

# INSTITUTE AND FACULTY OF ACTUARIES



## EXAMINATION

12 April 2019 (pm)

### Subject SA1 – Health and Care Specialist Advanced

*Time allowed: Three hours and fifteen minutes*

#### **INSTRUCTIONS TO THE CANDIDATE**

1. *Enter all the candidate and examination details as requested on the front of your answer booklet.*
2. *You must not start writing your answers in the booklet until instructed to do so by the supervisor.*
3. *Mark allocations are shown in brackets.*
4. *Attempt all questions, begin your answer to each question on a new page.*
5. *Candidates should show calculations where this is appropriate.*

***Graph paper is NOT required for this paper.***

#### **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** Country A is an independent island country, with a high quality state funded health care system. It offers the latest modern treatments free at the point any treatment is received.

This has led to an increase in “Health Tourists” – residents of countries outside Country A who come to Country A for free health care which they would otherwise have to pay for in their country of residence.

Country A’s government (“the government”) has become concerned because “Health Tourists” now make up over 10% of Country A’s health spending compared to 1%, five years ago. The media in Country A are drawing attention to this growing trend and demanding that the government take action.

- (i) Outline the health care services available to Country A’s residents which are likely to be used by a Health Tourist. [10]
- (ii) Explain the financial and social planning issues that health tourism may be causing to the government of Country A. [10]

The government has set an objective to mitigate the problems by requiring all visitors to Country A who are not residents to have a health and care insurance policy.

- (iii) Suggest the two areas of health and care insurance cover the government would require visitors to have. [2]

The government is considering two potential options for a framework for operating the new requirement:

**Option 1.** Perform checks at all points of entry into Country A to ensure visitors have adequate health and care insurance cover. For visitors without cover, a standard health and care policy will be available to purchase and anyone choosing not to purchase the policy will be turned away.

**Option 2.** Require all companies which transport people into Country A to provide health and care insurance for non-residents of Country A that has been approved by the government of Country A within the cost of the travel ticket they have sold.

- (iv) List four advantages and four disadvantages of Option 1 compared to Option 2, from the viewpoint of the government. [4]

The government has decided to implement Option 1 and has invited a small number of global insurance companies to tender for the contract to provide the standard health and care policy.

- (v) Discuss the factors the insurance companies would need to consider before deciding whether to tender. You are not required to consider how the premium would be determined. [25]
- (vi) Outline how your answer to part (v) would change if the government had decided to implement Option 2 instead. [4]

[Total 55]

- 2** A health and care insurer specialising in private medical insurance is in the process of implementing its Solvency II Technical Provisions (TP) and Standard Formula Solvency Capital Requirement (SCR). The insurer has commissioned an external consultancy firm to carry out an independent review of its Solvency II TP and SCR results.
- (i) Suggest the areas that would be covered in the independent review to provide the insurer with an assurance that the TP and SCR results are in compliance with Solvency II. [5]
  - (ii) Set out the information that the external consultancy firm would require from the insurer to carry out the independent review. [12]
  - (iii) Describe how the external consultancy firm might review the following areas:
    - (a) Input data. [3]
    - (b) Methodology, assumptions and calculation of the TP. [8]
    - (c) Methodology, assumptions and calculation of the SCR. [8]
    - (d) Governance and controls. [3]
  - (iv) Suggest analyses that could be carried out to assess the appropriateness of using the Standard Formula approach for the SCR. [6]
- [Total 45]

**END OF PAPER**