

EXAMINATION

5 April 2005 (am)

Subject SA1 — Health and Care Specialist Applications

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

1. *Enter all the candidate and examination details as requested on the front of your answer booklet.*
2. *You have 15 minutes at the start of the examination in which to read the questions. You are strongly encouraged to use this time for reading only, but notes may be made. You then have three hours to complete the paper.*
3. *You must not start writing your answers in the booklet until instructed to do so by the supervisor.*
4. *Mark allocations are shown in brackets.*
5. *Attempt both questions, beginning your answer to each question on a separate sheet.*
6. *Candidates should show calculations where this is appropriate.*

AT THE END OF THE EXAMINATION

Hand in BOTH your answer booklet, with any additional sheets firmly attached, and this question paper.

<p><i>In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator.</i></p>

1 You are an actuary of a UK critical illness and income protection insurance company. Your company is considering launching a health and care insurance company in another country and you have been asked to provide advice to your managing director on this proposal.

- (i) Outline the approach that you would take in assessing the market for the launch of a health and care company. [15]

The managing director has asked you to specifically focus on UK-style individual critical illness and UK-style individual income protection contracts.

- (ii) Describe the methodology that you would adopt in determining the assumptions required to price these contracts. [19]

- (iii) Assuming that the economic and demographic conditions in the other country were similar to those current in the UK, suggest values for these assumptions. [6]

Your managing director has been approached by a UK company providing income protection and critical illness products, who would be interested in discussing a takeover of them by your company.

- (iv) Discuss the factors which should be taken into consideration in assessing such a company for takeover. [11]

- (v) Indicate how your answer to (iv) might differ if the local provider also offered private medical insurance. [3]

[Total 54]

2 For a number of years a UK life insurance company has written three types of long term care contract:

- A regular premium individual contract where premiums are guaranteed for 10 years.
- A single premium individual contract where the insurer reserves the right to change the sum assured after 10 years.
- A group contract written as a renewable one year contract. Contract terms and premiums may be revised at each annual renewal.

Overall volumes of business have been disappointing and some concerns have been expressed about the profitability of this business. You are aware that the market leader is currently in the process of significantly increasing premium rates both for new and existing business.

You have been asked to look at the company's involvement within the long term care market and to produce a report for the senior management team. A drafting style is not required.

- (i) Describe the areas which should be covered in the report. [12]
 - (ii) Describe the data needed to carry out an analysis of sales expenses, persistency, claim inceptions and claim terminations, and comment on any difficulties that might be experienced in extracting data or interpreting the results of the analysis. [18]
 - (iii) Describe how the analyses carried out for part (ii) could be used in the financial management of the company. [3]
 - (iv) Discuss the possible implications for the company of withdrawing from the long term care market. [4]
 - (v) Assuming that your investigations indicate that the business is unprofitable suggest, with reasons, what actions you would recommend. [9]
- [Total 46]

END OF PAPER