

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

27 April 2011 (pm)

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 before 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 from the approved list.</i></p>
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- 1** A broker has approached the marketing manager of a large UK insurer which writes all types of health and care insurance business. He has suggested that it provides all of the health and care insurance required by the primary orchestra of another western European country. The orchestra is a large, internationally recognised, classical orchestra which will also tour outside its home country.

(i) Outline the generic types of health insurance that could be provided. [5]

The company is considering whether to accept this business, and in particular it is considering how it will differ from its standard policies.

(ii) Discuss these considerations. [30]

(iii) Suggest ways in which the company could reduce the morbidity risks arising from writing this business, including any variations to the standard terms and conditions that should be made. [15]

[Total 50]

- 2** A large UK health and care insurer writes critical illness, income protection, immediate needs annuities and pre-funded long term care insurance business.

In common with many insurers, assessment of the solvency position of the company, under both FSA Pillar 1 and Pillar 2, is currently only carried out as at certain dates in the year.

(i) Outline the items that would appear on these regulatory balance sheets, highlighting the differences between Pillar 1 and Pillar 2. [17]

The Finance Director is concerned about the ongoing solvency of the company. He would therefore like to know the solvency position, under both Pillars, on any given day.

(ii) Describe how the company could estimate its regulatory balance sheets and hence solvency position on a day on which no full valuation is carried out, including consideration of assets, liabilities, capital requirements and inflows and outflows of money. [25]

The company has now implemented this process, and has produced an estimate which suggests that the company did not meet the regulatory solvency requirements on a particular day.

(iii) Discuss how the company should proceed. [8]

[Total 50]

END OF PAPER