Fanling Lutheran Secondary School

2022-2023 First Term Uniform Test

S6 BUSINESS, ACCOUNTING & FINANCIAL STUDIES

QUESTION-ANSWER BOOK

November 4, 2022

Time allowed: 1 hour 30 minutes

Instructions:

1. This paper consists of 6 pages.
2. Full marks of this paper is 117.
3. Write your Name, Class, Class No., Seat No. and Group No. in the spaces provided on Page 1.
4. This paper must be answered in English.
5. Write your answer in the spaces provided in this Question-Answer Book. Do not write in the margins. Answers written in the margins will not be marked.
6. Supplementary answer sheets will be provided on request. Write your Class Number, mark the question number box and staple them to this Question-Answer Book.

Name :	
Class :	( )
Seat No. :	

Question No.	Marker's Use Only	
Section A		
1		
2		
3		
Section B		
1		
2		
3		
4		
Total		

Section A (38 marks)

1. Net profit for the year amounted to $100,000. Drawings made on 1 October 2022: Tsui $20,000, Chong $30,000. Rate of interest on drawings: 8% per annum. Capital and Current of Tsui and Chong are $60,000, $80,000 and $40,000, $50,000 respectively. Rate of interest on capital: 10% per annum. Chong was entitled to an annual salary of $20,000. The share profits and losses of Tsui and Chong are in the ratio of 2 : 3.

   REQUIRED: Prepare the appropriation account of the partnership for the year ended 31 December 2022 and the partners' current accounts in columnar form.

   (Total 10 marks)

Appropriation account

	$	$		$
Interest on capital –			Profit and loss (net profit)	100,000
Current: Tsui ($60,000x10%)		6,000	Interest on drawings –	
Current: Chong ($80,000x10%)		8,000	Current: Tsui ($20,000x8%x3/12)	400
Salary to partner –			Current: Chong ($30,000x8%x3/12)	600
Current: Chong		20,000		
Share of profit –				
Current: Tsui (2/5)	26,800			
Current: Chong (3/5)	40,200	67,000		
		101,000		101,000

Current

	Tsui	Chong		Tsui	Chong
	$	$		$	$
Drawing	20,000	30,000	Balance b/d	40,000	50,000
Appropriation–Interest on drawings	400	600	Appropriation–Interest on capital	6,000	8,000
Balance c/d	52,400	87,600	Appropriation–Salary to partner	—	20,000
			Appropriation–Share of profit	26,800	40,200
	72,800	118,200		72,800	118,200

2. Cai and Li were in partnership, sharing profits and losses equally. Capital of Cai and Li are $120,000 and $180,000. Goodwill was valued at $200,000. It was decided that no account is to be kept for goodwill. On 1 January 2022, Chan was admitted to the partnership with capital contribution of $70,000 by cheque. Premise has risen from $100,000 to $280,000, motor vehicles has dropped from $80,000 to $30,000, A bad debt recovery of $2,000 would be collected from trade receivables, An increase in allowance for doubtful account of $5,000, revaluation fees of $12,000 were paid. The profits and losses sharing ratio of Cai, Li and Chan are 5:3:2.

   REQUIRED: Prepare the revaluation account and the partners' capital accounts in columnar form to record the admission of Chan

   (Total 10 marks)

Revaluation

	$	$		$
Motor vehicles ($80,000 – $30,000)		50,000	Buildings ($280,000 – $100,000)	180,000
Allowance for doubtful accounts		5,000	Trade receivables (bad debts recovery)	2,000
Cash at bank – Professional fees		12,000		
Profit on revaluation –				
Capital: Cai (1/2)	57,500			
Capital: Li (1/2)	57,500	115,000		
		182,000		182,000

Capital

	Cai	Li	Chan		Cai	Li	Chan
	$	$	$		$	$	$
Goodwill (5 : 3 : 2)	100,000	60,000	40,000	Balances b/f	120,000	180,000	—
Balance c/f	177,500	277,500	30,000	Goodwill (1 : 1)	100,000	100,000	—
				Cash at bank	—	—	70,000
				Revaluation	57,500	57,500	—
	277,500	337,500	70,000		277,500	337,500	70,000

3. On 31 December 2022, the partnership did not operate well and the partners decided to dissolve the partnership. The relevant information is as follows: Capital and Current of Hui, Luo and Wong are $70,000, $30,000, $40,000 and $4,000, $5,000 and $7,000 respectively. On dissolution, the bank and net book value of office equipment, motor vehicles, inventory and trade receivable are $37,000, $30,000, $40,000, $50,000 and $10,000. The office equipment and inventory were sold for $36,000 and $60,000. Receipts $24,000 from trade receivable. Hui took over the motor vehicles for $44,000. Trade payable of $11,000, net of discounts received of $1,000, were paid off. The cost of dissolution were $3,000. The profits and losses sharing ratio of Hui, Luo and Wong are 1:3:4.

REQUIRED:

(a) Prepare the realisation account

(b) Prepare the partners' capital accounts in columnar form and the bank account.

(Total 18 marks)

(a)

Realisation

	$	$		$
Office equipment		30,000	Bank – Office equipment	36,000
Motor vehicles		40,000	Bank – Inventory	60,000
Inventory		50,000	Bank – Trade receivable	24,000
Trade receivable		10,000	Capital: Hui - Motor vehicles taken over	44,000
Bank – Dissolution costs		3,000	Trade payable – Discounts received	1,000
Profit on realization –				
Capital：Hui (1/8)	4,000			
Capital：Luo (3/8)	12,000			
Capital：Wong (4/8)	16,000	32,000		
		165,000		165,000

(b)

Capital

	Hui	Luo	Wong		Hui	Luo	Wong
	$	$	$		$	$	$
Realisationr	44,000	—	—	Balances b/f	70,000	30,000	40,000
Bank–Final settlement	34,000	47,000	63,000	Current	4,000	5,000	7,000
				Realisation	4,000	12,000	16,000
	78,000	47,000	63,000		78,000	47,000	63,000

Bank

	$		$
Balances b/f	37,000	Trade payable	10,000
Realisation–Office equipment	36,000	Realisation–Dissolution costs	3,000
Realisation–Inventory	60,000	Capital: Hui–Final settlement	34,000
Realisation–Trade receivable	24,000	Capital: Luo–Final settlement	47,000
		Capital: Lee–Final settlement	63,000
	157,000		157,000

Section B (79 marks)

1 Max Ltd is a manufacturer. Fill in the blanks in (a) to (e) with the most suitable terms provided in the box below (each term can only be used once).

variable cost	fixed cost	mixed cost
sunk cost	opportunity cost	

(a) Manufacturing workers are paid a monthly wage of $10,000 plus $5 per unit produced. The payments to manufacturing workers are a/an ___mixed cost_____.

(b) The company is considering using machine A to produce product B. Machine A is currently used to produce product C. The profit earned on producing product C with machine A is the __opportunity cost___ of producing product B using that machine.

(c) Machine A was purchased on 1 January 2015 for $200,000. Its current market value is $20,000. In deciding whether to sell this machine, its purchase cost of $200,000 is a/an ____sunk cost____.

(d) The factory rent is $50,000 per month. This is an example of ____fixed cost_____.

(e) The packaging cost for product C is $3 per unit. This is an example of ____variable cost____.

(Total 10 marks)

2 Cheung's Co plans to sell 5,000 units of equipment at $100 per unit. Financial information relevant to the product's production and sales is given below:

	$
Direct materials per unit	7
Direct labour per unit	8
Variable production overheads per unit	9
Sales commission per unit	20
Fixed production overheads	150,000
Fixed selling and administrative expenses	100,000

REQUIRED:

(a) Calculate the contribution margin per unit of equipment.

(b) How much sales revenue does Cheung's Co have to earn in order to make a profit of $30,000?

(c) If the price is set at $200 per unit, it is estimated that the sales quantity will drop from 5,000 units to 2,000 units. Should Cheung's Co raise the price? Support your answer with calculations.

(Total 12 marks)

(a) The contribution margin for each unit of the product = $100 – $7 – $8 – $9 – $20 = $56

(b) Total fixed cost = $150,000 + $100,000 = $250,000

Target profit sales unit = ($250,000 + $30,000) / $56 = 5,000 units

Target profit sales revenues = 5,000 x $100 = $500,000

(c) Unit contribution after the price change = $200 – $7 – $8 – $9 – $20 = $156

Net profit before the price change = $30,000

Net profit after the price change = 2,000 x $156 – $250,000 = $62,000

Cheung's Co should increase the price as the net profit would increase $32,000 after the change.

3. Dragon Limited manufactures three products: A, B and C. The products' financial information is as follows:

	Product		
	A	**B**	**C**
	$/unit	$/unit	$/unit
Selling price	365	390	225
Production costs			
Direct materials	80.5	95.0	45.5
Direct labour	60.5	61.0	40.0
Variable manufacturing overheads	24.0	24.5	20.5
Fixed manufacturing overheads absorbed	55.0	88.0	33.0
Variable selling and administrative expenses	21.5	21.5	21.5

Dragon Limited has a maximum of 20,000 machine hours available each year. The total fixed manufacturing overheads are $440,000 per year, which are absorbed on the basis of machine hours.

REQUIRED:

(a) Calculate the contribution margin per unit for products A, B and C respectively.

(b) Calculate the fixed manufacturing overheads absorption rate.

(c) Calculate the number of machine hours required to produce each unit of products A, B and C respectively.

(d) Suppose the projected demand for products A, B and C in the following year is 4,500 units, 2,500 units and 4,300 units respectively. State the production quantity of each product in the following year which will maximise the total contribution of Dragon Limited at its full capacity. Support your answer with calculations.

(Total 30 marks)

(a) Contribution margin per unit for products A = 365 – 80.5 – 60.5 – 24.0 – 21.5 = $178.5 per unit

Contribution margin per unit for products B = 390 – 95.0 – 61.0 – 24.5 – 21.5 = $188 per unit

Contribution margin per unit for products C = 225 – 45.5 – 40.0 – 20.5 – 21.5 = $97.5 per unit

(b) Fixed manufacturing overheads absorption rate per machine hour = $440,000/20,000 = $22 per machine hour

(c) The number of machine hours for each unit of products A = $55.0/$22 = 2.5 machine hour

The number of machine hours for each unit of products B = $88.0/$22 = 4 machine hour

The number of machine hours for each unit of products C = $33.0/$22 = 1.5 machine hour

(d) Contribution margin per machine hour for each unit of products A = $178.5 / 2.5 = $71.4 per machine hour

Contribution margin per machine hour for each unit of products B = $188 / 4 = $47 per machine hour

Contribution margin per machine hour for each unit of products C = $97.5 / 1.5 = $65 per machine hour

Therefore, production priority should be products A, products C and products B.

1. Produce 4,500 units of products A, machine hours used = 4,500 x 2.5 = 11,250

2. Produce 4,300 units of products C, machine hours used = 4,300 x 1.5 = 6,450

Machine hours left for producing product B = 20,000 – 4,500 x 2.5 – 4,300 x 1.5 = 2,300 machine hours

The number of product B to be produced = 2,300 / 4 = 575 units

Optimum production plan : 1. Produce 4,500 units of products A

2. Produce 4,300 units of products C

3. Produce 575 units of products B

4 Humble Co Ltd produced 15,200 units of a single product during the year ended 31 December 2018. There was no opening inventory, while 5% of the units manufactured during the year remained unsold at the year-end.

Price and cost information relating to the product is as follows:

Selling price	$350 per unit
Direct materials	$1,337,600
Direct labour ($25 per hour)	3.5 hours per unit produced
Variable manufacturing overheads	$12 per unit produced
Fixed manufacturing overheads	$438,000 per year
Variable marketing costs	$25 per unit sold
Fixed marketing costs	$2,000,000 per quarter

REQUIRED:

(a) Prepare income statements for the year ended 31 December 2018 using the following approaches:
  (i) Absorption costing
  (ii) Marginal costing

(b) State two advantages of using marginal costing as compared with absorption costing.

(Total 27 marks)

(a) (i)

Income statement for Humble Co for the year ended 31 December 2018

	$		$
Sales [(15,200 x 95%) × $350]			5,054,000
Less: Cost of goods sold:			
Direct materials	1,337,600		
Direct labour ($25 x 3.5 x 15,200)	1,330,000		
Variable manufacturing overheads (15,200 x $12)	182,400		
Fixed manufacturing overheads	438,000		
	3,288,000		
Less: Closing inventory [($3,288,000/15,200) × 760]	(164,400)		(3,123,600)
Gross profit			1,930,400
Less: Variable marketing costs [(15,200 x 95%) × $25]			(361,000)
Fixed marketing costs ($200,000 × 4)			(8,000,000)
Net loss			6,430,600

(ii)

Income statement for Humble Co for the year ended 31 December 2018

	$		$
Sales [(15,200 x 95%) × $350]			5,054,000
Less: Variable cost of goods sold:			
Direct materials	1,337,600		
Direct labour ($25 x 3.5 x 15,200)	1,330,000		
Variable manufacturing overheads (15,200 x $12)	182,400		
	2,850,000		
Less: Closing inventory [(2,850,000/15,200) × 760]	(142,500)		(2,707,500)
Product contribution margin			2,346,500
Less : Variable marketing costs [(15,200 x 95%) × $25]			(361,000)
Contribution			1,985,500
Less: Fixed manufacturing overheads			(438,000)
Fixed marketing costs ($200,000 × 4)			(8,000,000)
Net loss			6,452,500

(c) Fixed manufacturing costs are sunk costs and therefore not relevant to decision making, but those costs are treated as product costs in absorption costing.

Income statements prepared under marginal costing are more useful for decision making. For example, they can be used to predict the change in net profit if the sales volume changes by a certain percentage.

End of Paper