Actuarial Society of South Africa

EXAMINATION

17 May 2019

Subject F201 – Health and Care

Fellowship 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

The Elite Care Medical Scheme is an open Medical Scheme which struggled historically to retain young members - specifically those who have recently turned 21 years old. The Third-Party Administrator of the Elite Care Medical Scheme suggested 10 years ago to deliberately undercharge the contribution rates for young members (who have recently turned 21 years old) whose persistency was at risk due to their affordability constraints. This suggestion was motivated with the argument that these members' loss ratios are low at that stage in their life and does therefore not threaten the financial performance of the Medical Scheme. The Board of Trustees and Principal Officer of the Elite Care Medical Scheme at the time agreed to this strategic decision 10 years ago without any written agreements, and the Administrator proceeded to implement this decision accordingly.

Since this decision was implemented 10 years ago, the Board of Trustees and Principal Officer have been replaced with new incumbents. Upon evaluating the Scheme's financial performance, the new Board of Trustees noted that the Scheme's total contribution income raised was inadequate for the last 10 years (based on the prevailing contribution tables and the membership size and profile in this period). The new Board of Trustees proceeded to file a lawsuit (without the knowledge of the handshake agreement 10 years ago) against its Third-Party Administrator for an oversight in contribution collection over the last 10 years.

You are a Consulting Healthcare Actuary and you have been approached by this Third-Party Medical Scheme Administrator to perform an actuarial valuation of the financial loss or gain incurred by the Elite Care Medical Scheme as a result of the implemented strategic decision to deliberately undercharge young members for the benefit of an improved lapse experience. The intention of this actuarial valuation is to assist the settlement of the legal matter between the Administrator and the Medical Scheme.

Your role in this matter is limited to the actuarial valuation of the financial loss or gain due to this strategic decision. It is not your responsibility to prove whether the contributions were deliberately undercharged or negligently collected, or which party is at fault.

i. Briefly describe the grounds on which a medical scheme may discriminate and ways it may not unfairly discriminate against members for the purposes of determining contributions according to the Medical Schemes Act. [6]

ii. Outline the most common contribution table structures used by medical schemes. [6]

iii. Briefly outline the professional guidance framework(s) you would rely on for such an actuarial valuation. [5]

iv. Describe the data you would require to perform such an actuarial valuation. [7]

v. Explain how you would perform such an actuarial valuation. [10]

[Total: 34]

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QUESTION 2

i. Briefly explain what would need to be provided to the Boards of Trustees and to the Council for Medical Schemes (CMS) for the consideration of an amalgamation of two medical schemes. [8]

You are the Actuary to Big Consumer Medical Scheme. The Scheme has been approached by Drink Corp Medical Scheme with the desire to amalgamate. The proposed amalgamation would be effective 1 July 2020. It is currently December 2019.

Details of Big Consumer Medical Scheme (BCMS) include:

- A large open medical scheme with many benefit options (in excess of 10 options and efficiency discounted options)
- There are approximately 250,000 beneficiaries
- The scheme is financially sustainable with reserves in excess of 27% of gross annual contributions
- None of the options are income rated
- The benefits vary by option and include a range of Hospital only benefits, Comprehensive benefits and Above Threshold benefits
- The average age of the beneficiaries is 26 years
- The family ratio is 2.2
- The pensioner ratio is 5%

Details of Drink Corp Medical Scheme (DCMS) include:

- The scheme is a small restricted medical scheme
- There are approximately 7,000 beneficiaries
- The Scheme has a solvency level of 90%
- There are only 2 benefit options - the Higher Option and the Lower Option
- Details of the Higher Option include:
    - The Higher Option provides comprehensive benefits including hospitalisation (unlimited cover), extended chronic cover and 25% savings level.
    - The contributions are income banded, with two bands: R0 - R10,000; R10,001+
    - The average age of the option is 46 years, with a 10% pensioner ratio
    - The family ratio is 2.8
- Details of the Lower Option include:
    - The Lower Option provides basic benefits. These include hospitalisation, CDL chronic benefits and a "block benefit package" or out of hospital cover
    - The contributions are income banded, with three bands: R0 - R8,000; R8,001 - R10,000; R10,001+
    - This option has an average age of 25 years, with a 3% pensioner ratio
    - The family ratio is 1.7

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You have been provided with the following information for both medical schemes:

- The Annual Financial Statements for the past two years
- The detailed benefit guides for each benefit option
- Details of the current demographics of DCMS (splits by option, income band, age and gender)
- High level claim details (the overall Per Life Per Month claim amount values)
- The latest actuarial valuation reports

ii. Describe how you would assess the proposal for Big Consumer Medical Scheme and Drink Corp Medical Scheme to amalgamate. [20]

Following the initial review of the amalgamation, the Schemes approached their members to get approval. At that time, the main union representing the employees of Drink Corp (Federated Incorporation of Social Solidarity, FISS) objected to the amalgamation. They cited that the newly formed Scheme would result in a loss of control of the benefit design and running of the Scheme. Their main concern was that their members would now be subject to the dynamics of the open medical scheme and face larger contribution increases in the coming years.

iii. Discuss the actions that could be considered to assess and overcome the concerns raised. [8]

[Total: 36]

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QUESTION 3

RetireRite owns and operates retirement villages in South Africa. Individuals and couples with at least one person above the age of 60 years can purchase a property in the villages, residing until (last) death.

On last death, the property is automatically sold back to RetireRite for the equivalent of the purchase price allowing for an inflationary adjustment according to a pre-determined formula. The formula allows for life changes once the contract has been entered into, for example, marriage and divorce.

RetireRite makes specific medical services available to all residents:

- General practitioners (GPs) and nurses are hired by RetireRite to provide services to residents as and when needed. RetireRite charges residents on a fee for service basis for these services.
- GPs refer residents to medical specialists and tertiary care when needed which is not provided through RetireRite.
- RetireRite charges all residents a monthly levy to cover the operational costs of running the medical facility.
- Frail care services in support of activities of daily living are provided on a monthly capitation payment basis.

RetireRite is considering growth strategies to achieve full occupancy of its retirement villages. Based on interviews with current and prospective residents who identify their medical needs to be one of their highest priorities in retirement, they propose launching a package of medical services, called RiteCare. The package includes frail care services, the above medical services plus referred access to select medical specialists. The funding of the package will be done via a fixed percentage of the eventual sale price of the property on death.

You have been contracted by RetireRite as a Consulting Healthcare Actuary to review the RiteCare proposal for the initial establishment of it and its ongoing management. In doing so, you can assume that RetireRite have all relevant permissions for RiteCare to satisfy legislative and regulatory requirements.

i. Describe the considerations for the introduction of RiteCare to current and prospective residents. [10]

ii. Assess the funding model based on the percentage of the property value on death, with specific reference to the healthcare liabilities to be incurred by RetireRite. [5]

iii. Discuss the factors to be considered in setting the reserving strategy required to pre-fund the healthcare liability. [7]

iv. Outline the key features of an appropriate investment strategy for the RiteCare proposal. [8]

[Total: 30]

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END OF EXAMINATION

