



Singapore CA Qualification (Foundation) Examination

12 December 2022

Accounting for Decision Making

INSTRUCTIONS TO CANDIDATES:

1. The time allowed for this examination paper is **3 hours 15 minutes**.
2. This examination paper has **FOUR (4)** questions and comprises **SEVENTEEN (17)** pages (including this instruction sheet and Appendix A). Each question may have **MULTIPLE** parts and **ALL** questions are examinable.
3. This is a restricted open book examination. You are allowed to have only the following materials with you at your exam location:
 - One A4-sized double-sided cheat sheet
 - One A4-sized double-sided blank scratch paper
4. During the examination, you are allowed to use your laptop and any calculators that comply with the SAC's regulations. Please note that watches, mobile phones, tablets, and all other electronic devices **MUST NOT** be used during the examination.
5. During the examination, videos of you and your computer screen will be recorded for the purpose of ensuring examination integrity and you have consented to these recordings.
6. This examination paper and all video recordings of this exam are the property of the Singapore Accountancy Commission.

MODULE-SPECIFIC INSTRUCTIONS:

7. Assume that all dollar amounts are in Singapore dollar (S\$) unless otherwise stated.
8. All computations should be presented up to **TWO (2)** decimal places, unless otherwise stated.

IMPORTANT NOTICE:

If you are not feeling well, please do not press "Start Assessment". If you have started and leave during the exam, you would be deemed to have attempted the paper.

****VERY IMPORTANT NOTICE****

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1. Your question paper is attached under the "**Resource**" tab found at the bottom right of **EACH** question.

Other important information:

2. You will **only be allowed** to access the Excel function from your computer.
3. You are **NOT ALLOWED** to access any websites or reference materials (except for your A4 sized double sided cheat sheet) during the exam.
4. You are **NOT ALLOWED** to print the question paper.
5. **Please take note that your screen will be monitored throughout the examination. If you are found to have accessed unauthorised materials or websites, or if you cheat or attempt to cheat, you will be liable to severe disciplinary action.**

Should you encounter any issues during the exam, please call the following number:

+65 6100 0516

6. **You do not need to fill in an answer for this question.**

Question 1 – (a), (b) and (c)

Special Specs Limited (SSL) produces standard reading glasses it sells to a variety of third-party retail outlets. The flexible cost budget for 20x4 was prepared in advance for 3 possible activity levels: 100,000, 150,000 or 200,000 units. Details of the budgeted and actual costs for the period are given below:

	Budgeted Data			Actual Data
Production level (units)	100,000	150,000	200,000	180,000
Labour (\$)	200,000	250,000	300,000	17,500 variable hours worked, paid \$192,500 plus salaried supervisors paid \$100,000
Materials (\$)	175,000	262,500	350,000	19,000kg purchased and used, costing \$304,000
Factory overheads and other costs (\$)	1,000,000	1,000,000	1,000,000	1,150,000
Total costs (\$)	<u>1,375,000</u>	<u>1,512,500</u>	<u>1,650,000</u>	<u>1,746,500</u>

Each unit is budgeted to take 6 minutes of labour to make, and to use 0.1kg of material. SSL sells 2 styles of glasses, each which use the same amount of resources to manufacture.

Factory overheads are treated as a period cost.

Details of the sale of each style:

	Urban Animal (UA) style	Erudite Explosion (EE) style
Budgeted (= actual) sales price (\$)	15	25
Budgeted sales volume (units)	125,000	75,000
Actual sales volume (units)	100,000	80,000

SSL uses the variable costing method to calculate variances.

**e-Exam
Question
Number**

Question 1 required:

- 2** **(a)** Prepare a cost budget flexed to actual output level, showing clearly the total flexed budgeted cost as well as the breakdown for each of the cost components.

(9 marks)
- 3** **(b)** Calculate the total flexible budget variance for each item of cost, analysed into price/rate and quantity/efficiency variances as appropriate.

(11 marks)
- 4** **(c)** Calculate the sales mix variance for each product and in total.

(5 marks)
(Total: 25 marks)

Question 2 – (a), (b) and (c)

Smart Interior Lighting Ltd (SIL) makes high quality decorative floor and table lamps that can be controlled by a smartphone. There are many competitors in the marketplace, but SIL's brand is strong, and the design of its lights have won several consumer awards.

The Marketing Director of SIL has been approached by Business Is Bright (BIB), a Singapore contractor who specialises in installing smart lighting systems for businesses that includes lighting for corridors, offices, and even individual desks. BIB is tendering for a large contract to install smart lighting into a large office block with 45 floors and is looking for a new partner to supply the equipment. The length of the contract is expected to be 6 months. 10,000 smart lighting units are needed for the contract.

SIL would need to tailor its current offering as it is currently designed for domestic interiors. The Marketing Director is keen to offer a competitive price and is interested to know what SIL's costs would be as a baseline. The Operations Director would spend 20% of her time in the coming 6 months (the length of the contract) working on the contract. She earns \$200,000 per year. She has already spent 1 week preparing a cost estimate, which the Marketing Director has asked you to review:

	Note	\$
Materials	1	550,000
C454a	2	1,000
Labour	3	45,375
Other Variable costs	4	150,000
Administration	5	90,000
Factory rent	6	<u>30,000</u>
Total cost		866,375
40% Standard mark-up	7	<u>346,550</u>
Cost (= minimum sales price)		<u>1,212,925</u>

Notes

- 1) Materials: 10,000 units needed, for the contract, with 1 smartbox component per unit. A smartbox costs \$15 to purchase. 3,500 are already held in inventory, which cost \$12 each. The inventory items could be sold as spare parts for \$5 each. All of SIL's products use smartbox components. Each unit also requires 0.25kg of high-grade alloy. 750kg is in inventory. It usually costs \$160 per kg, but is currently in short supply, and emergency purchases could cost \$400 per kg. The alloy is used in one other product that currently earns a contribution of \$120 per unit and uses 0.4kg per unit. Sales of the other product would be lost if the inventory is not used to produce them.
- 2) A barrel of C454a (a dangerous chemical): Is needed for this contract and has been purchased at a cost of \$1,000 in anticipation of winning the work. If the contract is not won, it will cost \$400 to dispose of safely; there is no active second-hand market for this chemical.
- 3) Labour: 2 grades of labour are required: Semi-skilled and Skilled.
 - (i) Semi-skilled workers are paid a wage of \$1,500 per month and work 160 hours a month. Each unit takes 6 minutes to make. Half the BIB contract could be accommodated in the normal working day because there is spare capacity as the workers are currently not working on any other contract. Overtime is paid at double the usual rate per hour. Alternatively, temporary semi-skilled labour could be hired for \$20 per hour to cover the overtime hours.
 - (ii) Skilled labour is in short supply – more cannot be hired – and is currently working on the production of domestic units. Each domestic unit takes 12 minutes of skilled labour (paid an hourly rate of \$18 per hour) and makes a contribution of \$2.00 per unit. Skilled labour would have to be diverted from current production. Each BIB unit will take 6 minutes of skilled labour time.

- 4) Other variable costs: \$15 per unit.
- 5) Administration: This is an allocation of head office costs, apportioned based on the size of the contract compared to other products being manufactured. Head office costs include the hire of an additional coordinator for the BIB contract, only for the term of this contract, at an annualised salary of \$25,000 per year.
- 6) Factory rent: Current rent is \$100,000. Housing this contract would require renting extra space for the duration of the work at a cost of \$2,000 per month. The contract would take up 50% of the total space after renting the extra space.
- 7) Standard mark-up is 40% on cost. Securing less than this is effectively a cost to the business (as it reduces profitability) so it must be covered by the price quoted.

**e-Exam
Question
Number**

Question 2 required:

- 5** **(a)** Calculate the relevant cost of the BIB contract, briefly explaining each calculation, or your reason for excluding item(s). **(15 marks)**
- 6** **(b)** Explain TWO differences between Management and Financial Accounting, illustrating your answer using the SIL contract. **(4 marks)**
- 7** **(c)** Discuss THREE non-financial considerations that the Marketing Director of SIL should consider before deciding whether or not to bid for the BIB contract. **(6 marks)**
- (Total: 25 marks)**

Question 3 – (a), (b), (c) and (d)

Perfect Pitch Footballs Ltd (PPF) manufactures football equipment – footballs, goals, clothing and ancillary equipment. It produces 2 types of footballs – a junior and an adult version.

It has 4 cost centres in the factory: 2 production cost centres: Preparation and Assembly, and 2 service cost centres: Canteen and Maintenance.

It is preparing standard cost information for each football:

Materials: Materials cost \$6 per square metre, and each junior football takes 0.25 of a square metre, while each adult football takes 0.5 of a square metre.

Labour: Each junior football takes 6 minutes of direct labour in preparation, and 3 minutes in assembly. Each adult version takes 12 minutes of direct labour in preparation, and 6 minutes in assembly. Labour costs \$15 per hour.

Machine time: Each junior football takes 1 minute of machine time in preparation, and 6 minutes machine time in assembly. Each adult football takes 2 minutes machine time in preparation, and 12 minutes in assembly.

Annual overheads are detailed below:

	Preparation	Assembly	Canteen	Maintenance	Total
Rent (\$)					100,000
Supervisor salaries (\$)	3,000	3,000	3,000	6,000	15,000
Indirect materials (\$)			40,000	25,000	65,000
Equipment depreciation (\$)					150,000
General overheads (\$)					250,000

General overheads are assumed to be driven by floor space.

Further information about each costs centre is given below:

	Preparation	Assembly	Canteen	Maintenance	Total
Number of employees	20	10	1	5	36
Floor area (square metres)	30	50	15	5	100
Net book value (NBV) of equipment (\$'000)	10	50	10	10	80
Direct labour hours per year	20,000	10,000			30,000
Machine hours per year	5,000	20,000			25,000

The depreciation charge is calculated based on the reducing balance method, and so it is based on the net book value of the equipment. The equipment depreciation charge should be allocated based on the net book value of the equipment.

**e-Exam
Question
Number**

Question 3 required:

8

(a) Calculate the prime costs per junior and adult football.

(4 marks)

9

(b) Calculate the overhead costs per cost centre before reallocating service department costs.

(9 marks)

The service departments spend their time as follows:

	Time spent on			
	Preparation	Assembly	Canteen	Maintenance
Canteen	50%	40%	-	10%
Maintenance	20%	40%	40%	-

**e-Exam
Question
Number**

Question 3 required:

10

- (c)** Calculate the overhead costs for each production department after reallocating service department costs using the Step method. **(6 marks)**

11

- (d)** Calculate the total cost per junior and adult football including factory overheads using labour or machine hours as appropriate for each production department. **(6 marks)**

Note: Assume PPF uses departmental overhead rates to allocate factory overheads.

(Total: 25 marks)

Question 4 – (a), (b), (c) and (d)

Thriftyjet Airlines Ltd (TAL) operates low-cost flights regionally with Changi Airport as its main base and advertises using the phrase 'Getting you there for less'. TAL offers a no-frills service of frequent short to medium distance flights (with India, China and Australia being the furthest destinations). Passengers are not allocated specific seats to speed up and simplify boarding, luggage size and weight is carefully checked and controlled, and technology is used to automate check-in and boarding procedures as much as possible. TAL employs many school leavers for cabin crew at a low wage, but also has some very experienced airline Operations Managers at Head Office to streamline the business as much as possible. The internal culture is relentlessly cost focused.

TAL fights hard for market share in a crowded marketplace. It buys older aeroplanes from other, more prestigious airlines, who in turn purchase their aeroplanes from one of only a few global manufacturers. Customers can book a TAL flight via a dedicated booking website, although 93% book through one of the 3 independent online intermediaries – 'Flycompare', accounting for the majority of these bookings. Sales for TAL have fallen recently, with market research showing that customers are increasingly using video-conferencing facilities to attend business meetings. Whilst gathering customer feedback, some customers took the opportunity to say they would be much happier if complimentary inflight catering and beverages were introduced.

The Finance Director is frustrated and says 'no matter what we do, our margins are tight to non-existent. We do everything possible to reduce costs but always have to fight to keep our heads above water. Always have done. This recent drop in sales just makes it even harder.'

**e-Exam
Question
Number**

Question 4 required:

- 12** **(a)** Identify and explain THREE factors in TAL's value chain that add value. **(6 marks)**
- 13** **(b)** Using Porter's Five Forces as a framework:
- (i)** Identify and assess how high each competitive force is (high/medium/low) in the airline industry. **(10 marks)**
- (ii)** Conclude by assessing the overall impact the five competitive forces have on the profitability of TAL. **(2 marks)**

The Marketing Director, having reviewed the recent customer feedback, decided to respond by providing a free glass of champagne or fresh orange juice upon boarding for every passenger and a complimentary inflight meal of reasonable quality.

After 6 months of trialling this enhanced service, customer feedback has improved considerably but losses are increasing at the airline. The Marketing Director suggests increasing prices.

**e-Exam
Question
Number**

Question 4 required:

14 **(c)** Using Porter's Generic strategies as a guide, explain why profitability is falling despite improving customer feedback.
(4 marks)

15 **(d)** Assess the Marketing Director's suggestion to increase prices.
(3 marks)
(Total: 25 marks)

END OF PAPER

Appendix A – Common verbs used by the Examiners

Verb	Description
Analyse	Identify the key components, look for similarities and differences, look for patterns or outliers, and weight up the issues. If there is numerical data, you might need to provide a range of answers depending on how you substitute the data into your model. Make sure you state any implications of your answer and any assumptions that you make.
Assess	Make a judgment about the value, quality, outcomes, results, or size. Often there will be a qualifier in the instruction, which will tell you exactly what to assess . Professional judgment and scepticism (a questioning mind) are called for when making an assessment .
Calculate / Compute	Do the number crunching and derive the correct answer. Make sure that you write down your workings and crosscheck your numbers. Candidates often underperform because of careless mistakes.
Conclude / Draw conclusions	Form a judgment, or determine the outcome, or resolve an issue, by using the facts presented. An example might be "Conclude whether to outsource the human resource function".
Discuss	Discuss requires you to provide the 'for' and 'against' arguments, you cannot have a discussion without opposing views otherwise it would be just a conversation. If discuss is placed near the front of the instruction, then it requires you to provide an answer that is similar to explain , but addresses both the for and against arguments.
Explain	Explain requires you to write at least several sentences conveying how you have analysed the information in a way that a layperson can easily understand the concept or grasp the technical issue at hand.
Identify	Identify is similar to list , but requires you to also provide an explanation as to why the item/s that you have identified is/are relevant to the facts given in the question.
Illustrate / Give examples	Illustrate requires you to provide an example, either from the facts given, a real-life example, or a made up example to illustrate the point you are trying to make. Illustrate and Demonstrate have similarities.
Prepare	Prepare requires you to produce your answer using a specific format.
Use / Using	This instruction tells you the type of model that you must use when formulating your answer. For instance, " Using the <u>Discounted Cash Flow approach</u> , ..." tells you what valuation approach to use.