H

2020 Preliminary Exams
Pre-University 3

PRINCIPLES OF ACCOUNTING **9593/02**

Paper 2 **21 September 2020**

3 hours

Additional Materials: Answer Booklet

READ THESE INSTRUCTIONS FIRST

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.
Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
Do not use staples, paper clip, glue or correction fluid.
You may use a calculator.
DO **NOT** WRITE ON ANY BARCODES

Section A and Section B
Answer **all** questions.

All calculations must be shown adjacent to the answer.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **7** printed pages and **1** blank page

[Turn over

Section A

Answer **all** questions in this section.

1 Samuel runs a small manufacturing business, making three different products: Jen, Kit and Mat. He provides the following budgeted information for next month:

	Jen	Kit	Mat
Maximum production and sales (units)	6 000	7 000	8 000
Unit costs:	$	$	$
Selling price	72	90	136
Raw material at $10 per kilo	30	40	60
Direct labour	6	8	10

Total fixed costs during the period are $750 000.

REQUIRED

(a) State **two** disadvantages of using contribution margin for making business decisions. [2]

Additional information

Samuel has been advised that, as a result of an industrial action, only 74 000 kilos of raw material will be available next month. He has confirmed orders for next month for 5 000 units of each product. He is considering two options:

Option 1 Make as many units of each product such that he can maximise the profit for the month.

Option 2 Make a minimum of 5 000 units of each product and use the remaining raw material in the most profitable way.

REQUIRED

(b) Calculate the **maximum** profit Samuel can make from **each** option. (Note: products are to be produced in quantities of thousands). [13]

(c) Advise Samuel which option he should choose. Justify your answer by considering both financial and non-financial factors. [5]

[Total: 20]

2 Cahaya Pte Ltd is a small manufacturing business. The firm has two production cost centres: machining and assembly; and two service cost centres: maintenance and canteen.

The company accounts clerk provides you with the following budgeted data for the next financial year:

Details	Machining	Assembly	Maintenance	Canteen
Allocated costs	$120 100	$80 050	$40 000	$15 000
Number of employees	10	30	10	
Number of maintenance hours	8 000	2 000		
Direct labour hours	5 000	15 500		
Machine hours	45 000	3 875		

REQUIRED

(a) Reapportion the budgeted service cost centre overheads to the production cost centres. [4]

(b) Calculate a suitable budgeted overhead absorption rate for **each** production cost centre. [4]

Additional information

At the end of the financial year the following actual data is available:

	Machining	Assembly
Actual machine hours	44 300	
Actual direct labour hours		16 200
Actual overheads	$150 000	$105 000

REQUIRED

(c) Calculate the under or over absorbed overheads for each department. [4]

(d) Based on your computation in (c) above, suggest possible reasons for under or over absorbed overheads, supporting your answers with other relevant facts provided in the question. [4]

(e) Analyse the effects of under or over applied overheads on the current assets and shareholder's equity. [4]

[Total: 20]

3 Lex is preparing budgets for her business for first three months of 2021. She provides the following information.

1 Statement of financial position at the end of 2020 includes the following:

	$
Inventory (50 units)	500
Trade receivables	8 000
Trade payables	3 000
Bank overdraft	5 000

2 The budgeted purchases of inventory and the month end inventory for the first three months of 2021 are:

Month	Purchases of inventory (units)	Month end inventory (units)
January	450	40
February	490	60
March	460	30

3 All Lex's products are sold at $15 per unit.

4 Lex's customers pay her in full in the month following the sale.

5 Lex pays her suppliers of inventory in the month following purchase. The price she pays her suppliers will remain unchanged.

6 Monthly expenses are $2 000. These are paid in full in the month.

7 Lex pays $5 000 each month as dividends.

REQUIRED

(a) State **two** advantages to the business of preparing budgets. [2]

(b) Calculate the budgeted sales of Lex's business for January, February and March 2021 in **both** units and value. [4]

(c) Prepare the cash budget of Lex's business for January, February and March 2021. [5]

(d) Prepare the budgeted income statement of Lex's business for the three months ending March 2021. [4]

Additional information

Lex is unable to understand why, despite the business budgeting a profit in the first three months, the bank overdraft for the business is continuing to increase.

REQUIRED

(e) **(i)** Explain to Lex why her bank overdraft is increasing despite making a budgeted profit. [1]

(ii) Discuss **two** actions Lex could take to reduce her budgeted bank overdraft. [4]

[Total: 20]

Section B

Case Study: Answer **all** questions

4 AI Pte Limited has been in operations for many years, relying on a small, loyal team of workers. The directors are planning to purchase a new equipment to replace an old one which is coming to the end of its useful life.

The old equipment originally cost $50 000. The new equipment will cost $100 000 and will improve the production process, saving time on manufacturing the product and reducing material wastage. There is also the possibility that labour costs could be saved, as workers could be made redundant or redeployed in other areas of the factory. However, the new equipment will only have a maximum useful life of 5 years. After 5 years it will have no residual value and will have to be replaced.

As the accountant, you have been asked to evaluate whether or not the new equipment should be purchased. You have made the following calculations for annual savings if the equipment is purchased.

Year	Savings $000
1	20
2	40
3	75
4	80
5	(10)

For investment appraisal decisions, AI Pte Limited uses a weighted average cost of capital of 12%. This is calculated on the present capital structure of the company which is 80% equity and 20% long-term loans. If the new equipment is purchased, the company will issue an additional 50 000 shares of $1 each. The balance will be raised by obtaining an additional loan.

The discount factors at 12% are:

Year	Discount Factor
1	0.893
2	0.797
3	0.712
4	0.636
5	0.567

As the accountant, you have also been evaluating other equipment which may be suitable. You have found an alternative equipment. You made the following preliminary calculations in respect to the alternative equipment:

Capital cost	$ 150 000
Payback period	4 years
Net present value	$ 75 000

REQUIRED

a) Explain the term ‘capital investment’. Support your answer using an example. [3]

b) Explain what is meant by the term ‘weighted average cost of capital’. [3]

c) Explain the difference between payback and net present value in relation to investment appraisal. [6]

d) Calculate the following for the new equipment:

   (i) the payback period [5]

   (ii) the net present value [6]

e) Discuss the **non-financial** factors which the directors of AI Pte Limited should take into account when deciding whether or not to buy the new equipment. [6]

f) Discuss the limitations of relying on the quantitative information prepared for the purchase of the new equipment. [6]

g) Advise the directors which equipment they should purchase. Justify your answer. [5]

[Total: 40]

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