

# **INSTITUTE OF ACTUARIES OF INDIA**

## **EXAMINATIONS**

**2<sup>nd</sup> December 2022**

**Subject SP2 – Life Insurance**

**Time allowed: 3 Hours 15 Minutes (10.15 – 13.30 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 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. 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)** Moving forward, the worldwide implementation of IFRS 17 will likely result in massive changes in the insurance industry forever and it will vary from company to company. Discuss some of the challenges faced by insurance companies in the implementation of IFRS 17. [10]
- Q. 2)** A life insurance Company XYZ, after many years of writing the group and ULIP products is now considering outsourcing significant administration functions, customer services, including IT support and unit pricing, to a specialist administration company. The outsourcing contract would involve transferring administration to a new IT system. This contract would include functions that supports administration of new and existing business.
- i)** Describe the additional risks to which Company XYZ would be exposed by entering this outsourcing contract. (10)
- ii)** Discuss the control measures that the company could put in place to mitigate these risks. (15)  
[25]
- Q. 3)** In the year 2002, Mrs. ABC purchased a with profit endowment assurance policy with a Sum Assured of INR 5,00,000 from Company ABC.
- Mrs. XYZ also purchased a similar with profit endowment assurance policy with same Sum Assured from Company XYZ.
- Both paid the same annual premium. The guaranteed additions and reversionary bonuses declared over the past years were also the same. There were no cash bonus or survival benefits payable during the term. However, the maturity proceeds received by Mrs. ABC in 2022 was significantly higher than the maturity proceeds received by Mrs. XYZ.
- Discuss the possible reasons for difference between the maturity payments received by them. [15]
- Q. 4)**
- i)** List the main uses of data for actuarial analysis. (3)
- ii)** The Actuary of an established life insurance company has been having problems with data accuracy in their modelling work:
- a)** Describe the checks that they could make to test the data. (6)
- b)** Explain how these problems might affect the capital requirement of company. (2)  
[11]
- Q. 5)** The life insurance company sells a range of products. It's single premium unit linked product offers surrender value benefit at any time for full value of the units at the time of surrender less surrender penalty.
- The company is to introduce a new version of a unit linked product with an attaching guarantee. Under the terms of the guarantee, the surrender value on 5<sup>th</sup> and 7<sup>th</sup> policy anniversaries will be subject to minimum of the single premium paid.
- i)** Outline how the company could manage possible financial costs of the guarantee. (5)

- ii)** The company decided to adopt modernisation program with the aim to improve profitability and reduce running costs of operation. The company proposed to sell all existing products through its own website and not via broker and tied agents. Information will be provided to price comparison websites, which will be paid a fixed amount for each policy purchased.

Discuss the reasons why the company would sell its products over the internet vide price comparison site rather than through broker or tied agent. (4)

- iii)** Discuss how the insurance company can identify, manage and control its risks arising from sell of all existing products through its own website vide price comparison websites. Your answer should give a brief description of risk. (8)  
[17]

**Q. 6)**

- i)** The main role of regulator is to protect policyholders' interests and maintain confidence in financial system. The regulator is required to assess the effectiveness, relevance, suitability of regulations from time to time and examine its impact on insurance companies and pension schemes before implementing changes.

Explain possible reasons for which the insurance regulator in the country may want to review its regulations and supervisory practices from time to time. (6)

- ii)**
- a)** Outline what is meant by a "Management Box" in context of unit pricing. (1)
- b)** Describe the risks the insurer is exposed to in operating a management box system. (5)  
[12]

**Q. 7)**

- i)** Specify the requirements of data that can be used for monitoring the experience. (4)
- ii)** The actual expenses of the insurance company were higher than expected. Describe with examples how an insurance company can manage and control its expenses. (6)  
[10]

\*\*\*\*\*