

EXAMINATION

26 May 2014 (am)

Subject F201 – Health and Care Specialist Applications

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

- 1. Candidates will be issued with instructions to log-in using a password (which you will be provided with at the exam center).*
- 2. Candidates are required to submit their answers in Word format only using the template provided.*
- 3. Save your work continuously throughout the exam, on your computer's hard drive with which you have been provided.*
- 4. You have 15 minutes at the start of the examination 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 on exam papers.*
- 7. Attempt all questions, beginning your answer to each question on a new page.*
- 8. Candidates should show calculations where this is appropriate.*

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

Save your answers on the hard drive.

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.
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QUESTION 1

The island nation of Myst is an emerging economy that has experienced rapid growth as its agriculture-based economy has transformed into a manufacturing one.

Historically Myst has always had an effective and efficient healthcare system. Healthcare is provided free of charge to all citizens of Myst.

Mystian law stipulates that medical professionals may not be employed or provide services outside of the public healthcare system, where all healthcare workers are paid a fixed salary appropriate to their skill level.

The healthcare system is organised into districts, which are funded by an allocation from national tax income and aid grants from donor countries.

- (i) List and briefly describe the means the government may use to ration healthcare. [6]
- (ii) Describe the factors you would need to consider in order to calculate the resource requirements and resulting costs in each district for the next five years in order to maintain current service levels. List any assumptions you need to make and sources of information you would consult. [17]

Note: For the purposes of (ii) you may assume that the policy changes discussed in the remainder of this question are not being contemplated at this time.

Donor funding has been steadily decreasing in absolute terms as the per capita GDP has grown. Myst is finding that it cannot continue to provide healthcare that is free at the point of service for all citizens. The government is adopting a policy to change the way the system provides services. Primary healthcare will remain free. All other healthcare services will only be provided free of charge to impoverished citizens. Other citizens will be required to pay usage fees for the healthcare they receive.

- (iii) Describe the considerations that would be important for developing a usage fee schedule for public healthcare. [4]

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Myst is introducing a multi-payer insurance mechanism. Health insurance will be mandatory for all families whose combined income exceeds a regulated threshold. The system is set to launch on 1 January of next year. The delivery of healthcare remains unchanged and remuneration for healthcare services will be according to the usage fee schedule.

- (iv) Describe the characteristics of systems such as the one described above, and discuss its potential shortcomings. [10]

A limited number of companies have been granted licences to provide health insurance in Myst. Your employer has just won one of ten licences to provide health insurance under the system described above. The licence became available shortly before implementation of the system when one of the licensees withdrew from the market. Some of the other players have already published provisional details regarding their products, including premium rates, in an attempt to capture as much of the market as possible by the time the system launches on 1 January 2015.

All licensees have access to the same information including:

- State healthcare budget projections;
- Operational statistics such as numbers of procedures done, number of clinic visits, etc.
- The Mystian Department of Finance's report, which provides statistics about income tax payers.

You have been tasked with overseeing the development of a product offering.

- (v) Describe the factors you would incorporate into your product design and pricing for 1 January 2015. [30]

Total [67]

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QUESTION 2

MegaCorp is a financial service giant, formed through the merger of two companies, MoonSure and Fulcrum.

MoonSure's employees belong to the MoonSure Medical Aid Society (MoonMAS), a single option, restricted medical scheme reserved for the MoonSure employees and pensioners. MoonMAS has a pensioner ratio of 19% and an average beneficiary age of 54. Many MoonSure pensioners remain in MoonMAS due to MoonSure's contribution subsidy. MoonMAS contribution tables are income rated.

Fulcrum owns a medical scheme administration company that administers Fulmed, a large open medical scheme. Fulcrum employees are required to belong to Fulmed as part of their conditions of employment (unless they are proven dependants on another medical scheme). Fulmed has several options, ranging from low cost to comprehensive. Contributions are not income rated.

The CEO of Fulcrum's medical scheme administration company has approached the MegaCorp Board of Directors with a proposal to amalgamate MoonMAS into Fulmed, arguing that it will grow Fulmed while helping to standardise benefits for all MegaCorp employees.

- (i) List all the potential stakeholders in these two medical schemes. [8]
- (ii) Explain why a restricted medical scheme may have a different view on income band contribution rating compared to an open medical scheme. [5]

You are an independent consulting actuary who has been appointed by the MegaCorp Board of Directors to advise them on the proposal.

- (iii) Discuss how each of the stakeholders listed in (i) above that has an influence on the decision of whether to amalgamate or not is likely to view the proposal. [12]
- (iv) Describe the factors you need to consider in deciding whether you would recommend the proposed course of action. [8]

Total [33]

TOTAL 100

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END OF EXAMINATION