

# INSTITUTE AND FACULTY OF ACTUARIES

## EXAMINATION

19 April 2023 (am)

### **Subject SA2 – Life Insurance Specialist Advanced**

Time allowed: Three hours and twenty minutes

<p>In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator.</p>
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If you encounter any issues during the examination please contact the Assessment Team on T. 0044 (0) 1865 268 873.

- 1** A life insurance company has a significant volume of unit-linked pensions business and without-profits immediate annuities. The company is also trying to enter the term assurance market and has written a small volume of term assurance business in the last year.

The company has carried out an analysis of its supervisory valuation surplus. Statutory liabilities are assessed on a best estimate basis and required capital is assessed on a risk-based approach that is the same as Solvency II. Initial output from this analysis identified a significant positive non-economic variance.

(i) Discuss possible reasons for this result. [12]

(ii) Describe how the three types of business would be reported under IFRS 17. [4]

[Total 16]

- 2** (i) Explain why a company may want to hold assets that are in excess of its liabilities determined on the company's best estimate assumptions. [8]

A proprietary life insurance company sets a target level of available capital. The current amount of available capital is significantly higher than its target.

(ii) Discuss the company's response to this situation. [8]

The company is considering ways to assess its economic capital.

(iii) Discuss the advantages and disadvantages of stochastic modelling and stress tests for this purpose. [4]

[Total 20]

- 3** A life insurance company sells unit-linked contracts, and is designing a new investment fund.

The new fund will invest in fixed interest loans of varying terms made to start-up companies operating in sustainable industries such as wind farms built out at sea, hydro-electric power and fair trade cocoa and coffee. The loans are held to maturity and interest would accumulate to the maturity date. There is not currently expected to be a liquid market for these loans.

- (i) Discuss the additional reputational risks associated with this investment fund. [3]

Unit prices would reflect the company's internal assessment of the value of the loans, which would reflect the terms to maturity and expected pay-outs on maturity allowing for potential defaults.

- (ii) Describe how the new asset classes may impact each of the key types of risks that the company is exposed to, including climate risk. [18]

An Annual Management Charge (AMC) will be charged to the fund to cover expected costs and profits.

- (iii) Discuss the profitability and marketability factors the company would take into account when determining the AMC for this fund. [6]

- (iv) Describe the considerations the company would have to take into account to ensure that customers are treated fairly when investing in this fund. [4]  
[Total 31]

- 4 (i) Describe the main features of an ‘I minus E’ taxation approach. [5]

The government of a country is proposing to replace the current ‘I minus E’ approach on protection business with a tax on pre-tax trading profit at the full corporation tax rate.

- (ii) Suggest reasons for the government’s proposal. [5]

- (iii) Discuss the possible impact of the government’s proposal on life insurance companies that are subject to taxation in this country. [7]

For savings business, the policyholder incurs a tax charge on maturity, death or surrender.

It has been suggested that the tax charge on surrender should be removed because it is unfair to policyholders who surrender due to poor service or unforeseen circumstances.

- (iv) Discuss this suggestion and its implications. [8]

Currently, the country has two independent financial regulators of insurance companies, one focused on prudential regulation and another focused on the regulation of conduct. The government is proposing to merge both these regulators, together with the country’s central bank, which regulates other financial industries.

- (v) Discuss the possible advantages and disadvantages of the government’s proposal. [8]

[Total 33]

**END OF PAPER**