



ACTUARIAL SOCIETY
OF SOUTH AFRICA

EXAMINATION

17 May 2024

Subject F204 — Retirement and Related Benefits Fellowship Applications

Time allowed: Three hours and twenty minutes (which includes five minutes for downloading and uploading your answer document)

Total marks: 100

INSTRUCTIONS TO THE CANDIDATE

1. Ensure that you are logged in and authenticated through Examity before you attempt the examination.
2. The question paper is only available in the ASSA Exam Platform as a PDF download and **may not be printed**. Copy/paste of questions or parts thereof is allowed from the question paper to your Word answer document only.
3. **Download** the Word **answer document template** from the ASSA Exam Platform. Save this Word answer document on your desktop using your **Candidate Number as filename**. You are required to submit your answers in Word format **ONLY** using this document. No answers in any other format (e.g., handwritten) will be accepted. Save work regularly.
4. Ensure that your Candidate Number appears in the “header” of your Word answer document. [Double-click on the header at the top of the Word document, input your Candidate Number only in the header, then press “Esc” to close the header.] **Do not use your name or member number anywhere in your Word answer document.**
5. You may not access any file from your computer, use any other computer program (e.g., Email or Excel), or open any other browser during the examination. The use of Grammarly and Grammarly Premium or similar add-ins are also not permitted in examinations. Microsoft spellcheck is allowed.
6. You may not use any other material (e.g., a Formulae and Tables book) during the examination. Any such information that may be required will be provided to you within the examination.
7. You are strongly encouraged to use the first 15 minutes as reading time only, however, you may start answering the paper whenever you are ready.
8. Mark allocations are shown in brackets.
9. Attempt all questions.
10. Show calculations where appropriate. You may use blank paper to carry out rough work calculations. You may use a calculator from the ASSA-approved list only.
11. Upload your Word answer document only into the ASSA Exam Platform. Once you have uploaded your document, you must click on **Finish Attempt** to save your document. You will still be allowed to go back and make changes (**Review Attempt**) if you have time.
12. Once you are satisfied with your uploaded document, click **Finish attempt** and **Finish all and Submit**. Once you have submitted you will not be able to make any changes.
13. **You must submit your Word answer document BEFORE the end of the allotted examination time.** You must stop writing and start uploading during the last five minutes. Take this into account when planning your review and submission. There will be no time announcements.

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.

END OF INSTRUCTIONS

QUESTION 1

Fund Y is a defined contribution pension fund with R40bn in assets. R36bn of the assets are invested directly by the Fund Y's investment team and R4bn are invested through external investment managers. The latter includes the money market investments.

Included in the R36bn invested directly by Fund Y are investments in unlisted equity and unlisted debt of about R5bn.

Fund Y is administered by its own staff and uses a monthly investment return to update member's Fund Credits. Members have the option of investing in a High Equity Portfolio (the default portfolio), a Low Equity Portfolio and a Money Market Portfolio.

A Trustee has asked if Fund Y should be administered on daily unit price basis instead of the current monthly interest rate basis.

- i. Discuss the points you would make in response to the Trustee's question.

[11]

Another Trustee has questioned whether unlisted investments are appropriate investments for a retirement fund.

- ii. Explain the investment characteristics of unlisted debt and unlisted equity, in the context of retirement funds in general.

[6]

The Low Equity Portfolio is made up of an externally managed portfolio (Portfolio A) and a directly managed portfolio (Portfolio B). The portfolio statements for the month of May 2024 are as follows:

Portfolio A

Transaction	Date	Rand value	Unit Price (Rands)	Units
Opening Balance	01-May-24	241 323 100	2 305.61	104 667.7886
Investment	03-May-24	70 000 000	2 501.23	27 986.2308
Investment fee	31-May-24	- 194 746	2 410.34	- 80.7961
Closing Balance	31-May-24	319 546 543	2 410.34	132 573.2233

Portfolio B

Transaction	Date	Rand value
Opening Balance	30-Apr-24	865 100 201
Investment	03-May-24	32 000 000
Disinvestment	21-May-24	- 56 000 000
Closing Balance	31-May-24	838 602 303

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- iii. Determine the monthly return for May 2024 for each of Portfolio A, Portfolio B and the Low Equity Portfolio. State any assumptions you make.

[5]

A Trustee has noted that the monthly investment fact sheet produced by the investment manager of Portfolio A states that the investment return for May 2024 was 4.54%. The Trustee has queried why this return differs from your calculated value.

- iv. Set out a reconciliation of the calculated and the stated investment return for Portfolio A. Comment on your results.

[5]

Fund Y has recently undertaken an analysis of its investment management costs. The cost of the internally managed portfolios is about 10 basis points. The cost for the externally managed money market portfolio is 25 basis points and the cost of the remaining externally managed portfolios is 50 basis points. The resulting investment management costs for the 3 investment options offered to members are:

High Equity Portfolio	12 basis points
Low Equity Portfolio	25 basis points
Money Market Portfolio	25 basis points

The Trustees are concerned that the investment management charge is higher for a money market investment than for a high equity investment. They have asked for your views on this.

- v. Set out the points you would make to the Trustees and provide suggestions on how to alter the cost structure.

[11]

[Total 38]

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QUESTION 2

- i. Outline the purpose of benefit projections in the context of a retirement fund.

[3]

In 2020 the FSCA issued a draft conduct standard titled “Communication of Benefit Projections to Members of Pensions Funds”.

- ii. Outline the proposed requirements set out in the draft.

[3]

- iii. List the requirements set out in the draft with regards to the methodology to be used for projections in a defined contribution fund.

[4]

A 30-year-old member of a defined contribution fund retirement fund currently earns R300 000 per annum. The member has received a benefit projection of a lump sum of R20m at retirement at age 65. This includes future expected contributions accumulated to retirement and is calculated using an assumed rate of inflation of 5% p.a. and salary increases of inflation plus 2%. The member has asked you to help her make sense of this projection.

- iv. Express this retirement projection in a way that will assist the member to understand it.

[4]

An individual’s financial outcome at and after retirement is driven by a number of factors. Not all these factors are within the individual’s control, but there are some factors that a member is entirely in control of or at least has some control of.

A middle-class member of an occupational defined contribution fund is planning to opt for a living annuity.

- v. Outline factors that will influence their retirement outcome, giving three factors for each of these categories:

- a. Within the individual’s control
- b. The individual does not control but has some influence
- c. Outside the individual’s control

[9]

[Total 23]

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QUESTION 3

Defined contribution funds are generally assumed to be simple funds with a member share account, accumulating the benefits due to a member based on contributions. However, a number of large defined contribution Funds have to manage a multitude of risks and use reserve accounts to do so.

- i. Describe six reserve accounts that may be required within a defined contribution fund and explain their purpose.

[14]

- ii. Explain how these reserve account balances could be set and how they could be managed over time.

[18]

A trustee has queried how the reserves would be set out in the Fund rules.

- iii. Draft the required Fund rules for one of these reserves.

[7]

[Total 39]

[Grand Total 100]

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END OF EXAMINATION