INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

15th July 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) A health insurance company has sourced Group Hospital Daily Cash product through Micro Finance Institutes for all eligible members up to age 65 years and a flat premium is charged. There is no individual underwriting and there is an initial waiting period of 30 days for other than accidental hospitalization claims and a deductible of 2 days for all claims.

i) Discuss the key risks associated with this product offering. (7)

ii) Explain how these risks can be mitigated effectively. (5)

The product currently has a deductible of two days per hospitalization claim. The sales team have suggested that an alternative product that has a deductible of one day and doubles the daily benefit amount in case of hospitalization in emergency cases.

iii) Describe how you would price this product. (4)
[16]

Q. 2) A health insurer has a portfolio of lumpsum critical illness product covering common four critical conditions in the country. The Chief Distribution Officer has requested to consider an optional cover for increasing the sum insured by 10% per annum. This option can be exercised only at the time of every renewal without the need to provide any evidence of health at that time.

Suggest ways for the insurer to minimise its anti-selection risk for this proposed option. **[4]**

Q. 3) The following is a possible structure for the benefits under a dental plan.
For all eligible claims the insured agrees to co-pay 25% up to a maximum annual limit of ₹1,000 per policy year and the insurer will pay the remaining 75%. Once the insured have reached the maximum annual limit of his/her contribution, insurer will pay 100% of claims until the start of the next policy year.

State the advantages and disadvantages of this arrangement for the insured and the insurer compared with a plan that has a fixed benefit limit per claim. **[5]**

Q. 4) Your manager has said that having LTCI (Long Term Care Insurance) as an integrated rider on an IP (Income Protection) policy is not such a good product design as rider benefits on CI (Critical Illness) policies, whole of life insurance policies or PMI policies.

What are the risks to the insurer of offering LTCI as an integrated rider on an IP policy? **[4]**

Q. 5) You are working in the actuarial department of a large health insurance company. You have done an analysis on renewal rates across all products of the company. Basis that, you have concluded that renewal rates for the critical illness product are significantly lower as compared to other products. Also, renewal rates on all products have been reducing over time and average term of renewed portfolio is also reducing for all the products.

i) Discuss the risks for the insurer due to low renewal rates. (4)

ii) Explain the further investigations you would do to better understand the renewal experience for the critical illness product. (8)

iii) Suggest ways in which the renewal rates of the critical illness product can be improved. (9)
[21]

Q. 6) A large health insurance company, which is dominant in the market, sells only Individual long-term Income protection product. The shareholders want to disinvest a part of their stake in the market to raise additional capital, required for future growth of the company. The management has hired an independent actuarial consultant to calculate the market consistent embedded value, for the purpose of valuation of the company.

i) Discuss the different assumptions that will be made by the consultant for the purpose of calculation of embedded value. (10)

ii) Outline the cost of capital approach for the purpose of determination of risk margin for market consistent valuation. (5)

The consultant has observed that the company does not have any proper mechanism for capturing the data in the policy administration /claim system. The company has also outsourced many of its non-core activities to external vendors providing different services in the industry. The consultant has provided a list of recommendations along with the embedded value report for future enhancement/improvement in accuracy of the result.

iii) List the advantages and disadvantages of outsourcing. (5)

iv) What are the possible options available to the insurer to manage the risk, arising from outsourcing contracts? (5)

v) List out the possible recommendations provided by the consultant to the company. (5)

[30]

Q. 7) A health insurance company is selling Critical Illness (CI) policy in the market which provides a lump sum benefit on diagnosis of CI as specified in the terms and conditions of the policy. The claim experience of the company has been favourable over many years and therefore the portfolio has not been reinsured for a long time. The Reinsurance committee has assessed the risk and asked the actuarial department to find a suitable reinsurer for managing this business.

i) Describe the different asset class held by the insurer for managing the ALM risk in this portfolio. (5)

ii) Discuss the underwriting approach followed by the insurer for management of risk arising from this product. (5)

iii) List the factors to be considered for reinsurance arrangement of this product. (5)

iv) The company has noticed that the product is being mis-sold by the distributor, which is affecting the lapse experience of the portfolio.

Suggest the different steps that can be taken by the company to minimize the risk of mis-selling. (5)

[20]

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