

EXAMINATIONS

September 1998

Subject G — General Insurance

Paper One

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 23 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.

<p><i>In addition to this paper you should have available Actuarial Tables and an electronic calculator.</i></p>
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- 1** An excess of loss contract provides cover of £1m in excess of £0.25m for any one claim. Assuming that the underlying ground-up gross claims have a claim frequency of f and a claim size distribution of $g(x)$, set out equations for calculating
- (a) claim frequency
 - (b) average cost per claim,
- under the excess of loss contract. [3]
- 2** List eight principal rating factors for household property insurance (buildings & contents). [4]
- 3** Explain what is meant by the following Lloyd's terms.
- (a) Council of Lloyd's
 - (b) Central Fund
 - (c) Lloyd's Managing Agent
 - (d) Lloyd's deposit [6]
- 4** Explain what the Motor Insurers' Bureau is, and describe how it operates. [4]
- 5** Describe the key features of funded accounting. [4]
- 6** Explain why Property and Liability classes have different claims payment patterns. [2]
- 7** List the situations in which the GN12 Guidance Note should be followed. [2]
- 8** List the practical considerations involved in setting up a management information system. [2]
- 9** Define the terms Unearned Premium Reserve (UPR) and Unexpired Risk Reserve (URR) and explain why in some cases the URR may be greater than the UPR. [2]

- 10** State what probability density function you would choose for modelling each of the following variables. You should also provide a formula and a brief reason for the choice.
- (a) The likely frequency of earthquakes.
 - (b) The total claims cost from a portfolio of household buildings policies. [4]
- 11** List the insurance cover required by law in the United Kingdom. [3]
- 12** Define what is meant by the term “Agents’ Balances” and describe their treatment under the DTI Asset Admissibility regulations, suggesting reasons for this. [4]
- 13** Explain briefly the territorial scope of the supervision of insurance companies by the United Kingdom authorities. [3]
- 14** Describe briefly the effects of judicial decisions on insurance liabilities. [3]
- 15** State the reasons why a general insurance company might wish to purchase reinsurance. [5]
- 16** You have some historical base data from which you have been asked to calculate risk premiums for a particular type of policy. Describe the adjustments that may be necessary in order to calculate the risk premiums for a new rating period. [4]
- 17** Describe briefly the effects on an insurer of being at the bottom of the insurance cycle. [3]
- 18** The eighths method and the twenty fourths methods have been suggested as suitable ways to calculate the unearned premium reserve for a group of policies.
- (a) State the assumptions underlying each of these two methods.
 - (b) State with reasons, types of insurance where neither of these methods would be appropriate. [3]

- 19** List the three key principles embodied in the DTI Asset Admissibility regulations. [3]
- 20** Describe briefly the purposes of analysing claims and exposure experience. [3]
- 21** Two general insurance companies (A and B) have provided cover to an industrial company (C) on a 50% coinsurance basis. Company A has a risk excess of loss coverage in place with Company B that provides cover of £1m in excess of £1m. The industrial company has submitted a claim for £3m under the policy. State each company's liability amount in respect of this claim, also giving the party to whom the claim will be payable. [2]
- 22** Draw up a specimen revenue account, and briefly describe all the entries which may be found in such an account. [6]
- 23** (i) Explain why premiums may be inadequate under the following headings: [14]
- (a) Claims experience
 - (b) Expenses and commission
 - (c) Investment return
- (ii) You have been asked to carry out a profit testing exercise on a set of premium rates for a particular insurance product. List the features of the business you would allow for in your profit testing model. [4]
- (iii) You have been specifically asked to model the effects of the revised premium rates on future new business volumes. Discuss the considerations involved in carrying out this task. [7]

[Total 25]