

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

5 October 2012 (am)

Subject ST1 – Health and Care Specialist Technical

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 all seven 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** (i) Explain why a risk discount rate assumption used for product pricing purposes may contain a “risk premium”. [3]
- (ii) Describe how this risk discount rate assumption might be derived. [7]
[Total 10]
- 2** Explain why a large established life insurance company moving into the health and care insurance market is likely to make use of reinsurance to reduce its risks. [10]
- 3** (i) Describe the typical types of reserves for short term health insurance. [7]
- (ii) Describe the factors that may drive future claim costs (per insured life) under private medical insurance. [7]
[Total 14]
- 4** A company currently offers standard private medical insurance (PMI) cover to all its employees. The costs of this cover have risen by 50% in the last five years, and the cover has become unaffordable.
- (i) Discuss ways in which the company can seek to reduce the cost of its PMI cover. [7]
- The Human Resources director of the company has suggested that an alternative to providing health insurance to its employees would be to set up a “cycling to work” scheme. Under this scheme, employees would be able to obtain a subsidised bicycle for commuting, and the company would provide facilities at its offices to assist people cycling to work.
- (ii) Comment on this proposal. [4]
[Total 11]
- 5** Claims arising from the following risks are often excluded from cover in income protection contracts:
- AIDS/HIV
 - War
 - Misuse of alcohol or drugs
 - Residing abroad
- (i) Explain why each of these might be excluded. [8]
- A health and care insurer has decided that it should be possible to include income protection claims arising from war risks.
- (ii) Discuss the factors that the insurer would need to consider when assessing the additional morbidity risk which would arise from removing this exclusion. [9]
[Total 17]

- 6** (i) Describe the needs which are met by long term care insurance. [5]
- (ii) Outline the features of long term care insurance products that could be used to meet these needs. [12]

A health and care insurance company is offering both pre-funded and immediate needs long term care insurance contracts.

- (iii) Give an example of a possible target market for each. [2]
- [Total 19]

- 7** In the country of Actuarial, a growing number of dental procedures have been transferred from the subsidised State-run health service to the private sector over recent years. As a result, the cost of dental treatment incurred by residents of Actuarial has risen sharply. These increased costs have been funded by many individuals or groups through dental insurance. At the same time, the number of dentists undertaking treatment under the State-run health service has declined.

As a result of the increased treatment costs, there has been a recent trend of Actuarial residents seeking dental care in overseas countries where costs are lower.

A health and care insurance company is considering whether to enter the market for dental insurance. It has been suggested that the insurer should concentrate on providing dental care abroad for Actuarial residents.

- (i) Discuss this suggestion. [7]
- (ii) Describe the considerations for the insurer when deciding which dental providers to use for this proposed product. [4]

Initial research by the insurer has revealed that this product could be designed as either insurance or “non-insurance”.

- (iii) Describe the likely form of the “non-insurance” version of the dental product. [3]

Further research by the insurer has revealed that the proposed product would be of interest to two target markets:

- people having no access to subsidised State-run health service dental treatment
- people needing highly expensive dental procedures

- (iv) Outline how the insurer could evaluate the market potential for the proposed dental insurance product for each of these target markets. [5]
- [Total 19]

END OF PAPER