INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

30 September 2013 (am)

Subject SA3 – General Insurance
Special 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 both 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.

1 Possum Insurance Company (PIC) is the largest motor insurer in the country in which it operates.

Eight years ago, PIC started selling motor insurance with a Premium Return (PR) benefit. The PR benefit is only paid if customers remain continuously insured with PIC for 10 years. The PR benefit is equal to the total premium paid by the customer to PIC over the ten year period, less the total value of claims made by the customer over the same period.

If the total claims made over the ten year period exceed the total premiums then the PR benefit is nil – the customer is not required to cover the shortfall of premium relative to claims. No PR benefit is payable if the customer lapses before 10 years.

The premiums are subject to review on an annual basis or following a loss event, driving penalty or change of vehicle.

(i) List potential sources of PIC's profit for the Premium Return product. [2]

(ii) List costs that PIC will incur in providing this insurance. [5]

(iii) Discuss the viability and risks to PIC arising from this product, considering the following factors:

- Claims
- Recoveries
- Investment return
- Lapses
- Expenses and commission
- Capital
- Customer behaviour
- Market and regulatory environment

[30]

Following high sales volumes on the motor premium return product in the first two years of operation, PIC decided to offer its mobile phone insurance product (running at a 20% average claim ratio) on a premium return basis as well. Customers would need to maintain cover for 10 years and would need to claim the PR benefit in person from PIC's head office.

(iv) Discuss whether this venture is likely to be profitable for PIC. [8]

For the initial years of the product, underlying assets had been invested in government and corporate bonds which had produced relatively high returns on international comparative tables. In 2012, the country in which PIC operates joined a currency union with several economically stronger countries, and available yields dropped substantially.

PIC's managing director proposes that they should move the underlying assets to shares and property to secure higher investment returns.

(v) Discuss the managing director's proposal. [5]

The managing director has decided that the PR concept is no longer viable in the current market conditions.

(vi) Discuss the options that may be available to PIC to exit from the product lines with a PR benefit. [6]

[Total 56]

2 During 2013, an international shipping and mining company has been advised by its insurance broker that creating a captive may be the best way to address its insurance needs.

(i) Outline the insurance covers that might interest the company, giving examples of likely activities or exposures that might create a need for these covers. [12]

(ii) Discuss possible reasons why a captive arrangement may have been suggested for this company, considering any potential disadvantages. [15]

The company has expressed a reluctance for the captive retaining more than $50m from any one loss event. Based on this, the broker has sourced a range of market quotes for the property damage and business interruption exposures of the mining business, incorporating an excess of $50m per event.

The quotes are 50% higher than the average unadjusted annual historical cost over $50m over the last 20 years. The broker has suggested that the captive should look at a higher retention in order to avoid ceding excessive profit to the insurance market.

(iii) Discuss this suggestion. [10]

The company suffered significant losses to its shipping activities from a previous hurricane and it is keen to purchase robust catastrophe protection for the captive.

However, prices for traditional catastrophe excess of loss reinsurance are expensive, and the broker has suggested that an Industry Loss Warranty might be a lower cost alternative.

(iv) Discuss this suggestion. [7]

[Total 44]

END OF PAPER