Actuarial Society of South Africa

EXAMINATION

20 October 2022

Subject F201 – Health and Care

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. *You will be provided with a Word template within the ASSA Exam Platform to download and use to complete your questions. Submit your answers in Word format ONLY using the answer template provided. No uploads of answers (handwritten or otherwise) will be accepted.*

4. *Ensure that your candidate number appears in the Header of your Word template. [Double-click on the header, input your candidate number only, then press "Esc" to close the header.] <u>Do not use your name or member number anywhere in your answer document nor as file name</u>.*

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.*

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 approved list only.*

11. *Upload your Word answer document only into the ASSA Exam Platform. Once you have uploaded your file, 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.** 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

You are an actuary who has been requested to design and price a new product suite of Prepaid Global Fees to give patients certainty and transparency when planning for a surgery or medical procedure.

The target market is cash-paying patients who will pay upfront for this product and get peace of mind that the costs related to the procedure are covered. This product promises that there are no hidden fees, nor any out-of-pocket expenditure following the procedure.

The price of the product must include the costs related to the procedure – including the specialist and hospital costs, any prescribed medication and post-operative follow-up, if required. In the event of any related complications, those costs are covered by the Prepaid Global Fee too.

i. Discuss the features of the product's benefit design philosophy and how these might support demand for such a product.

[10]

ii. Describe the nature of the surgeries or medical procedures that could be considered for cover under such a product.

[10]

iii. Explain how you would determine a price for such a product that would satisfy the benefit design philosophy as discussed in part (i).

[15]

The outcome of the pricing exercise is that it is difficult to achieve affordable prices for certain procedures.

iv. Outline ways in which the price can be reduced to support affordability, stating any deviations from the benefit design philosophy from part (i) in doing so, in each case.

[15]

[Total 50]

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QUESTION 2

The following graphs are compiled with data from Statistics South Africa and the Council for Medical Schemes' annual reports.

Figure 1 - Medical scheme population as a percentage of total population by age and gender (2017)

Figure 2 - Distribution of restricted medical scheme population by age 2006 vs 2017

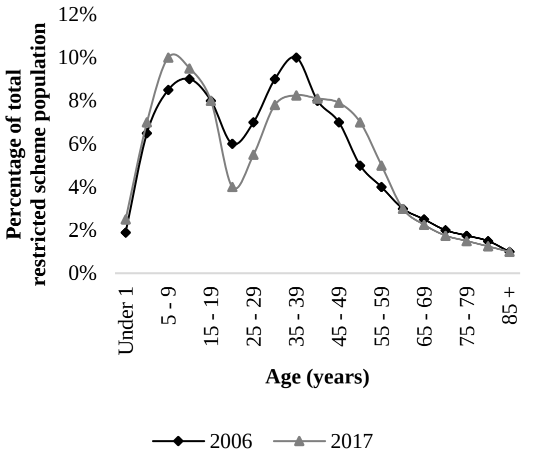
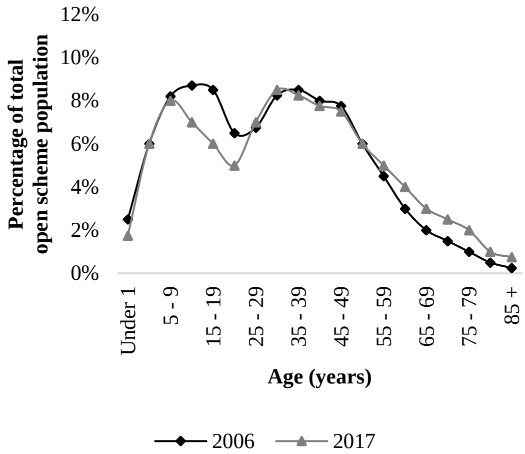


Figure 3 - Distribution of open medical scheme population by age 2006 vs 2017



i. Discuss, with reference to the graphs above, the extent and effects of anti-selection faced by the South African medical scheme industry. Define all terms used in your discussion.

[15]

ii. Outline the underwriting tools available for South African medical schemes to counter anti-selection.

[10]

iii. Explain the effectiveness of the underwriting tools outlined in part (ii). Include an explanation of how you would assess the effectiveness of each underwriting tool.

[12]

iv. Outline other ways - apart from underwriting currently allowed by regulation - to combat anti-selection.

[13]

[Total 50]
[Grand Total 100]

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END OF EXAMINATION

