

INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

21st March 2018

Subject ST1 – Health and Care Insurance

Time allowed: Three Hours (14.45* – 18.00 Hours)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1. *Please read the instructions inside the cover page of answer booklet and instructions to examinees sent along with hall ticket carefully and follow without exception.*
2. ** You have 15 minutes at the start of the examination in which you are required 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.*
3. *You must not start writing your answers in the answer sheet until instructed to do so by the supervisor.*
4. *The answers are not expected to be any country or jurisdiction specific. However, if Examples/illustrations are required for any answer, the country or jurisdiction from which they are drawn should be mentioned.*
5. *Attempt all questions, beginning your answer to each question on a separate sheet.*
6. *Mark allocations are shown in brackets.*
7. *Please check if you have received complete Question paper and no page is missing. If so, kindly get a new set of Question paper from the Invigilator.*

AT THE END OF THE EXAMINATION

Please return your answer booklet and this question paper to the supervisor separately. You are not allowed to carry the question paper in any form with you.

- Q. 1)** You are the pricing and risk actuary of XYZ Health Insurance Company in India. The insurer has lately experienced an increase in applications from lives suffering from mental health conditions in respect of its Income Protection product.
- i)** Describe ways in which insurer XYZ can offer special terms under its Income Protection product. (3)
 - ii)** Discuss the suitability of each of the options for an applicant with mental health conditions. (6)
 - iii)** Describe the moratorium approach to underwriting. (2)
 - iv)** Discuss the advantages and disadvantages of using a moratorium approach instead of initial underwriting in this scenario of increased applications from lives suffering from mental health conditions. (5)
- [16]**
- Q. 2)** A Health Insurance Company is performing an analysis of persistency experience for its unit-linked products.
- i)** List the data and its subdivisions required for this analysis. (3)
 - ii)** Describe how the results of this persistency analysis might be used. (3)
 - iii)** Describe why the results of the current persistency analysis might not be useful in future. (4)
- [10]**
- Q. 3)** The Government of a developing nation wants to improve health insurance penetration in the country. XYZ Health Insurance Company is a growing health insurance company with a country-wide customer presence selling all types of health insurance products. XYZ has been approached to offer a wellness plan to the market to meet the objective of the Government.
- Under this plan, in addition to the sale of health insurance products, policyholders will be provided with health goals based on their initial health assessment. On achieving the goals, policyholders will be provided with benefits such as health vouchers, entertainment vouchers and premium discounts on renewal.
- i)** Discuss the benefits to the company of offering this wellness plan (3)
 - ii)** Discuss why the wellness plan might be attractive to potential policyholders. (3)
- [6]**
- Q. 4)** ABC is a growing Health Insurance Company selling PMI, IP and CI products through agents and own branches. In view of growing competition and higher commission demands by agents ABC is exploring various options to increase sales.
- In order to increase its market share, ABC is considering an exclusive deal with a leading supermarket chain with a country-wide presence for selling PMI products. The deal will be for a minimum period of 3 years. It is agreed with the supermarket chain that during the deal period the insurer will not enter into similar deals with any other supermarket chain.

The insurer's PMI products will be sold on the supermarket's website as well as in the stores of the supermarket chain. All customers entering the supermarket stores shall be provided with brochures of the PMI products. Customers wanting to buy from the supermarket website will be provided product details by email.

Purchase of an insurance policy can be made from the supermarket through any mode of payment, including redemption of loyalty points accumulated with supermarket. Simple underwriting shall be performed at sales stage with a short proposal form-cum-underwriting questionnaire. There will be full underwriting in cases of adverse replies in the proposal form-cum-underwriting questionnaire.

- i) Describe the possible advantages, disadvantages and risks to the insurer of this approach to increasing sales. (12)
 - ii) Suggest ways to reduce the risks highlighted in (i). (6)
- [18]**

Q. 5) The newly formed insurance regulator of a country wants to standardise the information available to the regulator relating to product development and pricing across health insurers operating in the country. They are looking at preparing standard application forms for different categories of health insurances which insurers will need to fill and submit to the regulator. Any sales of insurance products can take place only after specific approval by the regulator for each application.

- i) Describe the information that might be included in such an application form for Critical Illness products, with focus on the following areas:
 - a) General Information about Company and Product (2)
 - b) Approach to Underwriting (4)
 - c) Assumption Setting (8)
 - d) Determination of Profit Criterion (2)

A few years after the introduction and successful implementation of the application forms by the regulator, an international consulting firm plans to collect such information from leading insurers in the country with the purpose of making a comparative analysis for the benefit of the contributors of information.

- ii) Identify the potential challenges that may arise in data collection and in drawing conclusions from the information collected by the consulting firm. (4)
- [20]**

Q. 6) A medium sized Health Insurer in the Country of Actuarialia has experienced a sudden increase in claims outgo in its CI portfolio in last few years. The insurer currently does not have any claims administration system in place and the process of recording claims is largely manual.

- i) List possible reasons for increase in claims outgo in the CI portfolio. (4)

To address the rise in claims outgo and to automate the claims process, the Head of the Claims Department has put forward two proposals:

Proposal A: Purchasing and implementing a new claims administration system to enable detailed claims analytics for better claims management.

Proposal B: Introduce a tighter claims acceptance and management process.

ii) Explain how Proposal A may help in controlling claims cost. (5)

iii) Discuss the implications of Proposal B for the insurer. (5)

Preliminary investigations have revealed that part of this increase is due to a large number of old claims (IBNR Claims) being reported in past 12 months.

iv) Describe the possible reasons behind this sudden increase in the IBNR claims. (4)

v) Discuss possible steps the insurer may take to address this issue of sudden rise in IBNR claims. (2)

[20]

Q. 7) A large Health Insurance Company, which primarily sells PMI, IP and LTCI products, has an asset-liability management (ALM) strategy in place. The Chief Investment Officer, who has recently joined the company, has requested the Actuarial department for a briefing on suitable asset investments for the liabilities pertaining to the following products:

- PMI
- Income Protection
- Long Term Care Insurance

i) Describe, with reasons, the asset categories that would be suitable for each of the above products. (6)

Additionally, the CIO has asked for a brief report on the current ALM in place for the above products to help him arrive at a reasonable understanding of the ALM situation for the company.

ii) List the items and information that you would cover in the ALM report. (4)

[10]
