Net profit to sales		21%		20%

Additional information:

- During the year, a surprise order of 5,000 units was received and both factory managers wished to take the offer.
Factory A manager argued that he earned higher profit on sales.
- The management has ascertained that in both factories, labour and material costs be considered variable.
- For the purposes of arriving at a decision, it has been agreed that production overheads of Sh.420,000 and Sh.312,000 be variable for Factory A and Factory B respectively.
- All other costs are fixed.

Required:

Advise the management of Beauty Care Ltd. on which factory should receive the order, explaining the reasons for the decision and any assumptions made. (14 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 22 May 2017.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

- (a) The following information relates to the output levels and corresponding overhead costs for Fox Ltd. for the last four months:

Month	Output level "000" Units	Overhead cost Sh."000"
January	100	17,500
February	75	12,500
March	95	18,100
April	50	10,000

Required:

Using the high-low method:

- (i) Formulate the cost function for the above relationship. (4 marks)
- (ii) Estimate the total overhead costs associated with 120,000 units of output. (2 marks)
- (b) Tukson Ltd. manufactures a single product branded "PS". The management accountant is in the process of preparing the budgets for the third quarter for the year ending 31 December 2017.

The following information is availed:

1. The production and sales forecast are as follows:

	July Units	August Units	September Units
Production	1,700	1,900	1,900
Sales	1,500	1,800	2,000

2. The unit variable cost breakdown is as follows:

	Sh.
Direct materials	1,500
Direct labour	1,000
Variable overhead	<u>500</u>
	<u>3,000</u>

3. The selling price per unit of "PS" is Sh.8,000.
4. The monthly fixed costs amount to Sh.1,600,000 payable one month in arrears.
5. The labour costs are paid in the month they are incurred.
6. Suppliers of materials give one-month credit.
7. The variable overheads are paid for in the month following production.
8. 50% of sales are on cash basis. The balance is paid in the following month.
9. The opening cash balance for the month of July 2017 is estimated at Sh.5,000,000.
10. A machine bought in May 2017 at Sh.5,000,000 is due for payment in July 2017.

Required:

Cash budget for three months ending 30 September 2017.

(14 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Explain three disadvantages of a group incentive scheme as a method of labour remuneration. (6 marks)
- (b) The management accountant of Mupe Ltd. has provided the projected sales and costs for the year commencing 1 July 2017 as follows:

Fixed costs	Sh.800,000,000
Variable costs	80% of sales
Number of units produced and sold	4,000,000
Selling price per unit	Sh.2,000

Additional information:

- The management is considering reducing the selling price in order to increase both sales and profits.
- The sales manager has submitted the following estimates of the effect of reduction.

	Reduce selling price by	Increase volume by
I	20%	20%
II	10%	15%
III	5%	10%

Required:

- (i) A worksheet to show the effect of each change on the profit. (12 marks)
- (ii) Advise the management on the best alternative to adopt. (2 marks)
- (Total: 20 marks)**

QUESTION THREE

- (a) Describe four features of useful information in management accounting. (8 marks)
- (b) Exodus Ltd. manufactures three products namely; X, Y and Z. Each product is started in the machine area and completed in the finishing shop.

The direct costs associated with each product forecast for the financial period ending 30 June 2017 are as follows:

	X	Y	Z
	Sh.	Sh.	Sh.
Materials	37	30	45
Wages:			
Machine area Sh.10 per hour	20	10	20
Finishing shop Sh.8 per hour	<u>12</u>	<u>8</u>	<u>16</u>
Total	<u>69</u>	<u>48</u>	<u>81</u>

Additional information:

- There are machines in both departments and machine hours are required to complete one of each product as follows:

Product	Machine Area	Finishing shop	Budget output
	Hours	Hours	Units
X	8	1	12,000
Y	3	1	16,000
Z	<u>6</u>	<u>2</u>	<u>4,000</u>
	<u>17</u>	<u>4</u>	<u>32,000</u>

- The fixed overheads for the machine area amount to Sh.201,600.
- The fixed overheads for the finishing shop amount to Sh.189,000.

Required:

For each department, compute fixed overheads absorption rate using:

- (i) Labour hours. (3 marks)
- (ii) Machine hours. (3 marks)
- (iii) The total cost for each product using the labour hour rate. (3 marks)
- (iv) The total cost for each product using the machine hour rate. (3 marks)

(Total: 20 marks)

QUESTION FOUR

Zico Ltd. produces a single product branded "zic". The product passes three distinct processes.

The following information relates to the month of April 2017:

	Process		
	A	B	C
	Sh.	Sh.	Sh.
Direct materials	7,800	5,940	8,886
Direct wages	6,000	9,000	12,000
Production overheads	6,000	9,000	12,000

Additional information:

1. 3,000 units at Sh.3 each were introduced to process A.
2. There was no stock of materials or work-in-progress.
3. The output of each process passes directly to the next process and finally to finished stock account.
4. The following additional data is availed by the cost accountant:

Process	Output (units)	Percentage of Normal loss to input	Value of scrap per unit (Sh.)
A	2,850	5%	2
B	2,520	10%	4
C	2,250	15%	5

Required:

- (a) Process accounts for processes A, B and C. (12 marks)
 - (b) Abnormal gain account. (2 marks)
 - (c) Normal loss account. (6 marks)
- (Total: 20 marks)**

QUESTION FIVE

- (a) Examine four types of costs under functional classification. (8 marks)
- (b) The management accountant of Empire Manufacturing Company provided the following information for the year ended 31 December 2016:

	January 2016	December 2016
	Sh.	Sh.
Stores in hand	32,000	45,060
Finished goods inventory	48,700	51,240
Work-in-progress	62,000	49,620
Purchases		150,000
Carriage inwards		2,260
Stores issued		138,000
Wages - Direct labour		132,000
- Indirect labour		46,800
Work expenses including power and rent		134,000
Repairs on materials in store		1,200
Cost of completed jobs		492,540
Cost of finished goods		490,000
Selling expenses		11,340
Office and administration expenses		26,500

Additional information:

1. The cost journal for the period showed rent of Sh.182,660 was allocated to work-in-progress in respect of work overheads while office overhead costs amounted to Sh.26,300.
2. The company operated integrated accounting system.

Required:

The relevant cost ledger accounts.

(12 marks)
(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 23 May 2016.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

- (a) A cost accounting system should be prepared based upon the requirements and particular needs of a business.

With reference to the above statement, describe four features of an ideal cost accounting system. (8 marks)

- (b) Davinda Ltd. manufactures a single product branded "MPZ". The company uses process costing technique to account for the costs incurred.

The following information relates to the company's operations for the month of April 2016:

- 1,200 kilogrammes of raw materials costing Sh.860,064 were input to the process.
- Conversion costs amounted to Sh.238,656.
- Losses in form of rejected product was estimated at 16% of the input materials.
- Rejected product was sold at Sh.360 per kilogramme.
- During the month, 994 kilogrammes of finished product passed the inspection.
- The remaining output was sold as a rejected product.
- There was no work-in-progress either at the beginning or at the end of the month.

Required:

- (i) The cost per unit of the normal output. (6 marks)

- (ii) Process account. (6 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Describe four types of costs that could be of significance in managerial decision making. (8 marks)

- (b) SK Ltd. has never operated a system of stock control. You have recently been appointed as the management accountant and tasked to develop a system of stock control.

From your investigations, you established the following consumption pattern for a component number G007 during the year 2015:

Month	Monthly consumption (units)
January	800
February	900
March	1,000
April	1,200
May	1,300
June	1,400
July	1,400
August	1,200
September	1,000
October	800
November	600
December	400

Additional information:

- The lead time for G007 is a minimum of 3 months and a maximum of 5 months.
- The cost of ordering was found to be Sh.20 per order.
- The cost price per unit of G007 is Sh.30.
- The inventory holding cost is 10% of the cost price.

Required:

- Economic order quantity (EOQ). (4 marks)
- Re-order level. (2 marks)
- Minimum stock level. (2 marks)
- Maximum stock level. (2 marks)
- Frequency of ordering. (2 marks)

(Total: 20 marks)**QUESTION THREE**

MST enterprise manufactures two products namely: PQ and QP. Information relating to each of these products for the month of April 2016 is as follows:

	PQ	QP
	Units	Units
Opening inventory	Nil	Nil
Production	15,000	6,000
Sales	10,000	5,000
	Sh.	Sh.
Sales price per unit	20	30
Unit costs:		
Direct materials	8	14
Direct labour	4	2
Variable production overheads	2	1
Variable sales overheads	2	3

Additional information:

- Fixed costs for the month were as follows:

	Sh.
• Production costs	40,000
• Administrative costs	15,000
• Sales and distribution costs	25,000
- The budgeted fixed production overheads amount to Sh.45,000 for a normal combined output of 22,500 units for PQ and QP.

Required:

Prepare the income statement for the month of April 2016 using:

- Marginal costing. (8 marks)
- Absorption costing. (8 marks)
- Reconcile the profits in (a) and (b) above. (4 marks)

(Total: 20 marks)**QUESTION FOUR**

- BAC Ltd. has provided the following information relating to their sales budget for the period June 2016 to December 2016:

Month (2016)	Sales (units)
June	5,000
July	7,500
August	10,000
September	15,000
October	20,000
November	30,000
December	35,000

BAC Ltd. has a policy to maintain inventory levels equal to 30% of the following month's sales requirements. Inventory on 1 June 2016 is projected to be 1,500 units.

Required:

A production budget for BAC Ltd. for the period June 2016 to December 2016.

(6 marks)

(b) The bankers of Macvision Ltd. have requested a cash budget for the month of July 2016 and August 2016. Macvision Ltd. has gathered the following information for budget preparation:

1. The cash balance forecast as at 1 July 2016 amounted to Sh.35,000,000.

2. Forecasted sales are as follows:

	May 2016	June 2016	July 2016	August 2016
	Sh. "000"	Sh. "000"	Sh. "000"	Sh. "000"
Cash sales	25,000	30,000	40,000	50,000
Credit sales	60,000	80,000	100,000	110,000
Total	85,000	110,000	140,000	160,000

3. Credit sales are collected 40% in the month of sale, 35% in the month following the month of sale, and 25% in the second month following the sale.

4. Inventory purchases average 55% of the total sales. Of these purchases, 65% are paid for in the month of purchase, with the remainder paid for in the following month.

5. Operating expenses are paid for as incurred. These expenses include Sh.2,500,000 in rent, Sh.6,000,000 in salaries and Sh.750,000 in utilities and miscellaneous expenses.

Required:

For the months of July 2016 and August 2016, prepare:

(i) A schedule of debtors collections.

(4 marks)

(ii) A schedule of creditors payments.

(4 marks)

(iii) A cash budget.

(6 marks)

(Total: 20 marks)

QUESTION FIVE

(a) Explain four items that cause the difference between profits as per financial accounts and profits as per cost accounts under the interlocking cost book keeping system.

(8 marks)

(b) Furaha community centre carries out subsidised rehabilitation wellness checks on recovering alcoholics in the upper region of the country. The records of the centre show that the cost of carrying out rehabilitation wellness checks for the last five months was as follows:

Month	Number of clients seen	Total cost Sh. "000"
December 2015	650	17,125
January 2016	940	17,800
February 2016	1,260	18,650
March 2016	990	17,980
April 2016	1,150	18,360

Required:

Estimate the cost of wellness check on 900 clients using:

(i) Simple linear regression method.

(6 marks)

(ii) High-low method

(6 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

PILOT PAPER

September 2015.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

- (a) List five assumptions of economic order quantity (EOQ) model. (5 marks)
- (b) Shoes and Boots Limited sells 5760 boots in a week. The purchase price is Sh.250 per boot. The company currently orders in 12 periodic instalments. Ordering and related costs amount to Sh.12,500 per order. The stock holding cost is 20% of inventory value. The company has a 50 week working year.
- Required:**
- (i) Economic order quantity. (4 marks)
- (ii) Annual savings in total inventory cost if EOQ model is implemented. (5 marks)
- (c) Ujuzi Limited manufactures and sells product "Alpha" made from raw material "Beta". The following transactions relate to raw material "Beta" for week starting on 10 August and ending on 15 August 2015:

Date	Transaction	Quantity (Units)	Price per unit Sh.
10	Issues	600	
11	Purchases	600	36.8
12	Issues	450	
13	Purchases	450	38.4
14	Issues	600	
15	Purchases	600	41.6
15	Issues	230	

Additional information:

- Stocks available at the beginning of the week was 900 units at a price of Sh.32 per unit.
- The company uses the weighted average method.

Required:

Stores ledger card for "Beta".

(6 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Distinguish between fixed, variable and semi variable costs. (6 marks)
- (b) The following details were extracted from the records of ABC Limited for the month of July 2015:

	Sh. "000"	Sh. "000"
Direct materials		30,000
Direct labour		22,000
Production overhead: Variable	4,000	
Fixed	6,000	10,000
Selling and distribution overhead		
Variable	2,500	
Semi variable (50% fixed)	4,000	
Fixed	<u>1,000</u>	7,500
Administration overhead		
Fixed	10,000	
Semi variable (25% fixed)	<u>10,000</u>	20,000
Sales		100,000

Production and sales units were 10,000 units.

Required:

- (i) Income statement under marginal costing. (8 marks)
- (ii) Breakeven point in units and revenue. (4 marks)
- (iii) Calculate the margin of safety. (2 marks)
- (Total: 20 marks)**

QUESTION THREE

- (a) Passion Fruit Processors Limited manufactures juices mixed from several fruits. The finished product is transferred to the warehouse on completion in mixing process.

The following cost data relates to the month of July 2015:

	Sh.
Raw material input: Fruits mixture (60000 Kgs.)	2,700,000
Special liquid	3,870,000
Direct wages	2,340,000
Overheads	1,350,000

Additional information:

1. Normal output of the process is 90% of input.
2. Losses in the process are sold to soap makers at Sh.90 per litre.
3. The output from the process was 55,000 litres of juice.
4. The company applies a profit margin of 40%.

Required:

- (i) Process account. (7 marks)
- (ii) Abnormal loss/gain account. (2 marks)
- (iii) The selling price per litre of juice. (3 marks)
- (b) The following cost data is available from the books of Usafi Limited for the month of July 2015 for a canteen operated by the company:

Purchases for the month:

Meat	100 Kgs. at Sh.250 per kilogramme.
Eggs	72 trays at Sh.200 per tray.
Vegetables	200 Kgs. at Sh.50 per kilogramme.
Bread	200 pieces at Sh.52.5 per piece.
Rice	150Kgs. at Sh.100 per kilogramme.
Maize flour	25 bales at Sh.1200 per bale.

Wages and salaries:

- 2 cooks at Sh.25,000 per month each.
- 1 counter clerk at Sh.15,000 per month.
- 5 helpers at Sh.10,000 per month each.
- 1 manager at Sh.18,000 per month (an allowance).

Consumable stores Sh.50,000 per month.
Gas and electricity Sh.12,000 per month.
Overheads allocated to canteen Sh.180,000 per annum.
Company subsidy Sh.14,900 per month.

Number of meals served in a month 2,500.

Required:

Determine the cost per meal served to the employees of the company.

(8 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Autotech Enterprises Limited have given the following particulars for cash budgeting:

Month	Sales Sh. "000"	Materials Sh. "000"	Wages Sh. "000"	Overheads Sh. "000"
August	20,000	10,200	3,800	1,900
September	21,000	10,000	3,800	2,100
October	23,000	9,800	4,000	2,300
November	25,000	10,000	4,200	2,400
December	30,000	10,800	4,500	2,500

Additional information

- 10% of sales are on cash basis. Of the credit sales, 50% are collected the following month and the balance the subsequent month.
- Creditors for material purchases give two months credit.
- Overheads are paid one month in arrears.
- Dividend of Sh.1,500,000 will be paid in December.
- Machinery costing Sh.10,000,000 will be installed in September. Payment will be in monthly instalments of Sh.2,000,000 per month for five months from October.
- Proceeds from sale of old machinery will be received in October for Sh.1,000,000.
- Income tax (advance tax) of Sh.5,000,000 will be paid in October.
- Opening cash balance on 1 October was Sh.800,000. If cash balance falls below Sh.500,000, a short term loan can be arranged at an interest rate of 18% per annum. Interest is payable monthly after the month of borrowing.

Required:

Cash budget for the three months ending December 2016.

(14 marks)

- (b) A calculator manufacturing company finds that it costs Sh.625 to make a calculator but the same is available in the market at Sh.575 each with assurance of continued supply.

The cost breakdown is as follows:

	Sh. per unit
Direct materials	275
Direct labour	175
Variable production overheads	50
Fixed production overhead	<u>125</u>
	<u>625</u>

Of the fixed production overhead, 40% are specifically incurred in making the calculator. The balance will be incurred irrespective of the decision made.

Required:

- Should the company make or buy the calculator? (3 marks)
- If the supplier offered the calculator for Sh.525 per calculator, would your decision change? Explain. (1 mark)
- Explain two factors that will need to be considered before such a decision is made. (2 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) List the qualities of a good labour remuneration system. (6 marks)
- (b) Langa Limited operates an interlocking accounting system from the cost accounts. The following information was available for the month of July 2015:

	Sh.
Opening balances	
Stores control account	108,500
Work in progress control account	178,200
Finished goods control account	84,150

Transaction for the month of July 2015:

	Sh.
Cost of finished goods	1,024,100
Cost of goods sold	986,920
Direct material issued	395,500
Direct wages	170,960
Production overheads (as per financial accounts)	416,440
Direct material purchases	433,180

Additional information:

1. In the cost accounts, depreciation was Sh.25,000 per month.
2. The production overhead is absorbed at 250% of wages.

Required:

Prepare in the cost books:

- (i) Stores control account. (4 marks)
- (ii) Work in progress control account. (4 marks)
- (iii) Finished goods control account. (4 marks)
- (iv) Production overhead control account. (2 marks)

(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 1 August 2022. Afternoon paper.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings. Do NOT write anything on this paper.

QUESTION ONE

- (a) Explain three users of management accounting information. (6 marks)
- (b) Unik Ltd. a leading manufacturer of ceramic tiles is preparing its cost estimation for the master budget. A cost accountant has derived the following data on a weekly output of standard size tiles from a factory:

Week	Output Units "000"	Total overheads Sh. "000"
1	20	60
2	2	25
3	4	26
4	23	66
5	18	49
6	14	48
7	10	35
8	8	18
9	13	40
10	8	33

Where;

$$\Sigma X = 120$$

$$\Sigma Y = 400$$

$$\Sigma X^2 = 1,866$$

$$\Sigma Y^2 = 18,200$$

$$\Sigma XY = 5,704$$

Required:

- (i) Using the least squares regression method, formulate a predictor equation in the form $y = a + bx$. (6 marks)
- (ii) In week 11, the factory planned to produce 25,000 standard size tiles. Estimate the total cost of producing this quantity. (2 marks)
- (c) Jikaze Ltd. is currently operating at full capacity and it manufactures and sells brooms for local market. Currently, the production volume is 100,000 brooms per annum with the following cost structure:

	Sh. "000"	Sh. "000"
Sales		20,000
Marginal cost : Labour	8,000	
Material	<u>5,000</u>	13,000
Contribution		7,000
Fixed costs		<u>(3,000)</u>
Net profit		<u><u>4,000</u></u>

Additional information:

1. Each broom is currently sold at Sh.200.
2. An opportunity has arisen to supply 30,000 brooms per annum at Sh.180 each.
3. Acceptance of this special order will incur extra fixed costs of Sh.800,000 per annum for the hire of additional machinery.
4. Jikaze Ltd. will pay an overtime premium of 20% for the extra direct labour.

Required:

Advise Jikaze Ltd. on whether the offer should be accepted or rejected.

(6 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Highlight four causes of labour turnover in an organisation. (4 marks)
- (b) Zara Ltd. produces two products namely; Z and R. The following information relates to the budget for the year ended 30 June 2022:

	Product Z	Product R
	Sh.	Sh.
Selling price per unit	6	12
Variable cost per unit	<u>2</u>	<u>4</u>
Contribution margin per unit	<u>4</u>	<u>8</u>
Fixed costs apportioned	100,000	200,000
Units sold (kgs)	70,000	30,000

Required:

- (i) Calculate the break-even points of each product. (4 marks)
- (ii) The break-even point of product Z to achieve a target profit of Sh.60,000. (2 marks)
- (iii) The margin of safety of product R. (2 marks)
- (iv) The product to produce based on the break-even point calculated in (b) (i) above. (2 marks)
- (c) Malipo Ltd. pays its employees using time-rate system. The following information is available with respect to employee number EMP003 for the month of March 2022:

1. Monthly salary:
 - Basic Salary Sh.20,000
 - Commuter allowance 25% of basic salary
2. House rent allowance Sh.6,500 per month
3. Leave salary allowance earned Sh.15,000
4. Non-cash benefits received from place of work was worth Sh.6,500 per month.
5. Number of working hours in the month of March 2022 was 200 hours.

Required:

Calculate the cost of labour per day of 8 working hours.

(6 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Explain the following types of costs:
- (i) Product costs. (2 marks)
- (ii) Opportunity cost. (2 marks)
- (iii) Conversion costs. (2 marks)
- (b) Outline four limitations of process costing. (4 marks)

- (c) Maridadi Ltd. produces a product that passes through two distinct processes. The following information was obtained from the accounts of the company for the month of July 2022:

Particulars	Process A	Process B
	Sh.	Sh.
Direct materials	78,000	59,400
Direct wages	60,000	90,000
Production overheads	60,000	90,000

At the beginning of the month of July 2022, 3,000 units of Sh.30 each were introduced to process A. There were no stock of materials or work-in-progress.

The output of each process passes directly to the next process and finally to the finished stock account.

The following additional data was obtained:

Process	Output	Percentage of normal loss to input	Scrap value of normal loss per unit (Sh.)
Process A	2,850	5%	20
Process B	2,520	10%	40

Required:

- (i) Process A account. (5 marks)
- (ii) Process B account. (5 marks)
- (Total: 20 marks)**

QUESTION FOUR

- (a) RH Ltd. manufactures and sells a single product branded “Zed”. Currently it uses absorption costing to determine profits and inventory values. The budgeted production cost per unit is as follows:

Direct labour	3 hours at Sh.6 per hour	Sh. 18
Direct materials	4 Kgs at Sh.7 per Kg	28
Fixed production overhead		<u>20</u>
		<u>66</u>

Additional information:

- Normal output volume is 16,000 units per year and the volume is used to establish the fixed overhead absorption rate for each year.
- The costs relating to sales, distribution and administration are as follows:

Variable	20 % of sales value
Fixed	Sh.180,000 per year
- There were no units of finished goods inventory at 1 October 2021. Fixed overhead expenditure is spread evenly throughout the year.
- The selling price per unit is Sh.140.
- For the two six-monthly periods, the number of units to be produced and sold were budgeted as follows:

	Six months ending	Six months ending
	31 March 2022	30 September 2022
	Units	Units
Production	8,500	7,000
Sales	7,000	8,000

6. RH Ltd. is considering whether to abandon absorption costing and use marginal costing instead for profit reporting and inventory valuation.

Required:

- (a) Statement of profit or loss for each of the six-month periods using:
- (i) Marginal costing. (8 marks)
 - (ii) Absorption costing. (8 marks)
- (b) A statement reconciling the profits as per the marginal costing and absorption costing in (a) above. (4 marks)
(Total: 20 marks)

QUESTION FIVE

- (a) Distinguish between the following terms as used in management accounting:
- (i) "Avoidable costs" and "unavoidable costs". (4 marks)
 - (ii) "Cost control" and "cost reduction". (4 marks)

(b) The following information relates to Erica Ltd:

1. The company had a cash balance of Sh.540,000 at the beginning of the month of October 2021.
2. Creditors give a credit period of one month.
3. Salaries are paid in the current month.
4. Fixed cost are paid one month in arrears and include a charge of Sh.100,000 per month with respect to depreciation.
5. Credit sales are settled as follows:
 - 40% in the month of sale.
 - 45% one month after the month of sale.
 - 12% two months after the month of sale.

The balance represents bad debts.

6. The actual sales, purchases and expenses for the month of August 2021 and September 2021 were as follows:

Month	Cash sales Sh.	Credit sales Sh.	Purchases Sh.	Salaries Sh.	Fixed overheads Sh.
August	-	1,480,000	1,104,000	180,000	600,000
September	-	1,640,000	1,224,000	180,000	600,000

7. The budgeted sales, purchases and expenses per month from October 2021 to December 2021 were as follows:

Month	Cash sales Sh.	Credit sales Sh.	Purchases Sh.	Salaries Sh.	Fixed overheads Sh.
October	400,000	1,600,000	1,200,000	190,000	600,000
November	440,000	1,800,000	1,380,000	190,000	620,000
December	500,000	1,000,000	1,750,000	200,000	640,000

Required:

A cash budget for the months of October 2021 to December 2021. (12 marks)
(Total: 20 marks)

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ATD LEVEL III

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

MONDAY: 21 November 2016.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

(a) Distinguish between the following types of costs as used in management accounting:

- (i) "Avoidable costs" and "unavoidable costs". (4 marks)
(ii) "Product costs" and "conversion costs". (4 marks)

(b) Blade Ltd. manufactures and retails three products namely: A, B and C.

The company employs 60 direct workers who work under a group bonus scheme. The company engages three grades of workers who are paid a bonus on the excess of time allowed over time taken. The bonus is paid at 75% of the workers' base rate and is shared by the workers in proportion to the time spent on the work.

The following production data has been extracted from the company's records for the month of October 2016:

Product	Units produced	Time allowed per unit (minutes)
A	320	63
B	640	120
C	1,200	100

Grade of worker	Number of direct workers	Rate per hour (Sh.)	Hours worked per worker
1	20	300	30
2	8	270	64
3	32	240	50

Required:

- (i) Percentage of hours saved to hours worked. (4 marks)
(ii) Bonus due to the group. (4 marks)
(iii) Gross earnings due to the group. (4 marks)

(Total: 20 marks)

QUESTION TWO

(a) The choice of an appropriate basis of apportionment of overheads by an organisation is really a matter of judgement. A company may decide on any basis of apportioning overheads according to its own circumstances.

Required:

With reference to the above statement, outline four features of a suitable overhead apportionment basis. (4 marks)

(b) Redline Ltd. has three production departments and two service departments. For the year ended 30 June 2016, the overhead distribution summary is provided as follows:

		Sh.
Production departments:	A	800,000
	B	700,000
	C	500,000
Service departments:	1	250,000
	2	300,000

The overheads of the service departments are charged out to the production departments as follows:

Department	A	B	C	1	2
1	20%	35%	25%	-	20%
2	35%	20%	20%	25%	-

Required:

Apportion the overheads of the service departments to the production departments using direct allotment method.

(4 marks)

- (c) Kilima Ltd. manufactures three different products; X, Y and Z, each of which requires two key materials; M1 and M2.

The following information has been provided by the sales manager:

Product	Estimated sales volume		
	X	Y	Z
	Units	Units	Units
January 2017	4,000	3,100	2,400
February 2017	4,400	3,500	2,100
March 2017	4,600	3,900	2,700

Material requirements for each product are as follows:

Product:		X	Y	Z
Material:	M1 (Kg)	8	11	15
	M2 (Kg)	6	9	11

Additional information:

- The production manager recommends that stock of raw materials at the end of each month be maintained at a level sufficient to meet 20% of the production requirements for the next month.
- The sales manager recommends that finished goods stock should be held for each product as follows:

	X	Y	Z
	1,000 units	500 units	1,800 units
3. Estimates of closing inventories for the month of December 2016 are as follows:			
		Kg	
Raw materials:	M1	2,400	
	M2	4,800	
		Units	
Finished goods:	X	400	
	Y	2,900	
	Z	800	

Required:

For the month of January and February 2017, prepare:

- Production budget. (4 marks)
- Material usage budget. (4 marks)
- Material purchases budget. (4 marks)

(Total: 20 marks)

QUESTION THREE

- (a) In the context of cost estimation, explain the following methods:

- High-low method. (2 marks)
- Account analysis. (2 marks)
- Engineering method. (2 marks)

- (b) Millennium Baby Care Centre Ltd. manufactures two products namely; NN and CL.

The standard cost for the two products are given below:

	NN	CL
	Sh.	Sh.
Direct materials	40	30
Direct labour	30	80
Variable overheads	20	40
Fixed overheads	<u>40</u>	<u>20</u>
	<u>130</u>	<u>170</u>

Additional information:

- The fixed overheads are based on annual production of 50,000 units of NN and 100,000 units of CL.
- The selling prices per unit of NN and CL are Sh.200 and Sh.250 respectively.
- The selling expenses consist solely of sales commission at Sh.10 per unit of each product.
- The fixed selling and administration expenses amount to Sh.1,600,000 and are apportioned to the two products.
- All the fixed overheads are common to the two products and allocation between the two products are purely arbitrary.

Required:

- (i) Assuming budget efficiency is achieved, determine the profit realised if only 80% of the production and sales budget is achieved. (6 marks)
- (ii) Break-even point in units for the company as a whole. (2 marks)
- (iii) Break-even point in units by products at standard mix. (2 marks)
- (iv) If the raw material availability is limited to Sh.4,000,000, compute the maximum profit that could be achieved. (4 marks)

(Total: 20 marks)**QUESTION FOUR**

- (a) Discuss four ways in which a management accountant might utilise cost accounting information in the organisation. (8 marks)
- (b) Genesis Enterprise manufactures an industrial product that goes through four distinct processes before the final product can emerge.

The following information is available from the cost records:

	Process I	Process II	Process III	Process IV	Total
	Sh.	Sh.	Sh.	Sh.	Sh.
Materials	1,600	2,600	2,000	1,025	7,225
Direct labour	3,500	2,250	3,680	1,420	10,850
Production overheads					7,595

Additional information:

- 500 units at Sh.4 per unit were introduced in Process I.
- Production overheads are absorbed as a percentage of direct labour cost.
- The actual output and normal loss of the respective processes are given below:

	Output (units)	Normal loss as % of input	Value of scrap per unit (Sh.)
Process I	500	-	-
Process II	450	10%	2
Process III	360	20%	3
Process IV	270	25%	5

- The actual output was as expected.

Required:

- (i) Process I account. (3 marks)
- (ii) Process II account. (3 marks)
- (iii) Process III account. (3 marks)
- (iv) Process IV account. (3 marks)

(Total: 20 marks)**QUESTION FIVE**

The following information was obtained from the financial books of Tengeneza Ltd. for the year ended 30 June 2016:

	Sh.
Direct materials consumed	250,000
Direct wages	100,000
Factory overheads	380,000
Administrative overheads	250,000
Selling and distribution overheads	480,000
Bad debts written off	20,000
Preliminary expenses written off	10,000
Legal charges	5,000
Dividends received	50,000
Interest on deposit received	10,000
Sales (120,000 units)	700,000
Closing stock:	
Finished stock (40,000 units)	120,000
Work-in-progress	80,000

Additional information:

1. Direct material consumption as per the cost accounting records amounted to Sh.280,000.
2. Factory overheads are recovered at 20% on prime cost.
3. Administrative overheads are recovered at Sh.3 per unit of production.
4. Selling and distribution overheads are recovered at Sh.4 per unit sold.

Required:

For the year ended 30 June 2016, prepare:

- | | |
|--|--------------------------|
| (a) Costing profit and loss account. | (6 marks) |
| (b) Financial profit and loss account. | (8 marks) |
| (c) Statement reconciling the profits obtained in (a) and (b) above. | (6 marks) |
| | (Total: 20 marks) |

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