

## EXAMINATIONS

5 September 2001 (am)

### Subject 303 — General Insurance

*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 10 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** A general insurance company is considering writing property damage insurance cover.  
State the main types of property likely to be insured. [3]
- 2** Describe briefly the areas of risk and uncertainty for a general insurance company writing a small heterogeneous book of business. [10]
- 3** A general insurance company is wishing to review its reinsurance arrangements. State the factors that may influence its decision. [7]
- 4** Explain briefly what is meant by:
- (a) discovery period
  - (b) facultative reinsurance
  - (c) IBNER
  - (d) moral hazard [6]
- 5**
- (i) Explain what is meant by EML. [2]
  - (ii) Write down the maximum EML that can be insured, and not go beyond the maximum reinsurance cover, if the only reinsurance the company has available is a surplus treaty with N lines of cover and a maximum retention of R. [1]
  - (iii) An insurer (C) takes on a risk with EML of \$10m. C has a risk excess of loss contract \$5m xs \$1m with reinsurer A which applies before a surplus treaty with reinsurer B. The surplus treaty provides a maximum retention of \$3m and 4 lines with the minimum always being ceded. Determine how much A, B and C each pay if a claim for \$9m occurs. [4]  
[Total 7]
- 6**
- (i) Describe two distinct methods used to account for general insurance business. [3]
  - (ii) Describe the four accounting concepts which are widely used in preparing the financial accounts of a general insurance company. [5]  
[Total 8]

- 7**
- (i) State the prime objective regarding the investment of assets of a general insurance company. [2]
  - (ii) List the factors which influence a general insurance company's investment policy. [3]
  - (iii) Describe briefly the ways a supervisory authority could influence the investment policy of a general insurer. [4]
- [Total 9]
- 8** You are the actuary for a general insurance company that writes only ten-year new home warranty business, in a country where all homes must be built to a set of minimum standards. The warranty is purchased by the builder before construction commences, on behalf of the purchaser for a single up-front premium — the purchaser of the home then becomes the policyholder on legal completion. The policy covers new homes from the date first occupied against the cost of major damage resulting from building defects where the cost of repairs exceeds \$2,000 (at 1/4/2001 prices — linked to the house re-building cost index), and the builder is no longer in business. New IT systems are being developed for all parts of the business. As part of the design process you have been asked to specify your data requirements.
- State the items of data you are likely to require for reserving and pricing purposes. [12]
- 9** You are the actuary for a general insurance company which was established five years ago. Since then it has written only third party motor insurance.
- (i) Describe, with reasons, the extent to which the basic chain ladder method may be relied upon for assessing the required level of outstanding claims reserves. [10]
  - (ii) Describe the additional steps you might take to assess the required level of reserves. [3]
- [Total 13]
- 10** You are the actuary for a general insurance company writing only commercial lines business. You have recently been asked by one of the underwriters to assist with a request from the owner of a small Christmas tree farm for insurance cover against all major insurable risks in respect of that business.
- (i) Describe the main insurance products the farm is likely to need and the associated perils covered by each product. [8]
  - (ii) List the rating factors you would use in premium rating each part of the cover in (i). [7]
  - (iii) Describe the main characteristics of claims likely to arise under each element of cover. [10]
- [Total 25]