ACTUARIAL SOCIETY OF SOUTH AFRICA

EXAMINATION

12 May 2026 (am)

Subject F205 — Investment Fellowship Applications

Examination writing time: Three hours and fifteen minutes (includes reading time)

Upload time: Five minutes

[Total time on examination countdown timer: Three hours and twenty minutes]

Total marks: 100

INSTRUCTIONS TO THE CANDIDATE

Failure to adhere to any of these instructions could incur examination sanctions including disqualification from the examination.

1. *Your examination countdown timer reflects your TOTAL examination time. Reading and writing time is three hours and fifteen minutes.* ***You may NOT continue to write during the five minutes upload time as this could lead to disqualification from the examination.***

2. *The question paper is available on the ASSA Exam Platform as a PDF download only 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. *You may not access any file from your computer, use any other computer software (e.g., Email or Excel), or open or use any other browser, collaboration tools or AI tools, including those embedded in MS Word and Adobe AI assistant (e.g. Copilot, ChatGPT etc.) during the examination. Embedded AI tools must be disabled. You may not use Grammarly, Grammarly Premium or similar built-in language and grammar tools which must also be disabled. Microsoft Word spellcheck is allowed.*

4. *Use only the Word answer template provided in your personal folder under the "Exam" icon on your desktop. The file has already been named using your candidate number. Please confirm that your candidate number matches the candidate number used in the file name. If there is any discrepancy, notify an invigilator immediately. Do not rename your file and do not create multiple versions.*

5. *Ensure that your* ***full Candidate Number*** *is entered 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. Your candidate number must be the only identifier used. Submissions that are incorrectly labelled or cannot be clearly identified by candidate number may not be marked and may result in forfeiture of the examination attempt.***

6. *You are required to submit your answers in Word format ONLY. No answers in any other format (e.g. handwritten) will be accepted. Save work regularly.*

7. *You are not permitted to bring any other material into the examination (e.g. a Formulae and Tables book). Any such information/material that may be required will be provided to you in the examination.*

8. *You are strongly encouraged to use the first fifteen minutes as reading time only, however, you may start answering the paper whenever you are ready.*

9. *Mark allocations are shown in brackets.*

10. *Attempt all questions, starting each on a new page (as provided for in the Word answer template).*

11. *Show calculations where appropriate. No materials may be used other than blank paper for calculations. Only calculators from the ASSA-approved list are permitted.*

12. *Upload a single version of your Word answer document only to the ASSA Exam Platform. Once uploaded, click* ***Finish Attempt.*** *You may still use* ***Return to attempt*** *to check that the correct version has been uploaded, provided you have time remaining. When you are satisfied with your upload, you must click* ***Submit all and Finish*** *to complete your submission. After selecting this option, no further changes can be made.*

13. *Candidates are responsible for ensuring that the correct content is uploaded for submission of their examination, that their answer script is successfully uploaded and submitted, and that it complies with the prescribed format, file size and submission location as communicated by ASSA. Submissions must be made via the examination platform. However, in the event of technical issues affecting the uploading of scripts to the platform, candidates may submit via the Incident Form. ASSA will not retrieve, replace or amend answer scripts where incorrect, incomplete or unintended versions are uploaded, where a script is not successfully uploaded or submitted via either the examination platform or the Incident Form within the stipulated timeframes (immediately in the case of an upload issue), or where candidates subsequently notify ASSA after the conclusion of the examination session that an incorrect file was submitted. Please note that candidates must both attempt and successfully submit their examination for it to be considered valid. Any attempt that is not successfully submitted in accordance with the above requirements will be regarded as incomplete and therefore invalid and will not be marked.*

14. ***You must submit your Word answer document onto the ASSA Exam Platform BEFORE the time on your examination countdown timer runs out.***

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. The onus remains on you to read and implement all examination instructions.

END OF INSTRUCTIONS

QUESTION 1

A South African company has the following balance sheet as at 31 December 2025:

	R'm
Property, Plant and Equipment	300
Inventory	100
Trade and Other Receivables	150
Cash and Cash Equivalents	50
TOTAL ASSETS	**600**
Long Term Loans	100
PRMA Obligation	350
Trade and Other Payables	100
TOTAL LIABILITIES	**550**

Included in the R150 million trade receivables figure is an amount of US$5 million payable by a large US company in 2 years' time. An activist shareholder has argued that the company's exposure to foreign exchange risk on this receivable should be hedged.

i. Discuss the merits of hedging this foreign exchange risk, including any inherent hedging that might already exist.

[3]

ii. Explain how the company could create a foreign exchange hedge by borrowing and estimate the cost of this hedge assuming the USD / ZAR exchange rate does not change over the period.

[4]

iii. Describe two derivative-based hedging strategies that could be used to minimise the foreign exchange risk, highlighting the pros and cons of each strategy.

[5]

REMEMBER TO SAVE

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A shareholder has suggested that the company could improve its valuation by outsourcing its PRMA liability to an insurance company.

[Note: PRMA stands for "Post Retirement Medical Aid", an obligation the company has to pay medical aid contributions on behalf of its employees during retirement.]

You have been asked to compile a report to assist the management team to make a decision about whether to outsource the PRMA liability.

iv. Outline the factors you would mention in your report, including the reasons for and against outsourcing, the important considerations and the potential impact on the company's valuation. [9]

v. Outline the practical challenges that the company might encounter in purchasing a PRMA policy from an insurer. [3]

vi. Outline how the insurer might formulate its investment strategy to match the PRMA liabilities under the policy it issues, including suitable assets to use in the investment strategy. [5]

To reduce the insurance premium payable by the company, the insurer has proposed the following strategy:

- A level annuity is purchased immediately to cover the current level of PRMA payments for existing pensioners.
- The remainder of the assets allocated to the policy are to be invested in a growth portfolio, which will be drawn upon to purchase additional level annuities each year in line with the annual increase in medical aid scheme payments.

vii. Discuss the merits and challenges of this suggestion and outline an appropriate investment strategy for the growth portfolio. [7]

[Total 36]

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QUESTION 2

Over the past year, the South African equity market has undergone a notable structural shift. Driven by record-high gold prices and a recovery in platinum group metals (PGM) prices, the precious metals sector weighting in the FTSE/JSE All Share Index (ALSI) has increased from approximately 10% at the end of 2024 to around 25% at the end of 2025.

You are the lead investment consultant to ABC Life Insurance Company (ABC), a large South African insurer managing a significant book of smoothed bonus funds. ABC's smoothed bonus funds have a strategic asset allocation benchmark with 50% allocated to South African equities (benchmarked against the ALSI). ABC's chief actuary has inquired about the sharp moves in precious metal prices and their implications for the business.

i. Outline the possible reasons behind the recent significant increases in the prices of precious metals.

[4]

ii. Explain the potential effects of a sustained elevated price environment for precious metals on the South African economy in general and how this might specifically impact the rand, inflation and interest rates.

[5]

ABC's chief actuary has expressed concern regarding the impact of this sectoral shift on the smoothed bonus funds, particularly given that ABC's investment managers have maintained benchmark weights to precious metals companies throughout this period.

iii. Discuss the challenges this increased equity market concentration poses to ABC's bonus declaration process/philosophy and solvency capital requirements.

[6]

To mitigate concentration risk, the chief actuary has suggested changing the SA equity benchmark from ALSI to an alternative index. Two alternative indices, FTSE/JSE Equally Weighted Top 40 index and FTSE/JSE RAFI 40 index, have been proposed.

[Note: The RAFI 40 index is designed to reflect the top 40 companies from the ALSI, ranked and weighted by fundamental economic size rather than market capitalisation. Constituent weights are capped at 10% at each quarterly review.]

iv. Assess the appropriateness and practical implications of changing the SA equity benchmark to either of the suggested alternative indices (assess both alternative indices in your answer).

[8]

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The product development team at ABC wants to launch a retail structured product that allows individual savers to participate in the precious metals boom while protecting their capital. The proposed product has a 5-year term and offers 100% capital protection at maturity, while providing a fixed percentage (participation rate) of any increase in the FTSE/JSE Precious Metals Index. ABC's marketing team has advised that a participation rate of less than 80% will not be competitive in the current market.

Additional information:

- 5-year at-the-money call options on a precious metals basket cost 42% of notional.
- 5-year at-the-money put options on a precious metals basket cost 52% of notional.

v. Describe how this product might be structured and calculate the maximum participation rate ABC could offer together with 100% capital protection, stating any assumptions made.

[5]

vi. Discuss ways in which the participation rate could be increased to make the structured product more competitive.

[4]

vii. Outline the main risks ABC would face in offering this product and how these risks might be managed.

[4]

[Total 36]

REMEMBER TO SAVE

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QUESTION 3

You have been engaged to advise a retirement village, Old Folks Village, on the formulation of its investment strategy. The village operates under a life-rights model, whereby residents purchase the right to occupy a home for the duration of their lives. Upon the death of the last surviving spouse, 75% of the original purchase price is refunded to the deceased resident's estate.

The Old Folks Village consists of 60 homes and the current profile of residents is as follows:

Resident / Owner	Number of homes	Average original purchase price	Average ages of homeowners
Single female	20	R2m	81
Single male	6	R2.5m	83
Couple	34	R3m	Males: 80 Females: 78

The Old Folks Village has an investment fund that is used to cover maintenance and repairs to homes, supplement the running costs of the retirement village and pay out life-rights when due. The proceeds of future resales of home life-rights are added to the investment fund.

The Old Folks Village is not tax-exempt.

The current value of the investment fund is R38m, split between two investment accounts:

Account	**Balanced portfolio**	**Money market**
Value	R34m	R4m
Description	This account receives proceeds of resales of home life-rights and pays out life-rights refunds. Managed by a private stockbroking firm that manages the local equity component and allocates other asset classes (offshore and South African fixed income) to unit trusts, managed by affiliates within the broader financial services group.	This account is used to cover running costs and maintenance and repairs to homes as required. Topped up by transfers from the balanced portfolio.
Return target / benchmark	Return target: CPI+4% p.a. Composite benchmark: 40% FTSE/JSE Capped ALSI 30% MSCI World 15% All Bond 5% Barclays Global Aggregate 10% STeFI Composite	STeFI Composite.
Fees (incl. VAT)	0.6% p.a. plus performance fee of 5% of capital growth (realised and unrealised), applicable only to the assets managed directly i.e. not the unit trusts. Unit trust fees apply to the assets allocated to these.	0.25% p.a.

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i. Describe the Old Folks Village's liabilities, including an estimated present value, and outline potential risks that might impact on the value of liabilities. Comment on whether the investment fund is sufficient in relation to the estimated liabilities.

[7]

ii. Discuss the appropriateness of the current investment strategy, return target, composite benchmark and fee structure for the Old Folks Village's investment fund.

[6]

Following concerns about poor performance of the balanced portfolio, the management committee identified four unit trusts from the Multi Asset High Equity category as potential competitors. Their returns were compared to returns from the investment manager's monthly investment report, which states that returns are net of fees and tax.

Returns to 31 December 2025	**1 year**	**3-years p.a.**	**5-years p.a.**
Old Folks Village Balanced portfolio	14.1%	13.6%	11.8%
Unit Trust A (passive)	22.7%	16.8%	14.8%
Unit Trust B (active)	19.5%	16.5%	13.5%
Unit Trust C (active)	24.0%	15.6%	15.0%
Unit Trust D (active)	21.9%	17.6%	14.5%
Median of Multi Asset High Equity category	19.3%	15.0%	12.8%

iii. Specify the type of tax most likely being referred to in the note in the investment manager's investment report, "returns are net of fees and tax" and estimate the quantum of the impact of this tax on the balanced portfolio's returns?

[2]

iv. Discuss the relevance of comparing the balanced portfolio's returns to these selected unit trusts.

[3]

The committee has obtained proposals from two financial advisors.

Advisor A proposal:

- Invest, via an investment platform, in a blend of unit trusts selected by the advisor, comprising active and passive SA equity, active and passive global equity, flexible SA fixed income, multi asset low equity and retail hedge funds.
- Fees: advice – 0.69% p.a.; platform – 0.15% p.a.; weighted average unit trust fee (TIC) – 1.4% p.a. (all incl. VAT)

Advisor B proposal:

- Invest in a multi-manager portfolio, with a target of CPI+4% p.a. and comprising three underlying managers of balanced mandates including offshore exposure.
- Fees: advice 0.575% p.a.; no platform fee applicable; portfolio management fee (TIC) of 1.05% p.a. (all incl. VAT)

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The committee has requested your advice on whether they should change their current strategy and, if so, to determine which of the two proposals to adopt.

v. Discuss the considerations that you would include in your advice to the committee.

[8]

Advisor A proposes that the investment strategy be Regulation 28 compliant.

vi. Comment on whether this is required or advisable for the Old Folks Village's investment strategy.

[2]

[Total 28]

[Grand Total 100]

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END OF EXAMINATION

