

EXAMINATION

22 September 2008 (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 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.

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.

- 1** A consulting actuary is providing advice to an employer, ZAB plc, concerning its corporate private medical insurance needs. The employer has about 1,200 employees all based in the UK.

ZAB plc provides a group private medical scheme to its employees that is currently fully insured with a UK insurer, LOM Insurance. No other health related benefits are provided.

- (i) Outline a typical schedule of benefits provided under a group private medical insurance scheme for employees in the UK. [5]

ZAB plc has recently taken on a director from the USA who is concerned that insurance cover is being purchased for benefits which might otherwise be provided by the UK National Health Service.

- (ii) Outline the points to be made in a letter to this director as to why this arrangement is provided for all employees. [7]

Based on the US experience in group private medical insurance the director from the USA is concerned that the premium rates for this insurance in the UK will rise in the future at a rate faster than retail price inflation.

- (iii) Suggest reasons why this might happen. [5]

The director from the USA has also requested a briefing paper on the medical underwriting practices applied to individual and group schemes in the UK.

- (iv) Outline the points to be made in the briefing paper for the director. [7]

ZAB plc has concerns regarding the current cost of group private medical insurance and has suggested that this risk is retained internally.

- (v) Discuss the key advantages and disadvantages of this approach. [6]

LOM Insurance insures both group and individual private medical insurance. LOM Insurance is currently insuring the group private medical insurance scheme for ZAB plc.

- (vi) List the data and other information required by LOM for pricing group private medical insurance. [7]

- (vii) Describe the investigations that LOM would undertake to determine the price of their individual private medical insurance business. [18]

[Total 55]

- 2** In the UK, the standards for capital management are based on the concept of two Pillars. Pillar 1 covers public solvency information that appears within the FSA Returns. Pillar 2, the Individual Capital Assessment (“ICA”), covers a confidential assessment of solvency for the FSA.

You are the valuation actuary of a UK health insurance provider writing critical illness, income protection and private medical insurance products. You are responsible for preparing the FSA Returns and the ICA report.

- (i) Under Pillar 1, describe how you will calculate the capital requirement in addition to the mathematical reserves. [8]
- (ii) Under Pillar 2, describe the nature of risks and the approach that a firm could take to evaluate the capital requirement of each one of the following risk categories:
 - (a) Market and interest rate risk
 - (b) Operational risk
 - (c) Credit risk (including Reinsurance risk)
 - (d) Mortality and morbidity risk [20]
- (iii) Discuss the advantages and disadvantages of the Pillar 2 regulatory framework. [10]
- (iv) Outline the Solvency II framework that is likely to be adopted by the EU Commission. [7]

[Total 45]

END OF PAPER