



Singapore CA Qualification (Foundation) Examination

6 June 2019

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 **TWELVE (12)** 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. This means that you are allowed to only bring the following materials into the examination hall:
 - One A4-sized double-sided cheat sheet.
- 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. This examination paper is the property of the Singapore Accountancy Commission.

MODULE-SPECIFIC INSTRUCTIONS:

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





Question 1 - (a), (b) and (c)

NCW Pte Ltd (NCW) produces high quality silverware.

It produces 3 lines of silver cutlery: the Harris, the Lewis, and the Skye.

There are 3 consecutive stages to producing the cutlery – pressing, fettling and finally engraving. Each involves the use of specialised machinery.

NCW operates a just-in-time manufacturing policy: no inventory of closing stocks or work in progress is held.

The time taken in minutes to machine each set of cutlery is as follows:

	Harris	Lewis	Skye
Pressing	3	3	2
Fettling	5	4	3
Engraving	2	2	2

The pressing machines cost \$1,000 an hour to operate, the fettling machines cost \$2,000 an hour and the engraving machines cost \$4,000 an hour. Machining costs are 100% variable. There are plenty of machines available and their availability do not limit production in any way.

The following relates to other items of cost per set of cutlery:

	Harris	Lewis	Skye
Silver (grammes)	300	350	500
Labour – 1 worker (minutes)	7	9	12

Silver costs \$700 per kilogramme, and labour is paid \$40 per hour. There are 4 skilled craftsmen who each work a 40-hour week for each 4-week month. Overtime is not possible due to trade union constraints, and hiring additional craftsmen with suitable experience is not possible in the short to medium term.

Factory overheads amounted to \$4,000,000 per annum. Fixed costs are absorbed per labour hour.

The Harris sells for \$1,000 a set, the Lewis sells for \$1,200 a set and the Skye sells for \$800 a set. Monthly demand is for 2,500 Harris, 3,000 Lewis and 1,000 Skye.

An external supplier has approached NCW offering to make cutlery on NCW's behalf for \$700 per Harris, \$650 per Lewis and \$750 per Skye.

Examplify Question Number	Que	stion 1 required:
1	(a)	Calculate the incremental cost to make each product, and the corresponding contribution margin (in \$). (12 marks)
2	(b)	Calculate a production plan to maximise NCW's contribution margin (in \$). Include in your production plan how many of each product NCW should purchase from the external supplier. (16 marks)
3	(c)	Describe FOUR additional non-financial factors NCW should take into account before committing to buying-in finished goods from the external supplier. (4 marks) (Total: 32 marks)

Question 2 - (a), (b) and (c)

HBM Limited (HBM) is a well-established business specialising in the manufacture of hand-built motor cars. It has a reputation for high quality, and its cars are valued as desirable status symbols amongst purchasers.

In recent years, competition has intensified globally. The financial accountant's view is that the squeeze on margins being felt must be addressed, and has suggested that cost control should be a priority. He suggests, for example, that various key components should be purchased online from auction websites as opposed to them being manufactured in-house to bring the cost of production down.

In an effort to streamline the company's cost base, the financial accountant has focused on the reduction of quality-related costs over a two-year period, and would like your assistance to assess the success of this initiative.

Further information:

- 1. Training costs have risen from \$100,000 in 20x7 to \$125,000 in 20x8.
- Warranty claims cost a total of \$1,200,000 in 20x7. The average claim per vehicle was for \$2,500. In addition to dealing with the claims, in 20x7 and 20x8, 25% of customers who made warranty claims also received compensation amounting to 50% of the average warranty cost. The warranty claims in 20x8 were for 10% more vehicles and an average claim of \$3,000 per vehicle.
- 3. Of the material put into production, 1% ended up as waste in 20x7, and 1.2% in 20x8. A completed car weighs 1500kgs. The average cost of a kilogramme of material is \$10. 12,000 cars were produced in 20x7, and 11,000 in 20x8. This waste includes scrapped component and on occasion whole cars due to issues found in production samples.

- 4. In 20x7, designers spent a total of 5,000 hours redesigning components to make them more reliable. This decreased to 3,000 hours in 20x8. A designer works 270 days a year, 10 hours a day and is paid on average \$80,000 in 20x7, and \$85,000 in 20x8. The redesign had to be undertaken as overtime, paid at one and a half times the standard rate.
- 5. Quality control testing in 20x7 was conducted by 8 employees, 4 full time and 4 part time (each working half a week). They were each paid a full time equivalent salary of \$60,000 per year. In 20x8, the 4 full time employees were made redundant at a cost of \$75,000 each on average.
- 6. Market research has suggested the reputation of HBM is suffering due to recent poor reviews and press reports concerning reliability.

Examplify Question 2 required: Question Number

4

(a) Prepare a cost of quality report for 20x7 and 20x8 in both absolute costs (to the nearest thousand dollars) and as a percentage of total quality costs.

Present your answers using the following format: Year (e.g. 20x7): Name of Account 1 = (Workings) = S\$ Amount, XX% Name of Account 2 = (Workings) = S\$ Amount, XX% Total = S\$ Amount Total Percentage (%) = XX%

(10 marks)

(b) Interpret your report and recommend a course of action accordingly. Describe any further information that would be relevant to your analysis on the financial accountant's initiative to reduce quality-related costs.

(10 marks)

(c) Why is the financial accountant's idea on cost management, despite in itself being a valid concern, potentially detrimental to the overall performance of the company?

> (5 marks) (Total: 25 marks)

5

6

Question 3 - (a), (b) and (c)

ELW Pte Ltd (ELW) manufactures high quality washing machines. The warehouse manager uses an economic order quantity model to maintain inventory levels.

A key component is the electric motor required for each washing machine. These are bought-in from a key supplier.

ELW makes 100,000 washing machines a year in batches of 500. The supplier supplies motors in batches of 100 for \$5,000 a batch and takes between 3 and 5 working days to deliver. Each order carries a standard \$400 delivery charge. Each motor costs 10% of purchase cost to store for 1 year in the warehouse. The warehouse manager has a policy of keeping at least 5 production batches worth of inventory at any time. There are 250 working days in a year.

Examplify Question Number	Que	stion 3 required:	
7	(a)	Calculate: (i) the economic order quantity (ii) the buffer stock level (iii) the reorder level	(2 marks) (1 mark) (2 marks)
	The have ELW	supplier recently contacted the ware a sale and there would be a 1% d / were to order at least 50 batches at	whouse manager to say they iscount on purchase price if a time.
8	(b)	Recommend if ELW should change Provide supporting calculations for the second s	ge the amount they order. your answer. (7 marks)
9	(c)	Explain the limitations of using the model to manage inventory at ELW.	ne economic order quantity (6 marks) (Total: 18 marks)

Question 4 - (a), (b) and (c)

'Paper and Pen' (PP) is a small shop that sells stationery, mainly to local businesses. It is a well-known and established brand locally, and this family-owned business has until recently enjoyed many years of profitable performance.

However, in recent times, both volumes and prices are being squeezed. Historically, the shop manager has compared prices and inventory lines to its only other local competitor, and this has always worked well to maintain competitiveness. The manager has noticed that the internet is affecting how the stationery industry operates, and wants your advice.

You are a performance management consultant, and have been engaged to define and justify a list of key performance indicators to provide focus on the new threat of the internet on the performance of the shop, and to explain how the business creates value for the owners.

Examplify Question Number	Question 4 required:
10	 (a) Using Porter's 5 forces, identify and explain the key new sources of competitive pressure resulting from the internet. (10 marks)
11	 (b) Identify and justify ONE key performance indicator to monitor each source of competitive pressure you identified in part (a). (5 marks)
	The six capitals of integrated reporting are input resources (or capitals) that an organisation has available to create output resources (or capitals). Value created is measured by comparing the input and output capitals.
12	(c) Identify the six capitals of Integrated Reporting (IR) and apply them to PP. Use PP as an example to illustrate the relationship between 'input capitals' and 'output capitals'. (10 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.
Describe	Describe requires you to provide the characteristics and features of an item or situation. For instance, " Describe the audit procedures to verify" requires you to state the specific audit procedure/s that you would use without going into step-by-step detail of how to perform that procedure.
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.
Interpret	Look at the whole as well as the individual parts and decide what the data (or diagram) is telling you. Remember, although interpret may involve some subjective assessment, some answers will be more right (or appropriate) than others.
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 .
Prepare	Prepare requires you to produce your answer using a specific format.
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 .