



Singapore CA Qualification (Foundation) Examination

11 December 2023

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 **SIXTEEN (16)** 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 ACRA's regulations. Please note that smart 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 Accounting and Corporate Regulatory Authority.

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 6865 9365

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

Question 1 – (a), (b), (c) and (d)

Street Food Kings (SFK) makes and sells traditional street food from a variety of ethnic sources. It sells its products direct to customers via a website, through a chain of temporary market stalls, and business-to-business (B2B) mainly to supermarket chains. The product is priced accordingly – with the market stalls being seen as ‘premium’ (as cooking at the stall is required), then website sales are mid-priced (no stalls, but low volumes per sale) and the lowest price of all is B2B sales given their high volumes per sale. The Finance Director is working with the Marketing Director to decide which distribution channel is the most profitable, to help direct future marketing efforts.

Relevant information has been collated for the business as a whole for the most recent year as follows:

	\$'000	Notes
Total cooking cost	500	Cooking costs per unit are 6 times as much at the stalls compared to the other methods of distribution. All methods of distribution need to be cooked by SFK.
Total packaging cost	210	There is negligible packaging at the stalls, and website packaging is 50% more expensive per unit than B2B, as individual small orders need to be packaged well for delivery to retail customers.
Total distribution cost	850	The average size of a website order is 4 units. The average size for a B2B order is 1,000 units. A B2B delivery costs 100 times more than a website order. Stalls distribution involves sending a van to the various events attended, which costs \$100,000 a year to run the van and pay the driver.

	Stalls	Website	B2B
Volume (units)	10,000	40,000	150,000
Average price per unit (\$)	35	25	20

The 'Stalls' price is set using a markup of 250% on ingredient cost. Ingredient costs are the same per unit for each distribution channel.

**e-Exam
Question
Number**

Question 1 required:

2

(a) Calculate the total gross profit (revenue less ingredient cost) for each distribution channel.

(5 marks)

3

(b) Using Activity-Based Costing, calculate the net profit per unit for each distribution channel.

(11 marks)

The Marketing Director estimates that the average website consumer buys 4 units a month. Website customers are usually attracted by an initial offer of a free 'family deal' delivery, which contains 5 free units. Should customers stop placing their regular orders, one month is given for free as an offer. This offer is usually given once for each customer at some point during their lifetime relationship with SFK. Customers usually stay with SFK for an average of 4 years after the initial offer (including months where units are given for free to entice them back).

**e-Exam
Question
Number**

Question 1 required:

4

(c) Calculate the lifetime gross profitability of an average website customer (total revenue less total ingredient costs).

(4 marks)

The Marketing Director is keen to reduce the number of customers who drift away and to increase the average customer lifetime length.

**e-Exam
Question
Number**

5

Question 1 required:

- (d)** Recommend and justify TWO suitable Key Performance Indicators to measure website customer satisfaction for SFK.
Recommend and justify which you think is the most important.

(5 marks)

(Total: 25 marks)

Question 2 – (a), (b), (c) and (d)

Faux Leather Chic (FLC) hand-makes accessories from a high-quality synthetic material that imitates leather.

The finance department has extracted the following historical information:

Output (units per year)	Total cost (\$)
20,000	1,250,000
35,000	2,250,000

Fixed costs are estimated to double at 30,000 units of output as extra machinery and supervisors are required at that point.

**e-Exam
Question
Number**

6

Question 2 required:

- (a) Calculate the variable cost per unit and the fixed costs below 30,000 units of output. **(5 marks)**

Handbags and purses both use the same particular grades of skilled labour and material.

Each handbag uses 50cm^2 of material, and each purse uses 25cm^2 of material. 1cm^2 of material costs \$0.50. The material used is in short supply. There is only $3,000\text{cm}^2$ available for the coming week for producing handbags and purses.

Each handbag takes 2 hours to make by hand, and each purse takes 3 hours. Labour is paid \$15 an hour. There are 5 workers who each work a 40-hour week on the handbags and purses line. Overtime is not allowed.

The maximum demand for purses is 100 per week, and the maximum demand for handbags is 100 per week. Purses sell for \$77.50 each and handbags sell for \$80 each.

**e-Exam
Question
Number**

7

Question 2 required:

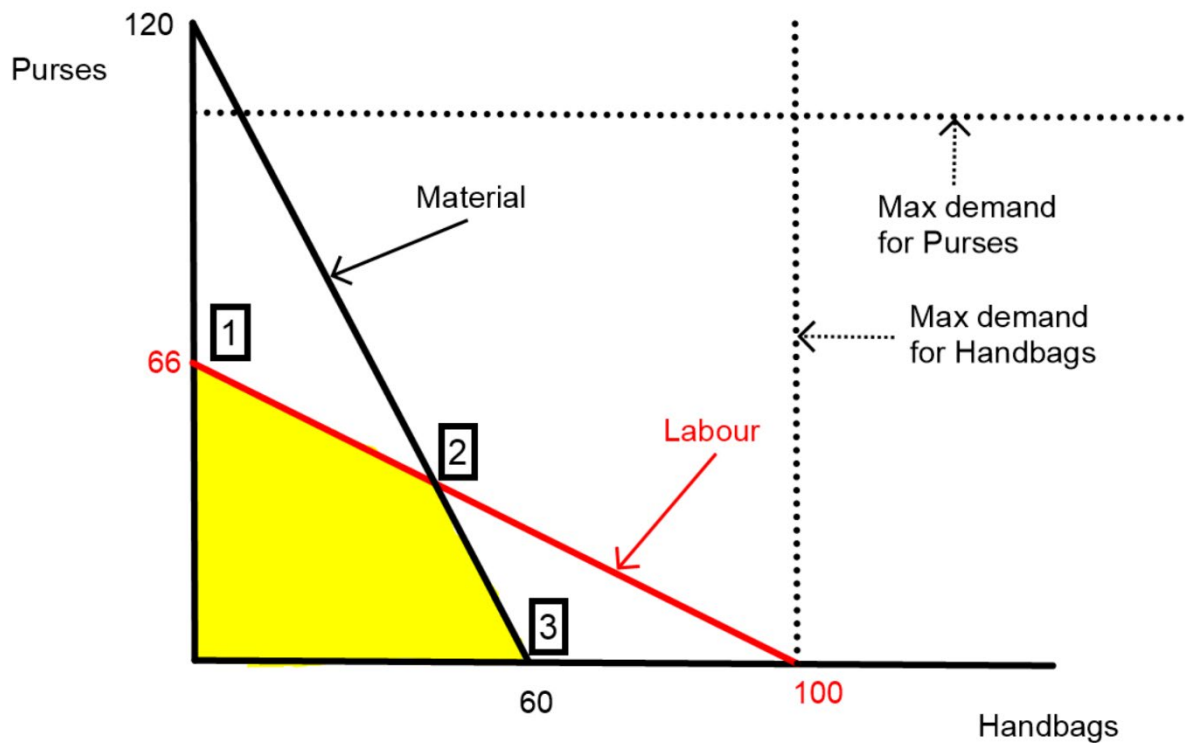
(b) Using P = the number of purses to make per week, and H = the number of handbags to make per week, state suitable equations for:

(i) The 2 constraints of labour and material **(2 marks)**

(ii) The 2 demand constraints **(2 marks)**

(iii) Total contribution **(5 marks)**

The constraints involved in making purses and handbags have been correctly drawn on a graph by the finance department as follows:



**e-Exam
Question
Number**

8

Question 2 required:

(c) Using simultaneous equations as appropriate, calculate the contribution generated at:

(i) Point 1 **(1 mark)**

(ii) Point 2 **(7 marks)**

(iii) Point 3 **(1 mark)**

**e-Exam
Question
Number**

9

Question 2 required:

- (d)** Based on the previous part calculation, conclude which is the profit maximising mix of handbags and purses to produce, and the annual contribution generated assuming 50 production weeks a year.

(2 marks)

(Total: 25 marks)

Question 3 – (a), (b), (c) and (d)

Cutting in Sharp (CIS) designs, manufactures and sells various products to help with painting and decorating at home. The Finance Director is presenting his approach to budgeting at the latest Board meeting. The Operations Director interjected and asked 'I hear talk of cost, revenue, profit and investment centres in the budgeting process. What exactly is the difference? For example, Ian, the Head of the Paintbrush Division, is responsible for the returns generated in the division, yet he cannot make any capital investment decisions?'

The Paintbrush Division (P) makes wall brushes (Wall) and wood brushes (Wood). It transfers Wall to the Homepack Division (H) that packages them up as 'Homepack' with a paint tray and cleaning fluid and sells them. Wall is not sold externally on its own. Wood is only sold directly to external customers.

Information relating to each product made by P:

\$ per unit	Wall	Wood
External sales price	-	15
Variable cost	15	7

P has an annual capacity to make 50,000 brushes. It takes the same resources to make each type of brush. Fixed costs in P are a total of \$200,000 per year, absorbed on a 'per unit' basis. The maximum annual demand for Wood is 40,000 brushes.

H can buy equivalent Wall brushes from an outside supplier at a cost of \$18 a brush. H packages each brush into a 'Homepack', along with \$13 of other materials and variable costs, and sells them for \$32 a pack.

The current method of pricing internal transfers is at full cost plus 10%. The Finance Director is considering whether this is the best approach to take towards transfer pricing.

**e-Exam
Question
Number**

10

Question 3 required:

- (a) Distinguish between the different types of responsibility centres mentioned by the Operations Director and identify, with justification, which type of responsibility centre the 'Paintbrush' Division would be classified as.

(6 marks)

H Division would like to purchase 10,000 Walls. The H Divisional Manager is free to buy from and sell to whomever they like.

**e-Exam
Question
Number**

11

Question 3 required:

- (b) Calculate the current transfer price and explain the decisions that would be made by each Divisional Manager at this price.

(7 marks)

12

- (c) Calculate the optimal transfer pricing range for the order by the Homepack Division for 10,000 Walls.

(7 marks)

The Finance Director has decided to use a dual pricing system based on variable cost and market price. In such a system the seller receives a high price in its divisional performance assessment, but the buyer is only charged a low price.

**e-Exam
Question
Number**

13

Question 3 required:

- (d)** Explain how the dual pricing system would work, and the prices that would be charged/paid by P, H and the Head Office. Explain ONE reason why the Finance Director may have chosen this approach.

(5 marks)

(Total: 25 marks)

Question 4 – (a), (b) and (c)

Best Foot First (BFF) makes high-quality hiking apparel for novice to experienced hikers and climbers in Asia and Europe. It is highly geared financially using short-term bonds. Its initial success was due to a new material – ‘Breathe and Bead’ that was waterproof, windproof and incredibly breathable. BFF developed clothing using the material for many years but is starting to lose market share as competitors develop similar materials. BFF has not invested in research and development since the early days. BFF’s environment is very dynamic – technology is unpredictable, and competition is global and fast-changing. Product lifecycles are also very short.

The European economies are on the edge of a recession, and interest rates are rising to combat rising inflation. Leisure time has increased compared to pre-pandemic levels due to the increased prevalence of homeworking. There has been increased press coverage in Europe about inexperienced climbers increasingly relying on rescue services when they get into trouble on hikes, endangering the lives of mountain rescuers. Many European countries have recently legislated to force hikers to pay directly for the rescue services they receive. The increasing prevalence of hiking ‘challenges’ (for example, climbing a certain number of peaks or a certain distance in a predefined timescale) has boosted the popularity of hiking, although pressure groups note the environmental damage done by increased footfall in environmentally sensitive areas.

**e-Exam
Question
Number**

14

Question 4 required:

(a) Using the PESTEL framework, identify SIX factors of particular relevance to BFF, explaining the relevance of each.

(12 marks)

BFF is considering launching a new hiking jacket, the Hill Extreme. It has an innovative design, but certain features make it difficult to manufacture, and it creates some unavoidable waste of fabric. It will involve an investment of \$400,000 in new machinery.

Each Hill Extreme jacket will take 1 hour of labour to make, and 1 hour of machine time on one machine. Labour will be employed to make the jacket and will be paid a standard \$15 an hour, with a 50% premium for overtime. Half of the jackets will need to be made in overtime due to capacity constraints. The machine manufacturing Hill Extreme jackets costs a standard rate of \$50 an hour to run in total (including manufacturing overheads and depreciation). Each finished jacket contains 1m² fabric. The fabric costs \$25 per square metre.

Annual demand is anticipated to be 10,000 jackets, at a sales price of \$100 each, and BFF's cost of capital is 10% per year.

The new 'Hill Extreme' jacket is to be assessed using residual income.

**e-Exam
Question
Number**

15

Question 4 required:

- (b)** Calculate the maximum percentage waste of input material that would make the new Hill Extreme jacket acceptable for BFF to launch. **(9 marks)**

BFF's approach to cost control is to set standards and manage variances by exception. They also set long-term cost reduction targets using an improvement in standards as a basis.

**e-Exam
Question
Number**

16

Question 4 required:

- (c) Explain TWO reasons why this approach to costing and cost control is not useful for a company like BFF.

(4 marks)

(Total: 25 marks)

END OF PAPER

Appendix A – Common verbs used by the Examiners

Verb	Description
Calculate / Compute	Do the number crunching and derive the correct answer. Make sure that you write down your workings and crosscheck your numbers.
Conclude	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".
Distinguish	To note differences between. For instance, " Describe what is meant by the term tax planning and distinguish it from tax evasion". Apart from describing what tax planning involves (say 1-2 marks), you need to explain how the two terms are different and how they are similar. However, providing a list of differences and similarities is insufficient – complete sentences are essential to achieve full marks. In addition, it is important that you also mention any other relevant factors (e.g. the ethical and legal issues).
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.
Justify	Whenever you see the word justify you <u>must</u> provide reasons for your answer, in other words, provide support for your argument or conclusion. If you fail to justify your answer, you will lose valuable marks. Justify is similar to defend .
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.
Recommend	Make a statement about the most appropriate course of action. If there is more than one possible course of action, state which action you would choose and why (justify your choice). Your professional judgment and your ability to interpret the wider situation are critical to scoring well in these types of questions. Don't forget to think about the future and the past, not just the present when making a recommendation .
State	State is similar to list , but the items require your professional judgement. For instance, " State any restrictions that apply". One of the easiest ways to make sure that you state comprehensively is to think, " list and justify ". You will note that state appears in many of the verb descriptions given.
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.