

Actuarial Society of South Africa

EXAMINATION

28 October 2015

Subject F203 – General Insurance Fellowship Applications

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

- 1. Candidates will be issued with instructions to log-in using a password (which you will be provided with at the exam center).*
- 2. Candidates are required to submit their answers in Word format only using the template provided. You MAY NOT use any other computer program (e.g. Excel) during the examination.*
- 3. Save your work continuously throughout the exam, on your computer's hard drive that you have been provided.*
- 4. 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.*
- 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. Candidates 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

You are the chief actuary of an established large short-term insurer writing both personal and commercial lines of business. In the past the insurer had a few very large losses from single events in its commercial lines.

The current reinsurance structure is a combination of quota share and excess of loss treaties. Each business line's reinsurance contracts are unique and differ with respect to percentage ceded, attachment points, number of lines and limits.

A new reinsurance manager has recently been appointed. He has found a reinsurer that would offer a new structure for the next financial year, as follows:

- i) A single quota share treaty covering all the business lines. (In other words each line of business will have the same percentage share with the reinsurer and will attract the same reinsurance commission rate.)
- ii) A stop loss treaty covering all lines of business. The stop loss will come into effect once the total loss ratio of the insurer is 8% higher than the budgeted loss ratio for the next financial year, and will cover all the losses above that point, up to a monetary limit. There is no reinsurance commission on the stop loss treaty.

a) Describe stop loss reinsurance.

[5]

b) Discuss the factors that need to be considered to determine whether the proposed new reinsurance structure would be appropriate.

Your answer should include, but not be limited to, operational issues and the possible impact on reserves, capital position and profitability of the insurer.

[35]

c) Explain what analyses you would do to determine whether the reinsurance premium for the stop loss treaty is reasonable.

[10]

[Total 50]

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QUESTION 2

You are the chief actuary of a large listed South African short-term insurer writing both personal and commercial lines of business.

- i) Explain the considerations that need to be taken into account when separating claims between large and attritional, for reserving purposes. [10]

The external auditors are busy with their year-end audit of the technical provisions of the insurer. They have asked you to provide evidence that the technical provisions that your team have estimated are adequate.

- ii) a) Propose how you would illustrate the sufficiency of all components of technical provisions in the financial statements, stating the current requirements where relevant, and [18]
b) List the data you would need to complete the calculations required. [6]

(Note: do not consider stochastic methods.)

- iii) Explain how an actuary should ensure that results are reasonable according to APN401. [6]

The CFO would like to compare the company's results with those of other insurers.

- iv) Describe the information and calculations that you would include in a comparison between insurers, based on information that is available in the annual financial statements. [10]

[Total 50]

TOTAL 100

REMEMBER TO SAVE

END OF EXAMINATION