

INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

23rd March 2021

Subject SA2 – Life Insurance

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 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. Mark allocations are shown in brackets.*

Q. 1) You have spent 20 years in the Life Insurance industry of India and have worked in the areas of statutory reporting, shareholder reporting and experience analysis. You have recently been offered a position of ‘Appointed Actuary’ at a leading insurance company. Before you accept the offer, what are the various factors you should consider, assuming

i) You have never worked with the company before (5)

ii) Mention any additional considerations in case you have worked with the company before (3)

Assume you take up the role of the Appointed Actuary and the Company writes a mix of business under participating, non-participating, unit linked along with various health and non-health riders, on both Individual and Group platforms. As your first task, you are reviewing the reserves and solvency position of the Company.

iii) Please list down various regulatory requirements in the context of reserving and solvency calculations. (16)

iv) Recently, you became worried about the recent outbreak of Covid-19 in the country and its possible impact on the claims. Your worry has further increased with the impact visible in other parts of the world. Please explain how would you determine the likely impact of the pandemic and whether any additional reserves might be required. (8)

Your Company writes significant Par business and the interest rates have been falling consistently. You are worried that existing bonus rates might not be sustainable.

v) Considering the above, what should be your strategy in terms of bonus declaration and managing PRE. (10)

vi) What would be the role of WPC Committee in the given situation? (8)

[50]

Q. 2) A medium sized life insurance company is dealing in all kinds of individual life insurance products viz. unit linked, participating and non-participating products. The solvency ratio of the company is around 170%.

i) List the topics that must be covered within the Board-approved ALM policy as required under the IRDAI’s Circular on ALM. (5)

ii) Discuss all the risks the insurance company is exposed to from ALM perspective and the matrices available to manage those risks. (9)

The linked discontinuance fund of the insurance company has been growing significantly over the last couple of years. The investment strategy followed by the company under the linked discontinued fund is to invest in short duration Government bonds of say 1-2 years and in money market instruments.

iii) List the provisions that are mandated by the regulator to protect the interest of policyholders in Linked Discontinued fund. (2)

Under the current economic scenario of interest rate down, the company is able to earn 3.5% annualized return in the linked discontinued fund basis the current investment strategy.

- iv)** Discuss the factors to be considered while proposing the investment strategy to be followed for the linked discontinuance fund by investment team such that it meets the policyholder's obligations and at the same time maximize the return to shareholders from the fund. (6)

In participating fund of the company, the current equity exposure is around 7% of the total investments. The CFO of company has raised concerns around having such lower exposure to equity assets in participating fund and proposed to increase the equity exposure to 40% of the total investments in participating fund.

- v)** Discuss the implications of the proposal from CFO. (8)

The company's solvency position and embedded value is highly sensitive to interest rate movements in the economy.

- vi)** Comment, the likely reasons for higher sensitivity of solvency position to interest rate movements. (5)
- vii)** Discuss the measures that should be taken to reduce the interest rate sensitivity of the following, along with the residual risks post implementation of the proposals, if any.
- a)** Solvency position of the company (5)
- b)** Embedded Value of the company (4)
- viii)** Outline the key considerations to be adopted by the Appointed Actuary when setting the methodology and assumptions for interest rate in the statutory valuation of liabilities. (6)

[50]
