

# ALL FOUR questions are compulsory

## 1 Chocoholics Anonymous

Chocoholics anonymous are looking to launch 2 new products.

The first is called Paradise and will require hire of additional equipment. The machines have varying capacities but they need to be ordered now before demand is known.

The management accountant has prepared a table detailing the various possible profits that could arise depending on level of demand, contribution and the varying cost of equipment hired.

<i>Demand (boxes)</i>	<i>p</i>	<i>Equipment Capacity (boxes)</i>		
		2,000	3,000	5,000
1,500	0.2	17,500	15,500	12,500
2,500	0.5	25,000	30,500	27,500
5,000	0.3	25,000	38,000	35,000

Those making the decision about the size of equipment that should be hired have conflicting views.

One manager believes the equipment with a capacity of 2,000 boxes should be hired whereas the other thinks capacity of 3,000 boxes should be obtained.

- (a) Explain both managers' attitude to risk. **(4 marks)**

The other new product Dreamy contains a special ingredient which isn't used by the groups other products.

Due to fierce competition and an influx of new bars in the market recently the management of CA are a little uncertain as to the likely initial volumes.

The new special ingredient can only be ordered in advance in quantities to fulfil demand of 1,000 boxes, 2,000 or 5,000 boxes of Dreamy so it is important to try and predict demand as accurately as possible.

Based on launches of other new products in the past, initial demand is expected to be as follows:

<i>Quantity demanded</i>	<i>Probability</i>
1,000 boxes	20%
2,000 boxes	50%
5,000 boxes	30%

The Dreamy will be sold onto retailers in boxes of 100. Each box will sell for \$35. Variable costs including the cost of special ingredient X are \$12

- (b) Prepare a table to show the profit values that could occur **(9 marks)**
- (c) Advise the management as to which level of order to place in order to maximise profit **(4 marks)**
- (d) Explain the use and limitations of expected values and what type of person would use them **(8 marks)**

**(Total: 25 marks)**

# Commentary

## Tutor guidance on improving performance on the exam paper.

### General

Your script is the only evidence you will provide to convince an ACCA marker that you should pass this paper and therefore progress through your qualification. Even very talented students can fall down at this paper because they do not consider the following points:

The first question should be the question you feel most comfortable with. Give the marker the impression that you are comfortable with the syllabus as early as possible. Make it clear which question it is you are answering too!

Make sure you answer ALL questions even if you have to guess. It is amazing how a stab in the dark can generate the 50<sup>th</sup> mark – the one you need to pass – again it shows the marker that you can think about the question (albeit in simple terms).

### Q1 Chocoholics Anonymous

Target mark – 17/25

This question covers many of the basics of the risk & uncertainty area of the syllabus. Parts (a) & (d) could have been answered in isolation. Part (c) involved calculation of expected values and as long as you correctly used the answers you calculated in (b) you would have scored full marks for this element. Remember to show your workings for part (b) and in this way you can pick up marks even if your answer is wrong.

# Student self assessment

Having completed this paper take a few minutes to consider what you did well and what you found difficult. Use this as a basis to focus your future study on effectively improving your performance.

## Common problems

## Future emphasis if you answer Yes

### Timing and planning

Did you finish too early?	Y/N	Focus your planning time on generating more ideas. Use models to help develop width to your thinking.
Did you overrun?	Y/N	Focus on allocating your time better. Practise questions under strict timed conditions. If you get behind leave space and move on.
Did you waffle?	Y/N	Focus your planning time on developing a logical structure to your answer.

### Layout

Was your answer difficult to follow?	Y/N	Use headings and subheadings. Use numbering sequences when identifying points. Leave space between each point.
Did you fail to explain each point?	Y/N	Show why the point identified answers the question set.
Were some of your workings unclear?	Y/N	Give yourself time and space to make the marker's job easy.

### Content

Did you struggle with:		
Interpreting the questions?	Y/N	Learn the meaning of question words (inside front cover). Learn subject jargon (study text glossary). Read questions carefully noting all the parts. Practise as many questions as possible.
Understanding the subject?	Y/N	Review your notes/text. Work through easier examples first. Contact a tutor for help.
Remembering the notes/text?	Y/N	Quiz yourself constantly as you study. You need to develop your memory as well as your understanding of a subject.

# 1 Chocoholics Anonymous

## Marking scheme

		Marks
(a)	1 <sup>st</sup> manager	
	– risk averse	½
	– maximin explanation	½ 1
	2 <sup>nd</sup> manager	
	– risk averse	½
	– maximin explanation	½ <u>1</u>
(b)	Calculation of each profit value (1 mark each)	4
(c)	Each expected value (1 mark each)	9
	Selection of highest EV	3 <u>1</u> 4
(d)	Risk neutral	1
	Explain uses (1 mark per point) ie dealing with risk, calculate average, take highest	Max 3
	Limitations (1 mark per point) ie long run average, ignores risk, dependant on probabilities, only used in repeated decisions	<u>Max 4</u>
		<u><u>8</u></u> <u>25</u>

## Suggested solution

- (a) The first manager is **risk averse**. He wishes to sign up to a capacity of 2,000 as this has the highest minimum return (17,500) of the three options. He will not wish to sign up to a level more than this as the lowest possible returns are below 17,500. This is known as a **maximin** decision.
- The second manager is a **risk seeker**. He wants the best possible return regardless of the risk involved. The highest possible return is at 3,000 boxes where there is the chance of a \$38,000 return. This is known as a **maximax** decision.

(b)

Demand (boxes)	p	Order quantity		
		1,000	2,000	5,000
1,000	0.2	23,000 (W1)	11,000 (W2)	(25,000) (W4)
2,000	0.5	23,000 (W1)	46,000 (W3)	10,000 (W5)
5,000	0.3	23,000 (W1)	46,000 (W3)	115,000 (W6)

(W1) Contribution = \$23 / unit x 1,000 units sold = \$23,000

(W2) Contribution of \$23 x 1,000 units – costs of 1,000 extra items bought not sold  
(23,000 – (1,000 x \$12))

(W3) \$23 x 2,000

(W4) \$23 x 1,000 – 4,000 x \$12

(W5) \$23 x 2,000 – 3,000 x \$12

(W6) \$23 x 5,000