

INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

10th March 2022

Subject SP1 – 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 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)** You are working in the product development team of a large health insurance company in India. Your team has designed a retail Health insurance product for High Net-worth Individuals (HNIs). The product is annually renewable and provides indemnity cover for In-patient hospitalization only outside India for major illness and medical evacuation through air ambulance.
- i)** List the factors which will influence the marketability of the product. (3)
 - ii)** Discuss six key risks of this product. (3)
 - iii)** Explain with rationale why the expense loading for direct expenses associated with this product is likely to be high? (6)
 - iv)** Discuss the usefulness of the following for the HNI product:
 - a)** Reinsurance. (3)
 - b)** Eligibility criteria and initial underwriting. (3)
- [18]**
- Q. 2)** List the elements of physical cashflow that you would expect to see in a profit test (pricing) model of the following contracts, identifying clearly which elements are income and which are outgo:
- i)** Regular premium conventional stand-alone critical illness policy. (2)
 - ii)** Unit-linked stand-alone critical illness policy. (2)
- [4]**
- Q. 3)**
- i)** List the factors that affect a health insurer's appetite for offsetting their risk with individual excess of loss reinsurance. (3)
 - ii)** XYZ reinsurer, has received a request to quote for individual excess of loss (XoL) cover for Retail indemnity health portfolio. The XoL cover is 10 lakhs in excess of 5 lakhs. Describe how this XoL cover could be priced. (6)
 - iii)** Prepare a report to present the performance of the reinsurance treaty to the board. List and discuss all the relevant factors that need to be covered in the report. (8)
 - iv)** XYZ reinsurer is considering opening its own insurance company in India. Discuss why XYZ might be considering this. (6)
- [23]**
- Q. 4)** You are working in a product development team and your team has recommended to file a new Critical illness Product to the Product Management Committee (PMC).
- The members of the Product Management Committee have following questions on your recommendations.
- i)** Outline the characteristics of an illness or condition that make it appropriate for inclusion in a critical illness product. (3)

The Chief Risk Officer of your company has shared a white paper mentioning strong link between long-term health effect of a very popular street food and a particular type of cancer.

ii) Explain how you would expect the impact of the street food on claims experience to vary between providers of critical illness cover. (4)

iii) Recommend risk mitigations to reduce the impact of this Street food on claims experience. (4)

[11]

Q. 5) Your Company has shortlisted a nursing service provider for “nursing at home” benefit under indemnity health insurance products. This benefit will be available only on cashless basis through the service provider. The marketing director is concerned that policyholders may react negatively to a limitation on their choice of facilities. She has suggested that policyholders be able to choose any facility but incur a co-payment for using facilities outside of the network.

Evaluate the two alternatives for the product design - Within Network vs. free choice with a co-payment. [6]

Q. 6) i) Define the following terms:

a) Continuation option (2.5)

b) Guaranteed insurability option (2.5)

ii) Outline the two different ways for valuing these above options. (5)

The Health Insurance Industry in the country of Indiana has observed a surge in the critical illness claims, due to an outbreak of pandemic. There has also been increase in the rejection of claims which is getting highlighted in the media. This has drawn attention of the regulator and a report from the industry, about the emerging situation including the allegation of declining the health claims, has been sought.

iii) List out the points that the industry will cover in the report. (10)

[20]

Q. 7) A health insurance company is planning to launch a new standalone critical illness product for the first time in the portfolio. The underwriter of the company has included this product in its manual.

i) List the information that shall be captured in the underwriting manual for this product. (5)

ii) The health insurance company has asked the information regarding family history of heart disease, cancer etc. Explain the reason for asking such information in the proposal form. (5)

iii) The Chief Distribution Officer of the company has asked for rate reduction of this product after 3 years of its launch, as the company has experienced very few claims. This may help the company to get an additional amount of new business. However, the Actuary is not very convinced for the reduction in premium rates of the portfolio. Outline the points to be covered in response to Chief Distribution Officer. (5)

iv) Describe the different types of reserves held to meet the liabilities of this portfolio. (3)

[18]
