INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

23rd November 2023

Subject SA2 – Life Insurance

Time allowed: 3 Hours 15 Minutes (14.45 - 18.00 Hours)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1. ***Please read the instructions inside the cover page of answer booklet and 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. ***Attempt all questions beginning your answer to each question on a separate sheet.***
4. ***Mark allocations are shown in brackets.***
5. ***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. You are not allowed to carry the question paper in any form with you.

Q. 1) A medium sized life insurance company operating in India for last 2 decades has recently started selling an individual conventional participating savings endowment plan more aggressively apart from other retail products.

i) State all the typical product design requirements applicable for this product to ensure the product is compliant with all regulatory provisions, applicable for open to new business products, in terms of structure, features and benefits. (10)

Under the participating product, the company distributes surplus through regular (reversionary or cash) bonuses as well as terminal bonuses. The company has earned an investment return of 8% last year. However, the company declared a regular bonus lower than what was illustrated at the time of sale of product at 8% illustration.

ii) Discuss the various possible key reasons for declaring a lower bonus rate than what was shown in the illustration as well as its implications to various key stakeholders. (16)

The company is planning to write group credit life insurance for the first time where a single premium will be charged for the Sum Assured which is reducing and linked to the loan amount for the policy term equal to loan tenure. It pays a death benefit equal to Sum Assured at the time of death and no maturity benefit at the end of policy term in case life assured is alive. The company is pitching a bank to provide this product to its various loan holders as an insurance scheme.

iii) Discuss the various factors that will need to be considered to arrive at the mortality assumption for calculating the premium rates to be charged to bank loan holders under the scheme (note, you need to discuss only about the mortality assumption & not the other basis). (11)

The company is also planning to enter into immediate annuity space. For this, the company is planning to offer single premium guaranteed immediate annuity with various options (such as annuity for life/joint life, annuity with return of premium on death for single life/joint life). The company also plan to offer option of loan against the policy as well as surrender value in the policy.

iv) Discuss the possible key risks associated with offering loan and surrender value in the policy and the possible remedial actions to manage/mitigate such risks. (8)

[45]

Q. 2) A newly licensed life insurer is setting up their processes and IT system for starting its operations in India. The Insurer is planning to sell the following products:

- A conventional with-profit endowment product with regular annual bonuses payable either on death, surrender or maturity.
- An online term product.
- A long term critical illness product where in on diagnosis of one of the specified critical illness a defined amount is payable. The customer at the time of claim, has an option to take this amount either as a lump sum or a life annuity at the prevailing annuity rates.
- A unit linked surgical product where the policyholder will get paid a fixed sum assured for undergoing a surgery (from the list of approved surgeries). For all other

hospitalisations they are allowed to withdraw from the fund value, subject to certain annual limits. On death and maturity the fund value is paid to nominee/ policyholder and the contract is closed. There are two fund options under this product.

i) Discuss the various data validations that the Actuary can setup for the valuation data. Besides the general validations also discuss all the specific validations you would suggest for these two products:

- unit linked surgical product
- with- profits endowment product (13)

ii) Discuss the uses of capital and free assets for the new insurer. Also discuss how moving toward risk-based capital would help the insurer to optimize the capital management. (10)

The Investment committee is in the process of formulating its investment policy, you have been asked to give your recommendation on how to set up an appropriate investment policy.

iii) Discuss the various points you will cover in your presentation to the Investment committee. Also give special considerations that should be kept in mind during the asset selection for

- With-profits endowment product
- Long-term critical illness product (including for the claims paid as annuities) (10)

The insurer received a communication from the regulator that the reinsurance program that it has proposed results into an almost nil retention on online term and the surgical product and has suggested to review the retention limits.

iv) State the possible reasons for the insurer to have such low retention limits for the said products. (7)

v) The insurer increases the retention limit in line with the regulator's instructions.

i) Suggest how the insurer can re-negotiate the terms and conditions with the reinsurer in order to manage their risks better. (5)

ii) Suggest all the other risk management strategies (other than reinsurance) the insurer may adopt to manage this risk of increased retention limit. (10)

[55]

****