Actuarial Society of South Africa

EXAMINATION

1 NOVEMBER 2011

Subject F203 — *General Insurance* 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 all three 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.

QUESTION 1

You are an actuary employed by the Financial Services Board (FSB). A company has recently applied for a short term insurance license. As required by the FSB, they have submitted a five year business plan. An extract of the first two years of the business plan is shown below.

2011	**Total (R'000)**	**Property (R'000)**	**Motor (R'000)**
Gross Written Premiums	39,000	33,000	6,000
Reinsurance Written Premiums	8,000	8,000	-
Net Written Premiums	31,000	25,000	6,000
Net (of DAC and reinsurance) UPR opening	-	-	-
Net (of DAC and reinsurance) UPR closing	14,000	11,000	3,000
Net earned premiums	**17,000**	**14,000**	**3,000**
Net claims incurred	**8,000**	**7,000**	**1,000**
Commission incurred	5,000	4,000	1,000
Reinsurance commission incurred	2,000	2,000	-
Net underwriting result	**6,000**	**5,000**	**1,000**

2012	**Total (R'000)**	**Property (R'000)**	**Motor (R'000)**
Gross Written Premiums	78,000	65,000	13,000
Reinsurance Written Premiums	16,000	16,000	-
Net Written Premiums	62,000	49,000	13,000
Net (of DAC and reinsurance) UPR opening	14,000	11,000	3,000
Net (of DAC and reinsurance) UPR closing	29,000	21,000	8,000
Net earned premiums	**47,000**	**39,000**	**8,000**
Net claims incurred	**25,000**	**19,000**	**6,000**
Commission incurred	10,000	9,000	1,000
Reinsurance commission incurred	3,000	3,000	-
Net underwriting result	**15,000**	**14,000**	**1,000**

Balance Sheet items	**31/12/2011**	**31/12/2012**
Reinsurer's share of UPR	5,000	10,000
Total Equity, including contingency reserve	8,000	16,000
Gross UPR	20,000	40,000
Gross IBNR	3,000	4,000

PLEASE TURN OVER

In addition, you have been given the following information:

There will be a 25% quota share reinsurance treaty in place on the property book.

No reinsurance is expected to be purchased for the motor book.

The property book is expected to be mainly annual business, and the motor business mainly monthly business.

i. Describe the current solvency requirements for South African short term insurance companies.

[2]

ii. Discuss whether it is appropriate to grant the licence given the information provided.

[10]

Following numerous consultations between the company and the FSB, and revisions to the business plan, the license was eventually granted and the company started its insurance operation during 2011.

At 31 December 2012, an extract from their submitted short term annual regulatory returns is as follows.

Actual 2012	**Total (R'000)**	**Property (R'000)**	**Motor (R'000)**
Gross Written Premiums	155,000	150,000	5,000
Reinsurance Written Premiums	18,875	18,750	125
Net Written Premiums	136,125	131,250	4,875
Net (of DAC and reinsurance) UPR opening	72,446	15,000	150
Net (of DAC and reinsurance) UPR closing	31,175	31,000	175
Net earned premiums	**177,396**	**115,250**	**4,850**
Net claims incurred	**89,833**	**86,438**	**3,395**
Commission paid	24,403	23,800	603
Reinsurance commission	3,375	3,375	-
Net underwriting result	**9,239**	**8,388**	**852**

iii. Explain the potential risk based capital implications of the new information provided, suggesting ways to mitigate potential capital increase requirements.

[14]

TOTAL [26]

PLEASE TURN OVER

QUESTION 2

You are the chief actuary at a medium sized direct short term South African insurer. In the preceding year, the insurer wrote gross motor premiums totalling R150m. The company's key strategic initiative is to increase its market share in the personal lines motor insurance market.

The current motor insurance product provides only own property damage and theft cover.

The company is considering adding Third Party Liability (TPL) cover as a standard feature of the product. The proposed cover is to provide protection against claims from third parties for property loss or damage resulting from an incident where the company's policyholder is at fault. It has been proposed that the TPL cover includes the following features:

- Benefit limited to twice the sum insured under a policyholder's current motor policy
- The TPL premium will be a percentage of a policyholder's existing premium. The percentage will be determined for the book as a whole.
- The benefit will not be sold on a stand-alone basis

(i) Discuss all the potential risks to the company associated with introducing this benefit.

[30]

As an alternative suggestion, you have been asked to investigate the benefits offered by the Road Accident Fund (RAF) and how these supplement or complement the proposed TPL cover under consideration. In particular, it has been suggested that the proposed cover is probably not even necessary, as it is provided for under the RAF.

(ii) Explain the operation of and cover provided by the RAF, whilst commenting on the suggestion.

[7]

The insurance industry is currently considering the introduction of compulsory Third Party motor property insurance in South Africa through a central fund run by the government.

(iii) Discuss the potential impact of this initiative on all stakeholders.

[17]

TOTAL [54]

PLEASE TURN OVER

QUESTION 3

You are the head of the actuarial and risk functions of a medium-sized insurer in SA currently writing a comprehensive personal lines portfolio. Your responsibilities include reserving and the information technology and administration system. Your sales team has managed to acquire an engineering portfolio, previously underwritten by a foreign insurer that had decided to exit the SA market.

The acquisition was concluded while you were on leave and upon your return you are given only the following information:

- The portfolio consists of an array of engineering policies, including plant, engineering equipment, construction all risks and erection all risks;
- The three underwriters that managed the portfolio for the foreign insurer have all joined your company to continue underwriting the portfolio;
- Your company is taking on the portfolio including its run-off by means of a portfolio transfer, in which outstanding claim reserves are transferred at 100%, plus a transfer of UPR;
- Your current reinsurers have agreed to add this portfolio into your existing reinsurance structure;
- The portfolio has been running at a profit margin of 5% for the last 3 years;
- The portfolio size is R120m per annum;
- The transfer date is in six weeks time;
- An electronic copy of each in-force policy;
- A data extract of all current outstanding claim reserves (linked to policies) to support the transfer of the outstanding claim reserve.

Given the information provided, discuss the concerns you have for your areas of responsibility:

(i) Reserving; [11]

(ii) Information technology and administration system [9]

TOTAL [20]

PAPER TOTAL [100]

END OF PAPER