THE INSTITUTE OF ACTUARIES OF AUSTRALIA

LIFE INSURANCE **1997 EXAMINATIONS**
SPECIALIST LEVEL PAPER TWO

Answer all 7 Questions

QUESTION 1 **10 MARKS**

You are the marketing actuary of an Australian life insurance company which has just acquired a New Zealand bank. The General Manager is keen to begin selling yearly renewable term insurance in New Zealand using the bank's salaried investment advisory staff, and wants to streamline the process of issuing policies in order to encourage high volumes of new business. The streamlining includes a reduced set of underwriting questions on the application form and on-the-spot acceptance of the risk by bank staff if certain health criteria are met.

(a) Suggest the health and other criteria that should be satisfied for a policy to be approved by the bank's staff on the basis of the answers to the questions in the application form.

(5 marks)

(b) Explain to the General Manager the considerations which will affect the pricing of these contracts by making comparisons with the yearly renewable term insurance contracts sold in Australia by a tied agency force.

(5 marks)

THE INSTITUTE OF ACTUARIES OF AUSTRALIA

LIFE INSURANCE **1997 EXAMINATIONS**
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QUESTION 2 **14 MARKS**

LIASB Solvency Standard 2.01 and Capital Adequacy Standard 3.01 set out the bases for the calculation of Solvency and Capital Adequacy requirements.

The LIASB also has explained the underlying philosophies which it has used to establish both of these standards.

Explain the essential features of the underlying philosophy of :-

(a) The Solvency Standard 2.01

(3 marks)

(b) The Capital Adequacy Standard 3.01

(3 marks)

(c) The term ***Related Product Group*** is referred to in both standards. Set out and explain

(i) The minimum Related Product Groups required by legislation.

(2 marks)

(ii) What criteria need to be satisfied in order for Related Product Groups to be formed at lower levels than the minimum and why a company may want to have Related Product Groups at lower levels.

(3 marks)

(d) The Solvency Reserve is made up of a number of components with tests at each level.

Describe what each of these components are and how the tests operate between each level.

(3 marks)

THE INSTITUTE OF ACTUARIES OF AUSTRALIA

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QUESTION 3 **14 MARKS**

The LIASB Valuation of Policy Liabilities Standard 1.01 provides guidelines for using the Margin On Services method for valuing policies using both the projection and the accumulation methods.

(a) In what circumstances is it appropriate to use the accumulation method of valuation ?

(2 marks)

(b) What are the advantages and disadvantages of using the accumulation method of valuation ?

(3 marks)

(c) Explain for what types of business the accumulation method might be appropriate and why you may choose to use it in preference to the projection method.

(4 marks)

(d) Describe the method of establishing Deferred Acquisition Cost reserves under the accumulation method of valuation.

(3 marks)

(e) Upfronting of profits, or releasing profit on day 1 of a new policy is allowed under very specific circumstances under the LIASB Valuation of Policy Liabilities Standard 1.01. Explain the situation where this is possible.

(2 marks)

QUESTION 4 **14 MARKS**

A long established portfolio of participating whole of life policies has been closed to new business for a few years. As Appointed Actuary, you have been setting annual compound reversionary bonuses and terminal bonuses by reference to asset shares of this portfolio of business and believe this has resulted in a reasonable degree of equity between policyholders over time.

(a) You have been asked by the directors about the method of valuing these policies on an ongoing basis under the new LIASB Valuation of Policy Liabilities Standard 1.01.

Explain the special calculations specific to discretionary policies under this standard.

(4 marks)

(b) Explain whether the use of asset share methodology can be continued under a Margin On Services valuation approach as a basis for declaring bonuses.

(3 marks)

(c) The Statutory fund which contains only this business has failed to meet the Capital Adequacy Reserve standard , but has met the Solvency Reserve standard.

State the impact on the distribution of earnings in this situation.

(4 marks)

(d) Special accounts are required under the LIASB Valuation of Policy Liabilities Standard 1.01 for participating policies. List and describe these accounts and their purposes.

(3 marks)

QUESTION 5 **17 MARKS**

(a) A life office offers "automatic cover" under its group life policies. What terms and conditions would apply to provision of this cover ?

(3 marks)

(b) As marketing actuary for a life company you have been asked to quote premium rates for a group life policy. The policy will provide life cover for the superannuation plan members of a major company. Explain how the mortality rate assumptions might differ from those in your yearly renewable term basis.

(5 marks)

(c) List the additional considerations which might apply if the group of lives to be insured in part (b) were the members of a MasterFund operated by a Fund Manager.

(A MasterFund is a public offer superannuation fund written under a master trust deed to manage the personal superannuation investments of individual members.)

(4 marks)

(d) List, giving reasons, types of reinsurance agreements that would be appropriate to a pool of the group life contracts described in (b).

(5 marks)

THE INSTITUTE OF ACTUARIES OF AUSTRALIA

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SPECIALIST LEVEL PAPER TWO

QUESTION 6 **14 MARKS**

(a) Outline the basic procedure for determining unit prices for investment linked products, including how policyholder charges and taxation may be treated.

(3 marks)

(b) Discuss how a life office may adjust unit prices to make allowance for investment transaction costs.

(3 marks)

(c) You are the Appointed Actuary to a small life insurance company, whose major product line is an investment linked product. A review of the unit pricing process has revealed the following characteristics:

- it is a manual system,
- unit prices are provided each Friday night and apply for the following week,
- assets supporting the business include an illiquid property asset comprising 15% of the total assets.

The review also identified a number of errors including:

- erroneous policy payments and premium payments,
- miscalculation of income tax provisions,
- discrepancies with reported investment results.

Discuss the risks implied by this review and how the impact of these risks might be addressed.

(8 marks)

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QUESTION 7 **17 MARKS**

(a) Outline the key provisions of the current Code of Practice for Advising, Selling and Complaints Resolution in the Life Insurance Industry.
(3 marks)

(b) You are the senior actuary in a start up life office, which is a component of a larger organisation which includes a bank. It is intended that the products to be sold will be single and regular premium investment products and risk products. Outline the distribution methods which might be appropriate to your life office, indicating the advantages and disadvantages of each.
(6 marks)

(c) An established life office intends to change from an 'upfront' sales person remuneration structure to a 'level' salesperson remuneration basis. Discuss the issues involved with such a transition.
(8 marks)

END OF PAPER TWO