

# EXAMINATION

26 October 2017

## Subject F202 — Life Insurance Specialist Applications

*Time allowed: Three hours*

### **INSTRUCTIONS TO THE CANDIDATE**

- 1. You will receive instructions to log in using a password which will be issued to you at the exam centre.*
- 2. You are required to submit your answers in Word format only using the template provided. You MAY NOT use any other computer program (e.g. Excel) during the exam.*
- 3. Save your work throughout the exam on your computer's hard drive.*
- 4. You have 15 minutes at the start of the exam 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.*
- 5. You must not start typing your answers until instructed to do so by the invigilator/supervisor.*
- 6. Mark allocations are shown in brackets on exam papers.*
- 7. Attempt all questions, beginning your answer to each question on a new page.*
- 8. You should show calculations where this is appropriate.*

**Note: The Actuarial Society of South Africa will not be held responsible for loss of data where candidates have not followed instructions as set out above.**

### **AT THE END OF THE EXAMINATION**

**Save your answers on the hard drive.**

**Hand in your question paper with any additional sheets firmly attached.**

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.
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## QUESTION 1

A proprietary life insurance company sold endowment assurance products with funds invested and managed in one of three separate traditional conventional with profit funds. The funds all use the additions to benefits method of surplus distribution but have different approaches to determining the rates of annual and final bonuses. All the funds are closed to new business, but there are still many active policies in each of the funds.

It has been suggested that these funds be merged into a single conventional with profit fund. After the merger, it is proposed that a consistent approach to declaring future bonuses be followed for all policies. You have been asked to look into the viability of this suggestion.

- i. List the Treating Customers Fairly outcomes that should be demonstrated and highlight other legislation, regulatory requirements and Actuarial guidance that should be considered as part of the proposed merger. [5]
- ii. Discuss the viability of the suggestion by considering the following:
  - a. comparison of the possible future bonus distribution methodologies; [15]
  - b. factors influencing the bonus decisions; [10]
  - c. Treating Customers Fairly and Policyholders Benefit Expectations; [5]
  - d. operational and financial impact; [5]
  - e. and the nature of the products and their features. [5]
- iii. Describe the impact on the calculation of regulatory liabilities of conventional with-profit business with the introduction of the Solvency Assessment and Management (SAM) framework. [5]

[Total 50]

**REMEMBER TO SAVE**

**PLEASE TURN OVER**

## QUESTION 2

A South African life insurance company sells a mixture of unit-linked and conventional contracts (both with profits and without profits). The company is considering setting up a new life insurance subsidiary in an under-developed African market. The South African parent company plans to model the potential financial outcome of the new subsidiary.

- i. State the objectives of the financial projection modelling that the company would perform to determine whether it should proceed.

(You are not required to consider alternative strategies) [2]

- ii. Describe the investigations the company will undertake, and the process it will follow, to set the assumptions and prepare the model required for the financial projections. When describing these investigations and process consider:

a. the insurance market; [12]

b. the insurance regulations; [8]

c. distribution, human resources and systems; [8]

d. expenses and the economic environment; [5]

e. and any other factors to be taken into account when performing the financial projections. [7]

A without profits non-linked term assurance product pays the sum assured on the diagnosis of one of a specified number of critical illnesses. To maximise the new business volumes, it is proposed that this term assurance product be priced without the overhead expenses included in the expense loadings.

- iii. Discuss this proposal, including the risks to the company. [8]

[Total 50]

[Grand Total 100]

**REMEMBER TO SAVE**

**END OF PAPER**