

# EXAMINATION

2 November 2012 (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 that 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 (these could be copied from Excel into Word).*

**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.***

<p><i>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.</i></p>
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## Question 1

JKL is a JSE listed company that currently has 8,000 active employees. JKL has been struggling financially due to difficult operating conditions and has just announced that it will be selling non-core business units with approximately 1,000 employees and retrenching approximately 20% of the remaining workforce.

J-Med is the restricted scheme for employees and pensioners of JKL and has approximately 12,000 principal members.

J-Med is self-administered. The principal officer and administrative staff are salaried employees of JKL, and the scheme is run out of JKL's offices. Presently JKL does not recover salary costs from J-Med, and office rental costs are charged at a favourable rate.

Membership is compulsory for all active JKL employees unless they can furnish proof of being registered as a dependent on a spouse's medical scheme. Active employees receive a generous fixed rand-amount subsidy, linked to wage increases.

Employees and pensioners who joined the company before 1 March 1995 are entitled to a 67% subsidy of their medical scheme contributions after retirement, subject to the following conditions:

- They must retire in the service of the company; and
- The subsidy is only payable as long as they remain members of the J-Med medical scheme.

No subsidy is payable after retirement unless both these conditions are met.

The medical scheme's financial results have deteriorated over the past few years, and the scheme is presently loss-making. The scheme's solvency margin amounted to 63% at the end of the previous financial year.

- (i) List the assumptions that an actuary needs to consider in order to perform a post-employment retirement subsidy valuation ("PRMA liability") in terms of IAS19. (6)
- (ii) Describe the factors you would consider in order to evaluate the sustainability of the scheme. (15)

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JKL expressed concern over the increasing levels of post-retirement subsidy liabilities that it has to reflect on its balance sheet. As a result, JKL's HR Director suggested that it should consider removing the condition of employment requiring employees to belong to J-Med. She argues that this move will not only increase the range of medical schemes and options available to employees, but it will also serve to allow employees to voluntarily participate in larger, more sustainable medical schemes which will assist in keeping future contributions, and hence the PRMA liability, under control.

- (iii) Outline how the proposed change is likely to impact on the employer's PRMA liability and state, with reasons, whether you agree or disagree with the suggestion. (7)

An alternative solution proposed by JKL is to "buy off" its PRMA liability by making a cash offer to each JKL employee or pensioner entitled to a post-employment subsidy. The financial director proposed offering each individual entitled to a subsidy a cash amount calculated as 80% of the portion of the PRMA liability attributable to him/her. Each individual will have the choice of accepting the cash offer, or rejecting it in which case the current subsidy entitlement will remain in place.

- (iv) Discuss the factors that current and former employees should consider in deciding whether or not to accept the cash offer. (7)

In response to the employer's suggestions, J-Med's Board of Trustees has convened a strategic session and established that, unless it will proceed doing business in its current form, it could embark on one of three alternative courses of action:

1. Liquidate the scheme
  2. Convert J-Med into an open scheme in order to retain members due to be lost through JKL's actions, and also to attract young and healthy members
  3. Amalgamate with an open medical scheme
- (v) Evaluate the potential impact of each of these three strategic options. You should consider the impact on the employer as well as the medical scheme and its members in your answer. (15)

**[TOTAL 50]**

## Question 2

You are an actuary employed by a large open medical scheme with several benefit options. Your scheme's brokers and tied agents insist that the scheme needs to enhance its offering by providing a wider range of options to consumers. The scheme's product development committee instructed you to investigate the possibility of a so-called "efficiency discount" structure, in which members in a particular option are entitled to pay a discounted monthly contribution if they choose to restrict freedom of choice to a designated service provider network which has been identified by the scheme on the basis of cost efficiency.

- (i) Discuss the regulatory provisions pertaining to the structuring of contributions, as well as considerations regarding a contribution discount of this nature. (4)

The scheme's Mega option offers relatively comprehensive benefits, including coverage for a number of non-CDL chronic conditions with a 10% co-payment. The option is presently in a breakeven position. This option has failed to attract new members over the past few years, and it has been suggested that, for this specific option, members that elect to receive chronic medication from a network of preferred pharmacies should qualify for a specified discounted contribution.

- (ii) Discuss the product design features that you need to consider when structuring an option of this nature. (8)
- (iii) Discuss the analyses that you would perform and the mechanisms that could be used to identify and establish a preferred provider network of cost-efficient pharmacies. (7)

The scheme's Principal Officer suggests that the scheme should nominate public sector facilities as the preferred provider for purposes of this structure. She argues that, amongst others, the state's ability to purchase drugs at lower prices than the private sector allows it to provide medication at more affordable rates. Members in the Mega option that elect to receive chronic medication from the public sector will then qualify for a discounted contribution.

The Principal Officer recently met with the Council of Medical Schemes (CMS) to discuss this proposal. In response, the CMS expressed concern that a product structure of this nature could result in indirect risk rating, and requested the scheme to prepare a submission to demonstrate that this is not the case.

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- (iv) Explain whether you agree with the CMS concern and outline the factors that you would consider in your response to the CMS. Your solution should also discuss the approach that you will follow to price the contribution discount. (15)

The Principal Officer expressed concern over the CMS response, and suggested that the scheme should rather register a new option. The new option will therefore be similar to the Mega option, but priced slightly lower and will provide chronic medication solely through a designated service provider network comprising public sector facilities.

- (v) Discuss the consequences of an “efficiency discount” compared to a separate option. (4)

**[TOTAL 38]**

### **Question 3**

A medical scheme has asked you for advice on its long-term solvency strategy.

- (i) Describe the factors you would take into account when advising the scheme on the appropriate level of capital it requires. (8)
- (ii) Explain what is meant by a risk-based capital approach, and discuss the advantages and disadvantages of risk-based capital. (4)

**[TOTAL 12]**