

Actuarial Society of South Africa

EXAMINATION

18 October 2019

Subject F204 - Pensions and Other Benefits Specialist Applications

Time allowed: Three Hours

INSTRUCTIONS TO THE CANDIDATE

- 1. Follow log in and saving instructions issued to you at the exam venue.*
- 2. Save your work throughout the exam.*
- 3. You are required to submit your answers in Word format only using the template provided. You MAY NOT use any other computer program (e.g. Excel) during the examination.*
- 4. You have 15 minutes at the start of the exam 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.*
- 5. You must not start typing your answers until instructed to do so by the invigilator/supervisor.*
- 6. Mark allocations are shown in brackets.*
- 7. Attempt all questions, beginning your answer to each question on a new page.*
- 8. You should show calculations where this is appropriate. If necessary, an answer book may be used for this purpose.*

Note: The Actuarial Society of South Africa will not be held responsible for loss of data where candidates have not followed instructions as set out above.

AT THE END OF THE EXAMINATION

**Check that you have saved your work as per instructions given to you.
Hand in your question paper with any additional sheets firmly attached.**

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.

QUESTION 1

Current labour legislation in the Republic of Outlandia makes provision for a private sector retirement gratuity to be paid by an employer to an employee only when the employee retires from service.

The benefit payable under the gratuity scheme is 15 days' salary for each year of service with the current employer only. Service for the purpose of determining the retirement gratuity is reset to zero whenever an employee changes employer.

- i. Set out the major implications of the current design of the gratuity scheme for an employee. [4]

The government of Outlandia has decided to intervene directly in the provision of this benefit through the introduction of a proposed portable gratuity scheme. This would be a contributory state scheme, which will be funded from employer contributions to the scheme and investment returns.

- ii. Outline the arguments in favour and against the proposed method of paying for the state scheme. [5]

One of the major aims of the portable gratuity scheme is to ensure that an employee's full employment history is taken into account in determining retirement gratuity benefits. The intention is to make the current employer responsible only for the portion of the past service the employee has served with the employer, and not service prior to joining the current employer.

- iii. Suggest, with reasons, a reasonable approach to apply to existing employers to arrive at a fully funded position in respect of their employees' accrued benefits. [3]

It is the intention of the government to fully fund in advance the benefit for the years of service employees have lost with previous employers. You have been asked to calculate a rough estimate of this liability to assess if this intention is viable or not.

- iv. State the key data and assumptions needed in the estimation of this liability in respect of these prior years of service. [6]

[Total 18]

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QUESTION 2

Default Regulations have recently come into effect in respect of various aspects relating to retirement funds. The regulations have focussed on three key areas.

- i. In relation to benefits payable at retirement, discuss in detail the specific applicable regulation focussing on:
 - a. the context and intended purpose; [4]
 - b. the regulatory requirements; and [11]
 - c. the potential pitfalls. [3]

The Financial Director of a large South African company is also the Chairperson of the Board of Trustees of the company's valuation exempt defined contribution pension fund. He has expressed his view that the Fund should embrace the default regulations and their intended purpose but look to go beyond simply meeting their requirements. He has requested that the Board engage in a number of related projects. The first of these is an investigation into offering a traditional in-fund life annuity.

- ii. In relation to this in-fund annuity option, describe the risks, uncertainties and general mitigating factors that need to be considered for such an arrangement. [15]

The Chairperson, having noted the research into the in-fund life annuity option, would like to ensure that the Board understands the other options that could be offered and how these compare to a traditional in-fund pension.

- iii. Set out a comparison of the annuity options that could be used in the construction of an annuity strategy, noting the relative advantages of each in this context. [14]

The Fund currently has one investment portfolio for the entire Fund. The Trustees have asked whether this would be suitable as a portfolio for both in-service contributing members and a potential pensioner account.

- iv. Comment on the main advantages and disadvantages of a single investment strategy for both membership groups. [5]

You have been asked to assist with the determination of an appropriate investment strategy for the in-fund pensioner pool. The Trustees have yet to decide if this will take the form of an in-fund living annuity or a traditional form of guaranteed annuity.

- v. Briefly set out the legislative framework that needs to be taken into account when setting any investment strategy. [3]
- vi. Explain to the Trustees what Asset Liability Modelling is and describe in detail how you would use this to assist in determining an appropriate pensioner investment strategy, albeit for a living annuity or a traditional guaranteed pension. [5]

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Given all the information provided, the Trustees decide that an in-fund option would be appropriate, and that a living annuity would best meet the needs of their members. They would like to understand how the full range of traditional asset classes could be combined to develop a suitable range of investment portfolio options for the in-fund living annuity pensioner portfolio.

- vii. Discuss the full range of traditional asset classes noting how each of these could be used in developing the living annuity investment portfolio options. [10]

The Trustees would like you to suggest four investment options they could offer to pensioner members. They have requested that these four options aim to provide sufficient flexibility for pensioners, allowing them to meet a range of potential post retirement needs.

- viii. Using a combination of the asset classes discussed in your solution to part (vii), propose four living annuity portfolios noting the purpose and potential use of each portfolio and its required strategic asset allocation to meet that purpose. [12]

[Total 82]

[Total 100]

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END OF EXAMINATION