

INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

19th November 2020

Subject SA1 – Health and Care

Time allowed: 3 Hours 30 Minutes (14.30 - 18.00 Hours)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

- 1. Please read the instructions to examinees sent along with hall ticket carefully and follow without exception.*
- 2. The answers are expected to be India Specific application for the syllabus and corresponding core reading. However, substantially the core reading material is still taken from material supplied by Actuarial Education Company which is meant for UK Fellowship examination. The core reading also contains some material which is India Specific, mostly the IRDA regulation. In view of this, it should be noted that focal point of answers is expected to be India Specific application. However, if application specific to any other country is quoted in the answer the candidate should answer the question with reference to Indian environment.*
- 3. Mark allocations are shown in brackets.*

Q .1) A health insurance company has been writing predominantly Group medical reimbursement products. It has been observed that the financial results of the company have been quite volatile from one quarter to next in the recent couple of years.

i) Outline the possible reasons for the volatility (5)

ii) The company is having data and resource limitations to derive IBNR using traditional triangulation methods. Suggest an alternative reserving methodology for setting up IBNR in a manner that helps reduce such volatility in the financials while allowing for actual experience emerging to a reasonable extent. (6)

The Company is currently purchasing reinsurance on an Excess of Loss (XL) basis. The new Chief Risk Officer of the Company suggests that the company should change its reinsurance structure to Quota Share (QS).

iii) Comment on the suggestion. (5)

In order to increase health insurance penetration amongst employer-employee groups, the Chief Marketing Officer has suggested that a basic plan that provides restricted level of benefits and domestic treatments only and a top-up plan that allows for treatment overseas should be designed that rides on top of the basic plan. The employees (and dependents of employees) will thus have the option to top-up at their own cost while the employer pays just for the Basic Plan.

iv) Comment on the suggestion. (5)

v) Suggest with reasons a suitable design for the top-up plan. (7)

vi) Explain how you would arrive at a best estimate claims outgo for the top-up plan. (11)

Considering the outbreak of a recent pandemic, the Board of directors has advised that the management put in place a framework for assessing the impact of such pandemics on the company's solvency.

vii) Outline the additional risks and uncertainties faced by the Company due to the pandemic (9)

viii) Describe how to assess the impact of a pandemic on the company's regulatory solvency (9)
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Q .2) You are an actuary working with a standalone health insurance company. The products team has decided to design a product for covering expenses due to COVID 19. They are yet to decide whether it should be sold as a rider or a standalone product.

i) What aspects should be considered to decide whether the product should be sold as a rider or a standalone product (6)

The products team, after due consultation, has decided to have it as a standalone product. You have been asked to review the product design and pricing and provide your comments to the chief actuary.

ii) Discuss the aspects that you will consider in your review regarding the following:

- a) Product design (8)
- b) Pricing & Reserving (8)
- c) Underwriting and claims (8)
- d) Sales and marketing (8)

The Government is exploring ways to expand the treatment facilities for COVID 19 patients. In this regard, the Government has decided to bring a legislation whereby private hospitals will be asked to keep 10% of their available bed capacity for free treatment of patients suffering from COVID 19 who can't afford the cost of treatment. A Government agency will decide which patients fulfil the criteria and thus will get treated in these hospitals free of cost.

- iii) Discuss the impact of this new legislation on insurers selling health indemnity products. (5)

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