

Actuarial Society of India

EXAMINATIONS

24th November 2005

Subject CA12 – Liability and Asset Liability Management

Time allowed: Three Hours (02.15* - 05.30 pm)

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 until instructed to do so by the supervisor.*
- 3. The answers are not expected to be any country or jurisdiction specific. However, if examples/illustrations are required for any answer, the country or jurisdiction from which they are drawn should be mentioned.*
- 4. Mark allocations are shown in brackets.*
- 5. Attempt all questions, beginning your answer to each question on a separate sheet.*
- 6. Fasten your answer sheets together in numerical order of questions. This, you may complete immediately after expiry of the examination time.*

Professional Conduct:

“It is brought to your notice that in accordance with provisions contained in the Professional Conduct Standards, If any candidate is found copying or involved in any other form of malpractice, during or in connection with the examination, Disciplinary action will be taken against the candidate which may include expulsion or suspension from the membership of ASI.”

Candidates are advised that a reasonable standard of handwriting legibility is expected by the examiners and that candidates may be penalized if undue effort is required by the examiners to interpret scripts.

AT THE END OF THE EXAMINATION

Hand in BOTH your answer script and this question paper to the supervisor.

- Q.1)** Describe the four accounting concepts which are widely used in preparing the financial accounts of any business. **[4]**
- Q.2)** Discuss why a life insurance company might use a stochastic model to investigate its current solvency position. **[6]**
- Q.3)** The actuarial profession in a developing country is considering issuing a number of guidance notes to its pensions actuaries.
Set out the advantages and disadvantages of this suggestion. **[6]**
- Q.4)** An employer intends to introduce a pension scheme for its employees.

Discuss the factors that the employer will take into account in deciding the type and amounts of benefits to be provided. **[8]**
- Q.5)** The government of a developing country is keen to ensure the adequacy of its future pensions provision.
- (i)** Outline the reasons why the government may introduce some form of compulsory private pensions provision. **(4)**
- (ii)** List the disadvantages of introducing compulsory private savings for pensions. **(6)**
- Total [10]**
- Q.6)** A life insurance company offers a without profits term assurance contract.
- (i)** Describe the reasons why a client's application for the contract may be underwritten. **(4)**
- (ii)** List the sources of information that a life insurance company can use to establish the level of mortality risk for a particular applicant. **(3)**
- (iii)** Describe the options open to the company if the underwriting process shows an applicant to have a higher expected level of mortality risk than that assumed in the premium rate **(4)**
- Total [11]**
- Q.7)**
- (i)** Explain briefly how reinsurance can aid the reinsured in managing its capital requirements. **(5)**
- (ii)** Give with reasons the type and extent of treaty reinsurance that would be *most* suitable for:
- (a)** An insurance company writing motor insurance
- (b)** A large insurance company writing industrial property fire insurance. **(4)**
- Total [9]**

- Q.8)** A company which currently writes medical benefits insurance is considering the addition of a Dental Insurance policy to its range of products.
- (i) State the features of the cover that you would need to consider in designing the product. (5)
 - (ii) Describe briefly the other factors you would need to consider before deciding whether the product should be launched. (5)
 - (iii) Suggest four likely rating factors for the product. (2)
 - (iv) List the items that would be included in the policy document. (6)
 - (v) List the sources of data you might be able to use to set your premium rates. (2)
- Total [20]**

- Q.9)** A life insurance company writes the majority of its business through insurance intermediaries. Each intermediary is paid initial commission at a multiple of a standard scale. The multiple is agreed between the company and the particular intermediary. Currently all intermediaries are paid the same rate of renewal commission.

Discuss the reasons why the company might offer some intermediaries a higher multiple than others, the risks it accepts from this approach, and how it can reduce these risks. [9]

- Q.10)** A life insurance company has been selling without profits term assurance business for many years. The company is setting up a model to assess the profitability of the existing book of business which has not been modelled before.
- (i) Describe what is meant by the term “model point” and describe how the model points might be chosen for this model. (11)
 - (ii) Describe the data checks and other investigations that would be carried out to determine whether the model points chosen are appropriate. (6)
- Total [17]**
