

# **INSTITUTE OF ACTUARIES OF INDIA**

## **EXAMINATIONS**

**25<sup>th</sup> March 2021**

**Subject SP1 – Health and Care**

**Time allowed: 3 Hours 30 Minutes (09.30 – 13.00 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 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.*
- 3. Mark allocations are shown in brackets.*

- Q .1)**
- i)** State the principles of Investment. (2)
  - ii)** Suggest with reasons the assets that Health and Care Insurer may choose to hold as a suitable match for outstanding claims reserves under private medical insurance cover. (2)
- [4]**
- Q .2)** XYZ Insurance Company is small sized and writes accelerated and stand alone in critical illness business.
- i)** Explain why initial underwriting should be used by the company for the purpose of risk management. (4)
- The company's current underwriting limit at which medical examination is triggered is in line with the industry. Marketing manager suggests that increasing the current medical limits substantially will help the company in significant reduction of underwriting costs and will also help in increasing the volumes of business.
- ii)** Discuss the factors to consider under this proposal. (8)
  - iii)** Explain why the insurer might want to reinsure part of the critical illness business. (5)
  - iv)** Discuss how the insurance company determines the retention limits. (4)
- The insurer has invited the quotes from several reinsurers for reinsurance arrangement.
- v)** Discuss the factors the company should consider while finalizing the reinsurer. (5)
- [26]**
- Q .3)** You are the valuation actuary of a well established health insurance company which writes Individual income protection & critical illness plans. In the last 3 years the sales to female population has increased significantly and the claims. The company is concerned about the increasing/worsening claims experience and decided to conduct a suitable investigation.
- i)** Explain briefly how you would conduct the mortality investigations. (4)
  - ii)** Describe how to ensure data used for investigation is appropriate. (7)
  - iii)** Suggest possible reasons and actions the company may consider in controlling the significant increase in claims for future. (4)
- [15]**
- Q .4)** You are the Chief Actuary of a health insurance company and CEO has asked you to assess the proposal of launching a cheaper version of CI product, which covers lesser number of illnesses compared to existing product with short form underwriting (i.e. underwriting based on health questionnaire) on policies with sum assured lower than 3 lacs.
- i)** List the items you can include in the health questionnaire. (2)
  - ii)** Discuss the factors you will take into account while assessing the above proposal. (10)
  - iii)** Further, discuss the merits and challenges associated with structuring the above product as tiered benefit CI. (8)
- [20]**

- Q .5)** You are an actuarial advisor with the insurance regulator, which has asked you to submit a report on the impact of ongoing COVID -19 crisis on health insurance. Discuss the factors you would include in your report pertaining to the following:
- i)** General business environment for health care insurance (5)
  - ii)** Product design and Underwriting (5)
  - iii)** Reserving (5)
- [15]**
- Q .6)** A health insurance company monitors its solvency position at the end of every quarter. CEO of the company is concerned about the solvency position and has asked Chief Actuary to estimate solvency position at the end of every month. The estimate suggests that company is unable to meet its regulatory minimum solvency margin in the current reporting month.
- i)** Suggest the possible reasons for the breach of regulatory minimum solvency margin. (5)
  - ii)** Discuss the possible course of action company may take to address this concern. (5)
- [10]**
- Q .7)** A newly established IT company wants to tie up with a leading health insurer to offer health insurance solutions customized to the needs of their employees.
- Discuss the needs of the employees and type of products which can be offered to meet them. **[10]**

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