INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

29 September 2017 (am)

Subject SA2 – Life Insurance Specialist Applications

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

1. *Enter all the candidate and examination details as requested on the front of your answer booklet.*

2. *You must not start writing your answers in the booklet until instructed to do so by the supervisor.*

3. *You have 15 minutes of planning and reading time before the start of this examination. You may make separate notes or write on the exam paper but not in your answer booklet. Calculators are not to be used during the reading time. You will then have three hours to complete the paper.*

4. *Mark allocations are shown in brackets.*

5. *Attempt both questions, beginning your answer to each question on a new page.*

6. *Candidates should show calculations where this is appropriate.*

AT THE END OF THE EXAMINATION

Hand in BOTH your answer booklet, with any additional sheets firmly attached, and this question paper.

In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator from the approved list.

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1 (i) Describe a proxy model, including its purpose and the situations in which it would most likely be used. [4]

(ii) List four different types of proxy model approach that a life insurance company could take. [2]

A small proprietary life insurance company which is subject to the Solvency II regime is looking to develop a proxy model. It sells conventional without profits immediate annuities and conventional without profits term assurance products. It invests in gilts and corporate bonds only.

(iii) Describe the main risk types that the company would model. [13]

(iv) Describe the other considerations for the company when designing the proxy model. [9]

The company wishes to monitor its required capital under different assessment approaches.

(v) Describe the three different types of required capital assessment that the company could model. [3]

The company is expanding its investment portfolio into a new asset class, comprising a different type of loan. This investment type is new to insurance companies, has a higher expected return than corporate bonds and carries higher credit risk.

(vi) Assess the possible impacts of this investment decision on the risks to which the company is exposed. [5]

(vii) Assess the implications of this investment decision for the required capital assessments described in part (v), considering both capital amount and calculation approach. [8]

[Total 44]

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2 (i) State the areas that should be covered in the "Principles and Practices of Financial Management" (PPFM) documents produced for UK with profits business. [5]

A UK proprietary life insurance company operates a Non Profit Fund (NPF) and a With Profits Fund (WPF).

As well as with profits in-force business, the WPF also includes some without profits business, including a significant portfolio of conventional without profits immediate annuities.

The WPF has been closed to new with profits business for a number of years. However, new conventional without profits immediate annuities continue to be written, in large volumes, into the WPF. All other new business is written into the NPF.

Profits from the WPF are distributed to policyholders and shareholders on a 90:10 basis. All profits arising from the NPF are available to shareholders.

A project is underway which has recommended that the conventional without profits immediate annuities, and associated assets, are transferred from the WPF to the NPF, and that all future conventional without profits immediate annuities are written in the NPF.

(ii) Suggest possible reasons why the company is undertaking this project, considering benefits in terms of both the WPF and the NPF. [12]

As part of the project, the company must determine the amount of assets to be transferred across to the NPF in respect of existing business and any amount that is paid by the NPF to the WPF in respect of future new business. For the former, the company intends to start from existing components of the Solvency II balance sheet.

(iii) Describe the considerations that the company would take into account when determining these transaction amounts. [14]

(iv) Outline the additional steps the company may need to take to ensure that policyholders are treated fairly in relation to the project. [7]

(v) Identify, with reasons, any changes that may need to be made to the company's PPFM as a result of the project. [6]

(vi) Outline the other issues, including practical issues relating to the transaction process, that the company would need to consider in relation to the completion of the project. [12]
[Total 56]

END OF PAPER

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