EXAMINATIONS

6 April 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 Define reciprocity and describe briefly its effect on the parties involved. [7]

2 Describe the Bornheutter-Ferguson method and explain under what circumstances it might be used in preference to other reserving methods. [5]

3 State the main perils and risk factors associated with Marine Liability Insurance. [3]

4 A general insurance company writes an extended warranty contract that takes over from the manufacturer's warranty after the product is 12 months old and extends the warranty until the product is 5 years old. The total insurance premium is due at the time of purchase of the product. The table below shows the premium written during underwriting years 1998 to 2000 and the estimated figure for 2001.

Underwriting Year	Written Premium (£000s)
1998	50
1999	100
2000	100
Plan 2001	100

Calculate the earned premium in 2001, stating any assumptions made. [6]

5 Outline the professional guidance relevant to actuaries practising in or advising UK general insurance companies and Lloyd's Syndicates, and state the Guidance Notes applying in each case. [9]

6 You are the actuary for a UK general insurance company. The Finance Director has suggested that in order to save money on reinsurance the company should increase its retention levels.

Describe briefly the factors you would take into account when formulating your response. [13]

7 You are the actuary for a UK general insurance company that currently transacts only household buildings and contents insurance. The company will shortly start to write private motor insurance.

Explain how your company will minimise the risk of insolvency in respect of the existing and proposed new business with reference to the following areas of risk:

- Investment
- Underwriting and Reinsurance
- Competition [10]

8 (i) Describe the calculation of the Statutory Minimum Solvency Margin Requirement for a UK general insurance company [6]

(ii) Describe the regulations relating to the discounting of technical reserves for a UK general insurance company [4]

(iii) Describe the valuation of asset requirements for the Statutory Returns of a UK general insurance company. [5]

(iv) A general insurance company has 3 objectives:

1. Increase written premium next year by 25%

2. Maintain Solvency Margin at the present level of 50% of premium written in the year.

3. Distribute as dividends 40% of net insurance profits after tax.

Assume that that the rates of gross interest and tax currently operating are:

Gross interest	9%
Tax	33%

Calculate the rate of gross insurance profit, expressed as a percentage of the written premium in the next year, that must be generated to achieve these three objectives. [6]

(v) Explain why a UK general insurance company might hold a solvency margin in excess of the Statutory Minimum Solvency Margin Requirement. [6]

[Total 27]

9 A country's government has recently introduced proposals that will require, for the first time, that general insurance companies discount reserves for the purpose of assessing their tax liability. The following procedure has been proposed:

- calculate the best estimate for the undiscounted claims reserves
- estimate how these reserves will be paid over time
- discount these payments using gross redemption yields available on government bonds of equivalent term
- similar techniques are to be applied to the unexpired risk reserve

(i) Discuss the implications of the proposals on the profitability, capitalisation and competitiveness of the insurance industry and also of individual insurance companies. [8]

(ii) Describe the practical difficulties of implementing the above proposals. [7]

(iii) Discuss the effect of these proposals on the security of the policyholders' interests. [5]

[Total 20]