

INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

19th November 2013

Subject SA1 – Health and Care Insurance

Time allowed: Three hours (14.45* - 18.00 Hrs)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1. *Please read the instructions on the front 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 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 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 are 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.*
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 new set of Question Paper from the Invigilator.*

AT THE END OF THE EXAMINATION

Please return your answer book and this question paper to the supervisor separately.

- Q. 1)**
- i)**
 - a)** Explain briefly, different ways in which premium rates can be loaded for policyholders at the time of renewal for a medical reimbursement policy? Give at least one example of any such structures that were found favourable with each of the life insurance and general insurance companies within the Indian insurance Industry in the recent past. (3)
 - b)** Under the recent regulatory changes proposed by IRDA for health insurance, it was suggested by the regulator that the insurer will have to give justification along with supporting documentations such as last three years' claim experience before revision of premiums for filed products, explain a few of the reasons for this approach by IRDA? (2)
 - ii)** A large standalone health insurance company is considering selling a portfolio of healthcare in territories other than India, what are the issues the company needs to consider before implementing its decision? (15)
- [20]**
- Q. 2)** ABC Insurance Company is considering a risk transfer strategy. Assume the role of risk officer for the company:
- i)** Discuss the ways in which reinsurance can be used to control risks (3)
 - ii)** Describe the **advantages** and **disadvantages** of Alternative Risk Transfer products. (7)
- [10]**
- Q. 3)**
- i)** The Chief Marketing Officer (CMO) of a general insurance company wants to introduce a new medical reimbursement health product. As an appointed actuary of the company, you are preparing for your meeting with the CMO:
 - a)** Describe a process for evaluating the need for a product. (2)
 - b)** Describe factors to be considered when establishing a network provider. (3)
 - c)** Describe measures for evaluation network performance. (3)
 - ii)** List factors to be considered when choosing lapse assumptions for pricing individual medical reimbursement insurance and describe characteristics for each factor that may have an impact on lapse rates. (5)
 - iii)** Group Health Insurance is used as a financial security tool by Employers to provide for their employees' healthcare needs. In the recent times, the change in lifestyle and increasing medical costs has made it difficult for Employers to keep pace with the galloping medical insurance premium bill to provide for this responsibility.

As a group health actuary, you have to describe the key challenges that are faced by the employers and how these can be dealt with through the help of your company's initiatives to the group sales head. (7)
- [20]**

Q. 4) XYZ General Insurance Company is in the process of launching a retail pure indemnity health insurance product with SI of Rs 5,00,000/- per policy with no individual rating factors. Only one life can be insured in one policy. It estimated the following regarding this product for the next one year from the date of its launch:

- Annual frequency of claim will be 10% per policy.
 - Severity of the claim will be Rs. 30,000/-
 - It plans to sell policies through agency, brokers and also direct sales force. As per the estimate of marketing department agency will contribute 50% of the total business and will be paid commission @ 10%. Brokers will contribute 30% of the business and will get brokerage @ 12%. The balance of the business will be sourced by direct sales force and there will be no variable cost involved.
 - Amortized annual cost for underwriting and policy setup are Rs. 200/- per policy.
 - Claim handling expenses are 5% of total claim outgo.
 - Company follows a practice of charging 6% Management Cost for various overheads. The percentage is applied on total claim outgo including claims expenses and underwriting and policy set up cost.
 - XYZ General Insurance Company has a profit target of 4% of total premium from this product in the first year which takes care of cost of capital and investment income.
 - Service tax on premium is 12% and surcharge on service tax is 3%.
- i)** You are requested to arrive at per policy premium to be charged including service tax for this product in the first year ignoring any other information not given in the question. (12)
- ii)** Assuming that the Company is able to sell 50,000 policies in the first year, prepare a brief table giving total inflows and outflows on various accounts verifying your answer in point (i). (6)
- iii)** Just before the product launch marketing team feels that we may have to spend extra Rs. 50 Lac on the promotion of this product in the first year to make it a success. XYZ General Insurance decides to forgo the profit from this product in the first year on account of the new expense items but feels that it must not make loss either. How many policies it must sell in order to break even in the first year of product launch considering the expense of business promotion and other details given in the question provided that the premium you arrive at in point (i) holds good. (7)

[25]

- Q. 5)** ABC Health Insurance Company Limited is a Standalone Health Insurance Company dealing in health insurance products allowed in India.
- i)** Please give description of the major heads of Assets and Liabilities of ABC Co. giving their nature? (10)
 - ii)** What do you understand by matching Assets and Liabilities by duration? (4)
 - iii)** Is it essential for ABC Co. to match its Assets and Liabilities by duration? (2)
 - iv)** What are the implications if the Assets and Liabilities are:
 - a)** Exactly matched by duration
 - b)** Not matched by duration (4)
 - v)** What can be an alternative tool to matching Assets and Liabilities by duration which can help ABC Co. in controlling risk of mismatch in Assets and Liabilities? (5)

[25]
