

EXAMINATIONS

10 September 2001 (am)

Subject 403 — UK Fellowship General Insurance

Paper One

**You must answer this subject only,
you may not attempt another subject in the 400 series.**

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

1. *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.*
2. *You must not start writing your answers in the booklet until instructed to do so by the supervisor.*
3. *Write your surname in full, the initials of your other names and your Candidate's Number on the front of the answer booklet.*
4. *Mark allocations are shown in brackets.*
5. *Attempt all 9 questions, beginning your answer to each question on a separate sheet.*

AT THE END OF THE EXAMINATION

Hand in BOTH your answer booklet and this question paper.

*In addition to this paper you should have available
Actuarial Tables and an electronic calculator.*

- 1** In respect of a UK proprietary general insurance company.
 - (i) Outline the ways in which the Insurer may utilise its trading losses when calculating its tax liability. [2]
 - (ii) Explain how investment returns are taxed. [3][Total 5]

- 2** A general insurance company is valuing its liabilities in respect of its company accounts. Discuss the specific problems that arise in respect of business written through intermediaries. [7]

- 3** Describe the Risk Based Capital approach to determining minimum solvency requirements and state its advantages and disadvantages. [6]

- 4** Explain why a UK general insurance company should have underwriting guidelines, and state the items that are likely to be covered in these guidelines. [4]

- 5** Define the term “experience rating”, and compare prospective and retrospective methods of experience rating. [5]

- 6** You are the actuary for a UK general insurance company and have estimated the undiscounted claims reserve as at the previous year-end. The insurer writes, amongst others, a class of business which guarantees payment in the event of a default in a contract between two companies. Recent poor economic conditions have meant that the insurer has received many claims under these policies.

Following the reserving exercise you have discussed your claims reserve estimate with the claims assessors. They have suggested that, as economic conditions have now improved, many of these claims will not be paid because the contracts are likely to be fulfilled. The assessors have therefore suggested that you should reduce your claims reserve estimate for this class of business.

State the information that you would need and the factors that you would take into account to determine whether or not the claims reserve estimate should be changed. [6]

- 7**
 - (i) Describe the general insurance pricing cycle. [3]
 - (ii) Explain what features of the general insurance industry cause such cycles to occur regularly. [8]
 - (iii) Suggest ways in which a general insurance company may mitigate the effect that pricing cycles have on its financial performance. [6][Total 17]

- 8 A major motor vehicle manufacturer provides finance, through a subsidiary company, to its customers who are buying new cars.

A deposit is paid, followed by a series of equal monthly payments and then one final payment equal to the anticipated value of the car at the end of the loan period. At the end of the loan period the lessee has the option of returning the car rather than paying the final payment.

You are an actuary for a general insurance company which has been approached by the above mentioned subsidiary company who want to effect an insurance policy which will pay out if the actual value of the vehicle at the end of the loan period is less than the anticipated value.

- (i) Describe the major risks to the insurer of underwriting insurance of this type. [7]
 - (ii) List the information required to assess such a risk. [4]
 - (iii) Explain how you would derive a premium for this risk. [5]
 - (iv) State the conditions that could be applied to minimise the financial risks to the insurer. [5]
 - (v) Outline the reinsurance cover the insurer would ideally purchase, with reasons. [4]
- [Total 25]

- 9** A UK general insurance company which was set up in 1997, has written only two classes of business. The experience in calendar year 2000 suggests that the underwriting performance of the company has deteriorated. You have been provided with the summary information shown below (all figures in £'000's).

Class 1

<i>Accident Year</i>	<i>O/S claims @ 31.12.99</i>	<i>O/S claims @ 31.12.00</i>	<i>Paid Claims in 2000</i>	<i>Paid Claims in 1999 & prior</i>	<i>Earned Premium</i>
1997	65	13	65	1,235	2,000
1998	680	306	510	2,720	5,500
1999	1,750	1,050	1,050	1,750	6,000
2000		2,000	2,000		5,000

Class 2

<i>Accident Year</i>	<i>O/S claims @ 31.12.99</i>	<i>O/S claims @ 31.12.00</i>	<i>Paid Claims in 2000</i>	<i>Paid Claims in 1999 & prior</i>	<i>Earned Premium</i>
1997	263	212	38	488	1,000
1998	798	519	239	798	2,100
1999	1,390	799	521	348	2,200
2000		1,800	450		2,500

- (i) Discuss the claims experience of the company as a whole and by class of business, giving possible reasons for the observed features. [15]
- (ii) Describe the further information you would require in order to comment on the profitability of the company and of each class of business. [10]
- [Total 25]