Actuarial Society of South Africa

EXAMINATION

12 May 2026

Subject F201 – Health and Care

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.***

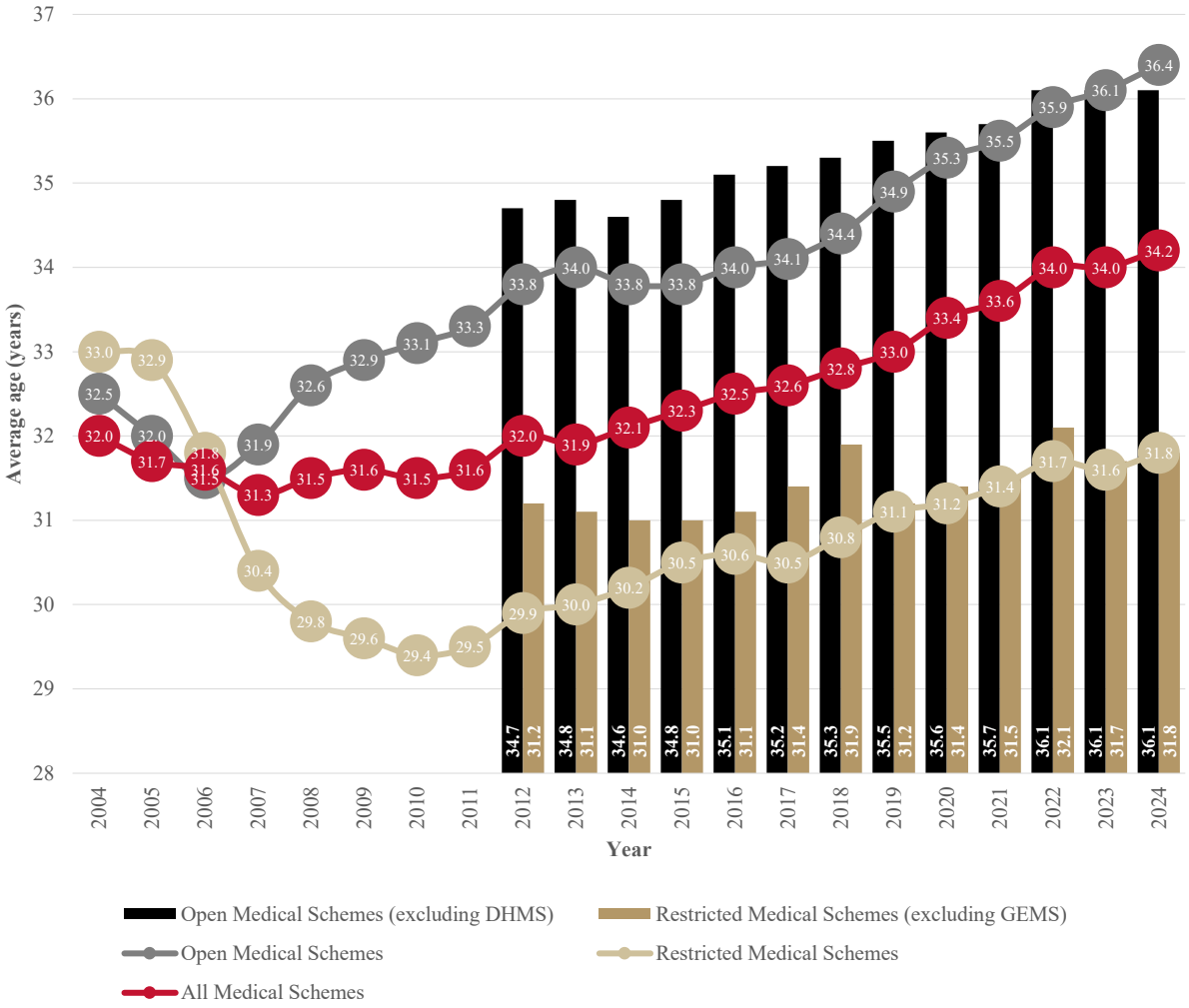
Note: The Actuarial Society of South Africa will not be held responsible for loss of data where candidates have not followed instructions as set out above. The onus remains on you to read and implement all examination instructions.

END OF INSTRUCTIONS

QUESTION 1

The Council for Medical Schemes Annual Report shows that the average age of beneficiaries covered by medical schemes increased to 34.2 years as of 2024, as illustrated in ***Figure 1*** below.

Figure 1: *Average Age of Beneficiaries (2004 – 2024)*



Source: *Council for Medical Schemes Annual Report 2024*

Figure 1 displays five metrics over time: three as line graphs and two as bar graphs. The black bars indicate the average beneficiary age per year for open medical schemes excluding the Discovery Health Medical Scheme (DHMS). The gold bars indicate the average beneficiary age per year for restricted medical schemes excluding the Government Employees Medical Scheme (GEMS).

Answer the following questions regarding the medical scheme beneficiary population and/or any relevant sub-populations or segments illustrated in ***Figure 1***, considering both the reporting period indicated in ***Figure 1*** and any subsequent timeframes.

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i. Identify three distinct **demographic trends** in the medical scheme population. For each trend, briefly explain:

- why the trend is occurring, and
- the impact of the trend on claims costs.

[6]

ii. Identify three distinct trends **unrelated to medical scheme demographics** that have impacted utilisation and claims costs. For each trend, briefly explain:

- how the trend increases healthcare utilisation, and
- how the trend leads to higher claims costs for medical schemes.

[6]

iii. Discuss the nature of anti-selection in medical schemes.

[4]

iv. Discuss how the following three proposals, coupled with standardised benefit packages, could have impacted the long-term cost of claims for medical schemes, had they been implemented:

- Risk equalisation;
- Mandatory membership; and
- Risk-based capital requirements.

[6]

Insurance products exempted under the demarcation regulations offer healthcare benefits and pricing structures that medical schemes cannot.

v. Discuss the nature of risk-rated premium structures for insurance products exempted under the demarcation regulations. In your discussion, include the following:

- how these products interact with medical scheme risk pooling, benefits and pricing; and
- how these products impact medical scheme risk pooling, benefits and pricing.

[8]

vi. Describe how the medical scheme environment and the healthcare insurance market could evolve over the next 5 to 10 years, if current healthcare industry trends (both demographic and non-demographic) persist and the current regulatory framework remains unchanged.

[10]

[Total 40]

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QUESTION 2

Several open medical schemes in South Africa have experienced a rapid growth in expenditure for cancer-related claims, placing pressure on scheme affordability and sustainability. This is partly driven by an increase in the prevalence of cancer claimants and the utilisation of new and high-cost cancer treatments.

You are part of the actuarial team advising a large open medical scheme. The scheme offers cancer-related benefits through the PMB entitlement and additional benefit option-specific cancer-related limits.

i. Discuss key factors contributing to the rise in cancer-related claims costs for a medical scheme.

[7]

ii. Outline the considerations relevant to actuarial projections when forecasting future cancer claims costs for this medical scheme, with reference to uncertainty about future treatments.

[8]

The Board of Trustees has asked that the scheme consider revising its cancer-related benefit design across all options, including changes to limits, reimbursement levels, designated service provider arrangements, and managed-care protocols to influence costs.

iii. Discuss the main actuarial considerations relevant to benefit design and member behaviour in this analysis.

[10]

A pharmaceutical company has launched a new cancer drug, *OncoLife*, reporting significantly improved survival outcomes compared to current therapies. The Trustees have requested that you evaluate the cost-effectiveness and affordability of funding this drug for scheme beneficiaries, given that it is significantly more expensive than existing alternatives.

iv. Describe how you would conduct an evaluation of *OncoLife* on behalf of the medical scheme. In your description, include the following:
    - the data requirements,
    - the modelling approaches, with specific references to the following methods:
        - Cost-effectiveness analysis
        - Cost-benefit analysis, and
        - Cost-utility analysis.
    - the basis for any assumptions.

[12]

v. Based on your answer to part (iv), discuss affordability considerations for both this medical scheme and the wider medical scheme industry when deciding whether and how to fund this drug.

[8]

[Total 45]

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QUESTION 3

The Board of Trustees of a small restricted medical scheme has approved and begun implementing a pricing strategy to achieve break-even at the gross healthcare result* for the current and next year.

Key features of the strategy:

- Contribution increases are higher than historical levels;
- The aim is to correct prior under-pricing;
- Excess reserves built up during COVID-19 are being reduced.

Other considerations:

- The sponsoring employer subsidises some members;
- The scheme is exploring amalgamation opportunities.

Discuss the implications of this pricing strategy and amalgamation intention for the scheme's investment and reserving strategy. In your answer, consider the effects on members and the sponsoring employer.

****Gross healthcare result** *refers to the scheme's total income from contributions minus the total amount paid out in claims and managed healthcare fees.*

[Total 15]

[Grand Total 100]

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END OF EXAMINATION