

PILOT PAPER – 2023-2027 SYLLABUS

ML3.1 Advanced Management Accounting

Managerial Level

Time allowed: 3 Hours.

Total Marks: 100

Exam Structure

This exam is consisting with three parts:

Part-I

- 10 Multiple Choice Questions (MCQ)
- Each 02 marks and 20 marks in total.

Part-II

- Five Case Based Objective Test Questions.
- Each 10 marks and 50 marks in total

Part-III

- Three Structured Questions.
- Each containing a case which relates to one or more requirement(s).
- Answers are required be provided in spreadsheet on given format.
- Each 10 marks and 30 marks in total

All questions are compulsory.

Practice Examination – Part I

Exam Structure

- 10 Multiple Choice Questions (MCQ)
 - Segment A 03 MCQ
 - Segment B 02 MCQs
 - Segment C 02 MCQs
 - Segment D 01 MCQ
 - Segment E 02 MCQs
- Each 02 marks and 20 marks in total.

Segment A

1. ABC PLC is in the business of providing telecommunication services to a vast group of customers in Sri Lanka. It operates a separate call center to provide its customers a high quality and fast service. The followings are some of the activities handled by the call center.
 - i. Receiving calls from customers and going through the verification process before transferring them to the subject matter experts.
 - ii. Providing information requested by customers by accessing the customer's account and other details.
 - iii. Checking the customer's perceptions about the verification process.

Which of the above could be considered as a value-added activity/ies of the call center:

- a) (ii) only and (iii) only
 - b) (iii) only
 - c) (ii) only
 - d) All of (i), (ii) and (iii)
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2. A company has been selling a particular raw material to several manufacturing companies over the last few years. The following information is relating to two of its customers – Sunshine (Pvt) Ltd and Multiflower (Pvt) Ltd. Which one of the following situations will not provide a relevant ground for the company to perform a periodic customer profitability analysis:
 - a) Sunshine purchases a bulk quantity of the material at a time. Thus, the material is delivered to the customer's location using a large lorry. However, a small lorry is used for delivering material to Multiflower due to relatively smaller purchase quantity.
 - b) The material is sold to Sunshine on credit whereas to Multiflower for cash.

- c) The discounts offered to Sunshine and Multiflower are 5% and 8% respectively.
- d) Sunshine uses material for producing a product to a foreign market whereas Multiflower produces for the local market.
3. Which of the following statements is correct in relation to the Activity Based Costing (ABC)/ Activity Based Management (ABM):
- a) ABC often makes use of information gathered from ABM for improving business processes.
- b) ABM focuses on processes and managerial activities of an organization for cost allocation.
- c) ABC focuses on the measurement of direct cost based on the performance of various activities, cost objects and resources.
- d) ABM focuses on processes and managerial activities of an organization for driving its goals.

Segment B

4. ABC Company has a real cost of capital of 6% per annum and inflation is 5% per annum. The company's money cost of capital per annum is:
- a) 2.4% b) 5.0% c) 11.3% d) 4.8 %
5. SMART firm has planned for new investments and they have identified five independent investments. But, the company has only Rs. 28 million in funds for the investment. The most profitable order of investment according to the profitability index is:

Projects	Initial Investment (Rs. Mn)	Present Value (Rs. Mn)	NPV (Rs. Mn)
A	2.5	3.25	0.75
B	10.0	10.825	0.82
C	5.0	7.575	2.58
D	10.5	12.35	1.85
E	12.5	13.2	0.70

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

Segment C

6. Top Cloth PLC is in the business of manufacturing and selling garments. It periodically reviews the following Key Performance Indicators (KPIs).

- i. Call pickup time
- ii. Machine set-up time

Which of the following Balanced Scorecard perspectives, do the above KPIs belong to in their order:

- a) Customer perspective and financial perspective.
- b) Customer perspective and internal business perspective.
- c) Financial perspective and customer perspective.

Financial perspective and internal business perspective

7. Which of the following is an advantage of using Residual Income as a measure of divisional performance:

- a) It is based on accounting measures of profit.
- b) It tends to choose marginally profitable investments.
- c) It facilitate comparisons between investment centres.
- d) It considers the opportunity cost of the assets invested in the division.

Segment D

8. Select the incorrect statement about Activity-based management (ABM).

- a) ABM facilitates a cost management system that focuses on identifying and managing the activities that drive costs in an organization.
- b) The purpose of implementing ABM is to improve efficiency, reduce costs, and enhance performance by identifying and eliminating non-value-adding activities.
- c) ABM is based on the principle that not all activities in an organization add value to the products or services offered and that some activities may be unnecessary or redundant.
- d) ABM involves a superficial analysis of activities and costs in an organization to identify opportunities for process improvements, cost reductions, and performance enhancements.

Segment E

9. A mobile phone manufacturer is currently developing a new mobile phone incorporating advanced features. They have recognized the risk that the product may not meet customer expectations, potentially leading to low sales and revenue.

Which risk management strategy would be the most effective for the company to reduce the impact of this risk:

- a) Avoid: The company could decide not to develop the new product to avoid the risk altogether.
- b) Transfer: The company could transfer the risk by outsourcing the product development to a third-party vendor.
- c) Mitigate: The company could conduct market research and incorporate customer feedback into the product design to reduce the risk of low sales.
- d) Keep: The company could accept the risk and take no action to avoid or mitigate.

10. Which of the following is not a type of financial risk:

- a) Credit risk.
- b) Market risk.
- c) Liquidity risk.
- d) Operational risk.

Practice Examination – Part II

Exam Structure

- Four Case-Based Objective Test Questions.
 - Segment A 02 Questions
 - Segment C 01 Question
 - Segment D 02 Questions
- 50 marks in total

Question 01 - Total 10 marks - Segment A

Tyre.Com (Pvt) Ltd manufactures four types of tyres – Summer tyres, Winter tyres, All-season tyres, and Off-road tyres. The manufacturing process involves three operations – building, curing, and finishing. The building and curing operations are performed with fully automatic machines, whereas the finishing is a manually operated process. The time required for these operations in relation to each tyre type is shown below, with the contribution per unit sold.

	Summer tyres	Winter tyres	All-season tyres	Off-road tyres
Building time (minutes)	2	4	3	7
Curing time (minutes)	3	2	3	4
Finishing time (minutes)	2	3	2	5
Contribution per unit (Rs'000)	1.5	2.5	3	4.5

The company has estimated that 100,000 minutes of building time, 50,000 minutes of curing time and 60,000 minutes of finishing time are only available for its next year's operations. Considering these resource constraints, the Management Accountant of the company has obtained the following optimum solution by using Linear Programming Simplex Method.

	A	B	C	D	S1	S2	S3	Solution
S1	-1	0	0	0.2	1	-0.2	-1.2	18,000
C	1	0	1	0.4	0	0.6	-0.4	6,000
B	0	1	0	1.4	0	-0.4	0.6	16,000
Z (in '000)	1.5	0	0	0.2	0	0.8	0.3	58,000

Notation	Description
A	Quantity of Summer tyres to be produced in the next year.
B	Quantity of Winter tyres to be produced in the next year.
C	Quantity of All-season tyres to be produced in the next year.
D	Quantity of Off-road tyres to be produced in the next year.
S1	Slack variable for building time (in minutes).
S2	Slack variable for curing time (in minutes).
S3	Slack variable for finishing time (in minutes).

1. According to the optimum solution, what are the production quantities of Summer tyres and Winter tyres in the next year:

Summer tyres

Winter tyres

2. How much is the maximum contribution that the company can achieve with the given resource constraints:

Variable cost per unit (Rs.)

Total monthly fixed cost (Rs.)

Maximum contribution (Rs' 000)

3. Identify whether each of the following resources are binding or not.

Statement	Binding / Not Binding
Building time	
Curing time	
Finishing time	

Binding

Not Binding

4. Which of the following is incorrect relating to the use of building time and finishing time available to the company when maximizing the contribution in the next year:

a) If the company can obtain additional finishing time, the maximum price to be paid for a minute is Rs 300.

b) If the available finishing time reduces by 5,000 minutes, the company's profit decreases by Rs 1,500,000 in the next year.

- c) 1.2 minutes of building time become unutilized for each additional minute of finishing time that the company can obtain.
- d) 18,000 minutes of building time are not used when achieving the maximum contribution in the next year.
5. Match the variables given on the left side with the solutions given on the right side if the company can obtain additional 2,000 minutes of curing time for the next year:

S3		Increases by 1,200
S1		Decreases by 800
C		Decreases by 400
B		

Question 02 - Total 10 marks - Segment A

Tax Consulting Services (Pvt) Ltd is a firm specialized in providing taxation services to both individuals and companies. There are two divisions – Individual Taxation and Corporate Taxation respectively for providing services to individual clients and corporate clients. In addition, the firm has two independent support service departments – IT Support and Customer Support which respectively provide IT services and handle customer inquiries in providing taxation services.

The firm is now planning to perform a Customer Profitability Analysis on individual clients by applying the activity-based costing technique. It has three individual client sub-groups – Individuals in employment, Professionals in practice and Businessmen. The Individual Taxation Division needs considerable IT support and Customer support services in addition to the professional time involved in providing taxation services. The following details relate to the taxation services provided to the individual clients during the last year.

	Individuals in employment	Professionals in practice	Businessmen
Billing value to per client (Rs)	20,000	28,000	35,000
Cost of professional time per client (Rs)	8,000	10,000	12,000
Professional time in hours	420	200	450
No. of clients	200	80	150

No. of inquiries handled by Customer Support Department	500	100	600
No. of hours of IT services provided by IT Support Department	400	200	900

During the last year, the costs incurred by IT support and Customer support department for providing services to individual clients were respectively Rs.3,450,000 and Rs.1,800,000.

6. Calculate cost driver rates for allocating IT support and customer support costs to individual clients.

IT support cost (Rs)

Customer support cost (Rs)

7. Rank the three sub-groups of the individual clients according to the profit per client during the last year.

Individuals in employment	
Professionals in practice	
Businessmen	

8. Which of the following is correct relating to the support cost allocation to the individual client sub-groups:

- a) IT support cost allocated to a client in the businessmen sub-group is greater than that of the professionals in practice sub-group due to higher professional time involved in providing the service for businessmen.
- b) Customer support cost allocated to a client in the Professionals in practice sub-group is lower than that of the Individuals in employment sub-group since the number of inquiries handled for the former is less than that of the latter sub-group.
- c) IT support cost allocated to a client in the businessmen sub-group is greater than that of the professionals in practice sub-group due to higher IT support time per client involved in providing the service for businessmen.
- d) Customer support cost allocated to a client in the Professionals in practice sub-group is lower than that of the businessmen sub-group since the number of clients in the former sub-group is less than that of the latter sub-group.

9. The firm is considering a revision to the billing value of the clients in the Businessmen sub-group to earn its expected profit markup of 20%. What is the revised billing value per client:

Revised billing value per client. (Rs.)

10. How much is the increase in the firm's profit if the services provided to 30 businessmen are discontinued and, new 50 professional clients are accepted to serve using the resources available in the Businessmen sub-group:

Increase in firm's profit. (Rs.)

Question 03 - Total 10 marks - Segment C

AB PLC carries out its operations through two divisions – Division A and Division B. Division A manufactures a component and transfers it to Division B. Any remaining quantity of the component manufactured by Division A can be sold externally at the price of Rs 640. The variable costs of manufacturing one unit of the component comprise the following.

	Rs.
Direct material	270
Direct labour	140
Variable overheads	90

Currently, Division A runs at its full capacity, manufacturing monthly 4,000 units of the component of which 3,000 units are transferred to Division B at the current market price, and the balance is sold externally. Division B manufactures a product called "Bee", each unit of which uses two units of the component manufactured by Division A. In addition to the cost of the components received from Division A, Division B incurs the following variable costs when producing one unit of the product "Bee".

	Rs.
Direct material	560
Direct labour	320
Variable overheads	140

The monthly demand for the product "Bee" is 1,500 units at the price of Rs 3,100 per unit. An analysis of the demand for Bee indicates that for every Rs. 200 increase in its selling price the monthly demand would reduce by 100 units, and that for every Rs. 200 decrease in its selling price demand would increase by 100 units.

11. Calculate the contributions earned by the two divisions and the company as a whole based on the current prices and volumes:

Division A (Rs.)

Division B (Rs.)

AB PLC (Rs.)

12. What is the selling price per unit of “Bee” that would maximize the profits of Division B:

Selling price of “Bee” (Rs.)

13. Match the variables given on the left side with the solutions given on the right side if Division B of the company decided to operate at its profit maximizing output level:

External sales of Division A	<input type="text"/>	1,900 units
Transfer by Division A to B	<input type="text"/>	950 units
Sales of Division B	<input type="text"/>	2,100 units

14. How much is the company’s contribution if Division B of the company operates at its profit maximizing output level:

Contribution of AB PLC (Rs.)

15. AB PLC has now decided to set the transfer price so as to lead to optimal decision making for the company as a whole. Which of the following transfer pricing methods can be chosen to reflect this new policy in this situation:

- a) Market-based transfer pricing.
- b) Transfer pricing at marginal cost.
- c) Transfer pricing at full cost.
- d) Transfer pricing at activity-based cost.

Question 04 - Total 10 marks - Segment D

Saravi.com sells books and magazines over the Internet. Over the years, Saravi.com has experienced an increasing trend of inventory handling costs. A recent article in a trade journal has caught the attention of management. The article notes that similar firms have purchasing,

warehousing, and distribution costs that average 13% of sales which is attractive when compared with Saravi.com’s results for the past year. The following information is available for Saravi.com:

Activity	Cost driver	Quantity	Percentage of activity cost driver for books	Percentage of activity cost driver for magazines
Incoming receipts (Rs 600,000)	Number of purchase orders	2,000	70%	30%
Warehousing (Rs 720,000)	Number of inventory moves	9,000	80%	20%
Outgoing shipments (Rs 450,000)	Number of shipments	15,000	25%	75%

Book sales totaled Rs 7,800,000 and magazines sales totaled Rs.5,200,000. A review of the company’s activities found various inefficiencies with respect to the warehousing of books and outgoing shipments of magazines. These inefficiencies resulted in an extra 550 inventory moves and 250 shipments, respectively.

16. State two non-value-added activities in the above scenario:

Non-value-added activity – 1

Non-value-added activity - 2

17. Compute the cost of non-value-added activity – 1:

Cost of non-value-added activity - 1

18. Compute the cost of non-value-added activity – 2:

Cost of non-value-added activity - 2

19. Find out cost driver quantities of books and magazines under activities ‘warehousing’ and ‘outgoing shipments’ respectively fill out the blanks in the following table.

Activity	Cost driver quantity			Cost driver quantity: Books	Cost driver quantity: Magazines
		Books	Magazines		
Warehousing	9,000	80%	20%		1,800
Outgoing shipments	15,000	25%	75%	3,750	

Question 05 - Total 10 marks - Segment D

Solar Systems Company makes two types of solar panels at its manufacturing plant: Large panels for commercial customers and Small panels for domestic customers. Production takes place for five days per week, from 7 am until 8 pm (13 hours), 50 weeks a year. Each panel has to be cut, moulded and then assembled using a cutting machine (Machine C), a moulding machine (Machine M) and an assembly machine (Machine A).

Material costs and selling prices for each type of panel are shown below.

	Large panels	Small panels
Selling price per unit (Rs)	12,600	3,800
Material costs per unit (Rs)	4,300	1,160

Total factory costs, which include the cost of labour and all factory overheads, are Rs 12 million each year at the plant. Out of the 13 hours available for production each day, workers take a one-hour lunch break. For the remaining 12 hours, Machine C is utilized 85% of the time and Machines M and A are utilized 90% of the time.

The following information is available for Machine M, which has been identified as the bottleneck resource:

	Large panels Hours per unit	Small panels Hours per unit
Machine M	1.4	0.6

20. Calculate throughput per unit for Large panels and Small panels.

Large panel (Rs.)	<input type="text"/>
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Small panel (Rs.)	<input type="text"/>
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21. Calculate throughput return per factory hour for Large panels and Small panels.

Large panel (Rs.)	<input type="text"/>
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Small panel (Rs.)	<input type="text"/>
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22. Find out the cost per factory hour. (Rs.)

23. Find out the throughput accounting ratio for Large panels and Small panels.

Large panel (Rs.)	<input type="text"/>
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Small panel (Rs.)	<input type="text"/>
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Practice Examination – Part III

Exam Structure

- Three Structured Questions.
- Each containing a case that relates to one or more requirement(s).
- Answers are required to be provided in a spreadsheet in the given format.
- Each 10 marks and 30 marks in total.

Question 01 - Total 10 Marks – Segment B

Hard Rock Company is a Sri Lankan newly started automobile company which is managed by a German Motor Company. Hard Rock decides whether to invest in a new product line. The project involves an initial investment in equipment costing Rs.700,000 and working capital costing Rs.150,000. The expected net cash inflows for the product are Rs.250,000 per annum for 5 years at the current price levels. At the end of 5 years, it is projected that the equipment will have a terminal value of Rs.60,000 and that the elimination of working capital will provide an inflow equal to its initial book value.

The company's post-tax cost of capital is 12% in nominal (money) terms and the inflation rate is projected to be 5% per annum.

Taxation data is as follows.

- The equipment will be subject to tax depreciation allowances of 25% per annum on a reducing balance basis, which can be claimed against taxable profits from the current year (year 0) which is shortly to end. A balancing charge or allowance will arise on disposal.
- The rate of corporate tax is 24% payable 1 year in arrears.

YOU ARE REQUIRED TO:

- Evaluate the viability of the project:

Answer Format

(Rs)							
Year	0	1	2	3	4	5	6
Initial Capital							
Working Capital							
Net Cash Inflows (W1)							
(Minus) Tax 24%							

Tax Relief on Capital Allowance (W2)							
Net Cash Flow							
Discounting Factor 12%	1	0.893	0.797	0.712	0.636	0.567	0.507
Present Value							
NPV							
	Decision -						
Working 01							
(Net Cash Inflow)							
Working 2							
Tax Relief							

Question 02 - Total 10 Marks – Segment C

PC Parts PLC manufactures computer parts for domestic market. Its keyboard factory operates as an investment centre. The factory is currently operating at 70% capacity which the company expects to continue for the next financial year ending 31st March 2024. The following is a summary of the projected financial results of the factory for the next financial year.

	Rs'000
Sales (350,000 units at Rs 600 each)	210,000
Variable cost (Rs 250 each)	(87,500)
Contribution	122,500
Direct fixed overheads	(53,000)
Allocated general service and head office costs	(12,000)
Operating profit	57,500
As at 31st March 2024;	
Net book value of property, plant and equipment	215,000
Working capital	53,000

The factory is now considering an acceptance of a special order for 140,000 units of keyboards for Rs 430 each, which is to be supplied during the next year. The special order will not affect the regular sales of the factory. However, it will increase the direct fixed overheads by Rs 14 million and require an additional investment of Rs 95 million in property, plant and equipment and working capital.

The company pays a performance-based bonus to the managers if their divisions achieve a target Return on Investment (ROI) of 20%. The company's cost of capital is 10% per annum.

YOU ARE REQUIRED TO:

2. Calculate the Return on Investment (ROI) and Residual Income (RI) of the Keyboard factory without considering the special order.

ROI		
RI		
(Rs'000)		

3. Calculate the Return on Investment (ROI) and Residual Income (RI) of the special order.

ROI		
RI		
(Rs'000)		

4. Briefly discuss the possible reaction of the Factory Manager with regard to the acceptance or rejection of the special order.

Decision making criterion	
Factory Manager's decision	

5. Discuss the use of ROI as a performance evaluation criterion in the above scenario.

Advantages	Disadvantages
1.	1.
2.	2.

Question 03 - Total 10 Marks – Segment E

A construction company is planning to build a new high-rise building in a region prone to earthquakes. The company's management team has identified the risk of earthquake damage to the building. They are now considering different risk management strategies to address this risk.

You are required to:

6. Discuss two risk management strategies that the company could use to address the risk of earthquake damage to the building.

Answer Format:

Risk management strategy 1

Explanation

Risk management strategy 2

Explanation

7. Analyze the advantages and disadvantages of each risk management strategy identified in part A, and recommend which strategy the company should use.

Answer Format:

Risk management strategy 1

Advantages	Disadvantages

Risk management strategy 2

Advantages	Disadvantages

Recommendation:

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