Institute of Certified Management Accountants of Sri Lanka

Incorporated by Parliament Act No.23 of 2009

PILOT PAPER

Certified Accounting Technologist

CAT 2: Cost and Management Accounting (MA)

INFORMATION:

1. Time allowed:

   Reading– 15 minutes.

   Writing - Three (3) hours
2. The total mark allowed for this paper is 100.
3. This paper has 12 pages.

INSTRUCTIONS:

4. This paper consists of three sections.

   Section I: 25 Multiple Choice Questions (MCQs)

   Section II: Question no. 01 (Compulsory Question)

   Section III: Question no. 02 – 05 (Answer any two questions)
5. Answer only four (04) questions including Sections 1 and II
6. The answers should be in the English language.
7. Only non-programmable calculators are permitted to use.

*The answer key is given from page 13-17

Section I

Exam Structure

- 25 Multiple Choice Questions (MCQ)
- Each 02 marks and 50 marks in total.

1) Which of the following statements is accurate regarding the categorization of costs:

a) All direct costs are not product costs
b) All overhead are indirect costs
c) All indirect costs are fixed costs
d) All direct costs are variable costs

2) Which of the following statements is correct in relation to Management Accounting:

a) It is carried out at the discretion of the management and external auditors
b) It focuses on the needs of all stakeholders
c) It is used for planning of future activities
d) It provides information based on generally accepted accounting principles

3) Which of the following tasks is not carried out in the management accounting function of a firm:

a) Preparation of the annual budget
b) Analysis of costs of an activity as fixed and variable for decision making
c) Preparation of the cash flow statement for publication
d) Estimate of cash flows to evaluate a project

4) Given a manufacturing business with a re-order level of 2,000 kg, a re-order quantity of 5,000 kg, a minimum weekly consumption of 200 kg, and a minimum and maximum lead time of 3 and 5 weeks for a raw material, what is the maximum stock level of this raw material:

a) 6,400 Kg b) 5,000 Kg c) 5,800 Kg d) 7,000 Kg

5) Below are the steps involved in identifying overheads to a cost unit. What is the accurate sequential order of these steps:

A. Allocation of overheads

B. Collection of overheads

C. Absorption of overheads

D. Apportionment of overheads

a) A, B, C, D b) A, B, D, C c) B, A, D, C d) C, D, A, B

6) The following information relates to a product manufactured by a company

	Cost per unit (Rs.)
Total Cost	**250**
Direct Cost	**60**
Non-production overheads	**100**

Assuming that all direct costs are variable costs, with production overheads being 50% variable and non-production overheads being 25% variable, what are the production cost per unit and the variable cost per unit of this product:

	Cost of production per unit (Rs.)	**Total variable cost per unit (Rs.)**
a)	105	120
b)	150	130
c)	150	120
d)	105	130

7) What is the production overhead for the year ending March 31, 2023 given that a manufacturing business had prime costs of Rs.900,000/-, total production costs of Rs.1,600,000/-, and work-in-progress inventories valued at production cost of Rs.200,000/- as of March 31, 2023, and Rs.330,000/- as of March 31, 2023:

a) Rs.1,030,000/- b) Rs.900,000/-

c) Rs.830,000/- d) Rs.700,000/-

8) Suhas PLC manufactures and sells 50,000 units of a product each year. The prime cost per unit is Rs.20/-, comprising solely of variable costs. At an activity level of 50,000 units, manufacturing overheads amount to Rs.2,000,000/-, and non-manufacturing overheads amount to Rs.1,500,000/-. The company's fixed costs represent 60% of the total overheads. What are the total cost per unit and the variable cost per unit of this product:

	Total Cost per Unit (Rs.)	**Variable Cost per Unit (Rs.)**
a)	90	30
b)	90	48
c)	70	48
d)	36	30

9) A company that produces a single product has two production departments, A & B. The following information related to these two production departments:

Production Department	Production Overhead (Rs.)	Required No of Hours
A	200,000	10,000 machine hours
B	150,000	30,000 labour hours

To produce one unit of this product, it requires Rs. 50 of direct material and 4 hours of direct labor at Rs.50/- per hour. In computing the unit production cost, production overheads are absorbed for 2 machine hours and 4 labor hours. What is the production cost per unit:

a) Rs.310/- b) Rs.350/- c) Rs.290/- d) Rs.270/-

10) The company utilizes special types of material for product manufacturing with a re-order quantity of 8000 units. Material usage and lead time are outlined as follows:

	Maximum	Minimum
Daily usage (units)	200	100
Lead time (weeks)	05	03

Given that the company operates all seven days of the week, what is the minimum inventory level maintained by the company:

a) 10,800 units b) 12,900 units

c) 3,800 units d) 2,800 units

11) Which of the following cost classification is more suitable for cost-volume- profit (CVP) analysis:

a) Direct and Indirect cost

b) Irrelevant cost and Opportunity cost

c) Relevant cost and Sunk Cost

d) Variable cost ad Fixed Cost

12) The provided information pertains to the Machine and Finishing Divisions of a factory, which produce a single product. Here are the details:

	Machine Division	Finishing Division
Time spent to produce a unit	6 machine hours	8 labour hours
Overhead absorption rate	Rs.30/- per machine hour	Rs. 40/- per labour hour

Given that the budgeted cost of production is Rs.800/- per unit, what is the budgeted prime cost of a unit of the product:

a) Rs.300/- b) Rs.480/- c) Rs.500/- d) Rs.620/-

13) Which if the following item is not considered as direct wages of machine operators in a garment manufacturing firm:

a) Basic pay for normal hours worked

b) Incentive based on numbers of units produced

c) Overtime premium for a special order

d) Medical allowance payable at hospitalization

14) Which costing method is best suited for industries where production is continuous and uniform:

a) Specific order costing b) Job costing

c) Process costing d) Batch costing

15) In job costing, how is the total cost of a job calculated:

a) By dividing the total overhead by the number of units produced

b) By adding direct material, direct labor, and overhead costs

c) By multiplying the direct labor hours by the overhead rate

d) By subtracting the direct material cost from the total production cost

16) Process costing is typically used in industries where:

a) Each unit produced is unique and custom-made

b) Production occurs in small batches with distinct characteristics

c) Production involves continuous and repetitive processes

d) Each job or product has a specific customer requirement

17) Mandara Company manufactures custom-made furniture. The direct material cost for producing one unit of a specific order is Rs.500/-, and the direct labor cost is Rs.300/- (3 hours*100 per hour). The overhead total cost of Rs.60,000/- is allocated based on direct labour hours and total labour hours are 1200. what is the total cost per unit for this job:

a) Rs. 950/- b) Rs.600/- c) Rs.850/- d) Rs.1,100/-

18) In a manufacturing process, 10,000 units of a product were introduced, and 9,500 units were completed with normal losses of 500 units. If the total cost incurred in the process is Rs.50,000/-, what is the cost per unit for the completed units:

a) Rs.4.74 b) Rs.5.00 c) Rs.5.26 d) Rs.5.56

19) In a production process, 15,000 units were started, and 14,500 units were completed. There were also 200 units lost due to an unexpected equipment malfunction. If the total cost incurred in the process is Rs.75,000/-, what is the cost per unit for the completed units:

a) Rs.5.00 b) Rs.5.10 c) Rs.5.50 d) Rs.5.86

20) In a manufacturing process, 30,000 units were introduced, and 28,500 units were completed with normal losses of 500 units. If the total cost incurred in the process is Rs.300,000/-, what is the cost per unit for the completed units:

a) Rs.10.52 b) Rs.10.00 c) Rs.10.17 d) Rs.9.84

21) What is the variable cost per unit and the company's profit when 8,000 units are sold, given that the break-even point is 6000 units, the selling price per unit is Rs. 200, and the total fixed cost is Rs.480,000/-:

	Variable Cost per unit (Rs.)	Profit (Rs.)
a)	80	160,000
b)	120	240,000
c)	80	240,000
d)	120	160,000

22) Which of the following statements is not correct in relation to Cost –Volume-Profit Analysis:

a) The decrease in the unit contribution will lead to a decrease in the break-even point in units.

b) The increase in the contribution to sales ratio will lead to a decrease in the break-Ven point in value

c) Beyond the break-even point, the unit contribution is equal to the unit profit

d) The increase in unit selling price will lead to a decrease in the break-even point

23) Which of the following statements is correct at the break-even point:

a) Total contribution is equal to the total fixed cost

b) Total sales income is equal to total fixed cost

c) Sum of the total fixed cost and total variable cost divided by two is equal to the total sales income

d) Fined cost per unit is equal to the variable cost per unit.

24) A company manufactures a single product and sells at Rs. 50 per unit. The following information related to two activity levels

Number of units produced	Cost per unit (Rs.)
2000	50
3000	40

What is the total fixed cost:

a) Rs.100,000/- b) Rs.120,000/-

c) Rs.60,000/- d) Rs.80,000/-

25) A company manufactures a single product and sells at Rs. 50 per unit. The following information related to two activity levels

Number of units produced	Cost per unit (Rs.)
2000	50
3000	40

What is the Break Even Point:

a) 5000 units b) 2000 units c) 6000 units d) 4000 units

[25 MCQs x 2 Marks each -Total 50 Marks]

Section II – (Compulsory Question)

Exam Structure

- One Scenario- Based Objective Test Questions.
  - 20 marks in total

Question 01

PART -A

"Sunny Juice" Company produces organic fruit juices. The production process involves multiple stages, including extraction, filtration, pasteurization, and bottling. The company applies process costing to determine the cost per unit of its products.

During the month of June, the company completed the following activities and details are provided for two stages.

Extraction Stage

10,000 kg of organic fruits were processed in the extraction stage, incurring a total cost of Rs.50,000/-. However, due to the nature of the process, there were 200 kg of normal losses and 100 kg of abnormal losses.

Filtration Stage

All the output from the extraction stage, after accounting for losses, was passed through the filtration stage. The total cost incurred in the filtration stage was Rs.20,000/-. There are no normal or abnormal losses occurred.

YOU ARE REQUIRED TO:

1.1. Calculate the cost per unit for the outcome of the extraction Stage:

(03 Marks)

1.2. Calculate the total value of abnormal loss of extraction Stage:

(03 Marks)

1.3. Calculate the cost per unit for the outcome of the Filtration Stage:

(04 Marks)

PART -B

ABC Company is considering introducing a new product into the market. The company has gathered the following information regarding the potential product.

- Selling price per unit: Rs.50/-
- Variable cost per unit: Rs.30/-
- Fixed Costs: Rs.50,000/- per month
- Desired monthly target profit: Rs.20,000/-

YOU ARE REQUIRED TO:

1.4. What is the meaning of the Break-Even Point:

(02 Marks)

1.5. Calculate the break-even point (BEP) in terms of both units and revenue for the new product:

(04 Marks)

1.6. Determine the number of units the company needs to sell to achieve the desired monthly target profit:

(04 Marks)

[Total 20 Marks]

Section III – (Optional Question)

Exam Structure

- Four Scenario-Based Objective Test Questions.
  - 15 marks each and 30 marks in total
  - Answer any two questions

Question 02

Cost Accounting and Management Accounting are essential for supplying critical information that supports decision-making and performance evaluation in organizations. It's necessary to understand their distinct roles, how they differ from financial accounting, and the specific needs of their users. Furthermore, using software tools significantly improves the efficiency and effectiveness of cost and management accounting processes.

YOU ARE REQUIRED TO:

2.1. Explain the role and functions of Cost Accounting and Management Accounting:

(06 Marks)

2.2. Identify and describe the key users of cost and management accounting information:

(05 Marks)

2.3. Differentiate between financial accounting and management accounting:

(04 Marks)

[Total 15 Marks]

Question 03

You are presented with the following information by Happy Engineering Company related to January 20X4. The transactions in connection with materials are as follows.

Days	Receipts		Issues
	Units	Rate per Unit	Units
05th January 20X4	160	90.00	
10th January 20X4	80	95.00	
15th January 20X4			120
18th January 20X4	200	105.00	
25th January 20X4			60
28th January 20X4			180

YOU ARE REQUIRED TO:

3.1. Calculate the cost of Materials issued under the FIFO Method:

(04 Marks)

3.2. Calculate the value of closing stocks under the FIFO Method:

(04 Marks)

3.3. Calculate the cost of Materials issued under the LIFO Method:

(04 Marks)

3.4. Calculate the value of closing stocks under the LIFO Method:

(03 Marks)

[Total 15 Marks]

Question 04

Udara Manufacturing Company undertook Job No. 210, which involved the following direct costs

Material: Rs. 5,200/-

Direct Wages:

Department X: 100 hours @ Rs.3.50 per hour

Department Y: 80 hours @ Rs.5.00 per hour

Overhead expenses are estimated as follows:

Variable overhead

Department X: Rs.8,000/- for 5,000 direct labor hours

Department Y: Rs.10,000/- for 4,000 direct labor hours

Fixed overhead

Estimated at Rs.12,000/- for 15,000 hours of normal working time of the factory.

YOU ARE REQUIRED TO:

4.1. Calculate the total cost of Job No. 210:

(10 Marks)

4.2. Estimate the percentage of profit earned if the price quoted was Rs.1,500/- and the company uses Profit markup for identifying profit:

(05 Marks)

[Total 15 Marks]

Question 05

A company is planning to manufacture computers by assembling imported components for the use of children under the age group 10 years old. The selling price of a computer is decided to be Rs.100,000/- and the expected costs are as follows:

License Fee	:Rs.100,000 per month
Supervisors Salaries	:Rs.160,000 per month
Assembly workers Salaries	:Rs.16,000 per unit
Rent	:Rs.720,000 per annum
Insurance	:Rs.80,000 per month
Material cost	:Rs.24,000 per unit
Fees for two consultants	:Rs.200,000 per month

YOU ARE REQUIRED TO COMPUTE:

5.1 Monthly Total fixed cost with indicating each item separately:

(04 Marks)

5.2 Number of computers to be sold monthly to cover total cost:

(04 Marks)

5.3 Number of computers to be sole monthly to cover the total cost if the assembly workers are paid a total monthly salary of Rs.300,000/- instead of a unit-based salary:

(03 Marks)

5.4 Number of computers should be sold to earn a monthly profit of Rs.50,000/-:

(04 Marks)

[Total 15 Marks]

ANSWER KEY

Section I

Q. No	Answer	Q. No	Answer
01	B	14	C
02	C	15	B
03	C	16	C
04	A	17	A
05	C	18	C
06	B	19	B
07	C	20	C
08	B	21	D
09	A	22	A
10	D	23	A
11	D	24	C
12	A	25	B
13	D		

Section II

Question 01

1.1 Calculate the cost per unit for the outcome of extraction Stage:

Total Cost/ (Input-Normal Loss)

Rs.50,000/ (10,000-200)

Rs.5.10

1.2 Calculate the total value of abnormal loss of extraction Stage

Per unit cost * Abnormal loss

Rs.5.10*100

Rs.510

1.3 Calculate the cost per unit for the outcome of Filtration Stage:

(Total cost = Rs.49470+20000)/9700

Rs.7.16

1.4 What is the meaning of Break-Even Point:

The break-even point is the level of sales at which total revenue equals total costs, resulting in neither profit nor loss. It represents the point where a company covers all its expenses but does not generate any profit

1.5 Calculate the break-even point (BEP) in terms of both units and revenue for the new product.

BEP (in units) = Fixed Costs / Contribution Margin per unit
= Rs. 50,000 / (Rs. 50 - Rs. 30) per unit
= Rs. 50,000 / Rs. 20 per unit
= 2500 units

BEP (in revenue) = BEP (in units) * Selling price per unit
= 2500 units * Rs. 50 per unit
= Rs. 125,000

1.6 Determine the number of units the company needs to sell to achieve the desired monthly target profit.

Target units = (Fixed Costs + Target Profit) / Contribution Margin per unit
= (Rs. 50,000 + Rs. 20,000) / Rs. 20 per unit
= Rs. 70,000 / Rs. 20 per unit
= 3500 units

Section III

Question 02

2.1 Explain the role and functions of Cost Accounting and Management Accounting:

Cost Accounting: Cost Accounting involves the collection, analysis, and interpretation of cost data to assist management in decision-making, cost control, and performance evaluation. Its primary role is to determine the cost of products, services, or activities by classifying costs into various categories such as direct costs, indirect costs, fixed costs, and variable costs. Cost Accounting helps in budgeting, pricing, inventory valuation, and assessing the profitability of products or services. Its functions include cost ascertainment, cost control, cost reduction, and cost analysis

Management Accounting: Management Accounting extends beyond cost determination to include planning, decision-making, and control functions within an organization. It provides information such as budgets, forecasts, and performance reports to assist managers in making informed decisions. Management Accounting focuses on the internal needs of management and helps in strategic planning, performance evaluation, resource allocation, and performance measurement. Its functions include planning, decision-making, control, and performance evaluation

2.2 Identify and describe the key users of cost and management accounting information:

The key users of cost and management accounting information include internal users such as managers, executives, and employees at various levels of the organization. Managers use this information for planning and controlling operations, setting goals, making strategic decisions,

allocating resources, and evaluating performance. Executives rely on cost and management accounting information for strategic planning, monitoring organizational performance, and making long-term investment decisions. Employees use this information for day-to-day decision-making and improving operational efficiency. Additionally, external users such as investors, creditors, regulatory authorities, and government agencies may also use cost and management accounting information for decision-making and financial reporting purposes

2.3 Differentiate between financial accounting and management accounting:

Financial Accounting: Financial Accounting primarily focuses on providing financial information to external stakeholders such as investors, creditors, and regulatory authorities. It follows generally accepted accounting principles (GAAP) and aims to present a true and fair view of the financial position and performance of the organization. Financial Accounting involves the preparation of financial statements such as the balance sheet, income statement, and cash flow statement. Its primary objective is to provide information for external reporting and decision-making

Management Accounting: Management Accounting extends beyond financial accounting to include planning, decision-making, and control functions within an organization. It provides information such as budgets, forecasts, and performance reports to assist managers in making informed decisions. Management Accounting focuses on the internal needs of management and helps in strategic planning, performance evaluation, resource allocation, and performance measurement. Its primary objective is to provide information for internal management and decision-making purposes.

Question 03

3.1 Stores Ledger-FIFO Method

Date	Receipts			Issues			Balance	
	Units	Rate	Value Rs.	Units	Rate	Value Rs.	Units	Value Rs.
05th January 20X4	160	90	14400				160	14,400.00
10th January 20X4	80	95.00	7,600				240	22,000.00
15th January 20X4				**120**	**90.00**	**10,800**	120	11,200.00
18th January 20X4	200	105.00	21,000.00				320	32,200.00
25th January 20X4				40	90.00	3,600		
				20	95.00	1,900		
				60		**5,500**	260	26,700.00
28th January 20X4				60	95.00	5,700		
				120	105.00	12,600		
				180		**18,300**	80	8,400.00

3.2

Cost of Materials issued under FIFO Method				**Closing Stock under FIFO Method**		
			Rs.			**Rs.**
15th January 20X4			10,800.00	80	105	8400
25th January 20X4			5,500.00			
28th January 20X4			18,300.00			
			34,600.00			

3.3 **Stores Ledger-LIFO Method**

Date	**Receipts**			**Issues**			**Balance**	
	Units	**Rate**	**Value Rs.**	**Units**	**Rate**	**Value Rs.**	**Units**	**Value Rs.**
05th January 20X4	160	90	14400				160	14,400.00
10th January 20X4	80	95	7,600				240	22,000.00
15th January 20X4				80	95.00	7,600		
				40	90.00	3,600		
				120		**11,200**	120	10,800.00
18th January 20X4	200	105.00	21,000.00				320	31,800.00
25th January 20X4				**60**	**105.00**	**6,300**	260	25,500.00
28th January 20X4				140	105.00	14,700		
				40	90.00	3,600		
				180		**18,300**	80	7,200.00

3.4

Cost of Materials issued under FIFO Method				**Closing Stock under FIFO Method**		
			Rs.			**Rs.**
15th January 20X4			11,200.00	80	90	7200
25th January 20X4			6,300.00			
28th January 20X4			18,300.00			
			35,800.00			

Question 04

4.1

				Rs.
	Material Cost			5,200.00
	Direct Wages			
	Department X	100*3.50		
	Department Y	80*5.00	750.00	750.00
	Overhead Cost			
	Variable Cost			
	Department X	(8000/5000) *100	160	
	Department Y	(10,000/4000) *80	200	
	Fixed Cost	(12000/15000) *180	144	504.00
	Total Cost			6454
	Profit			1500
	Sales Price			**7954**

4.2 Price Mark up

Profit/Cost = (1500/6454) *100=23.24%

Question 05

5.1 Monthly Total fixed cost with indicating each item separately

License Fee : Rs.100,000
Supervisors Salaries : Rs.160,000
Rent : Rs.60,000
Insurance : Rs.80,000 per month
Fees for two consultants : Rs.200,000 per month
Total Fixed Cost : Rs.600,000

5.2 Number of computers to be sold monthly to cover total cost

TFC / (SP –VC)
Rs.600,000 / (100,000-40,000)
10 computers

5.3 Number of computers to be sole monthly to cover the total cost if the assembly workers are paid a total monthly salary of Rs.300,000 instead of a unit based salary

TFC / (SP –VC)
Rs.900,000 / (100,000-24,000)
12 computers

5.4 Number of computers should be sold to earn a monthly profit of Rs.50,000

(Consider originally given details)
(TFC + Profit)/(SP-VC)
(600,000+50,000)/ (100,000-40,000)
11 computers

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