INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

November 2025

CP1A - Actuarial Practice

Time allowed: 3 Hours 15 Minutes

Total Marks: 100

Q. 1) A life insurance company plans to introduce a Critical Illness (CI) rider alongside its Unit-Linked Insurance Plan (ULIP) to address the existing CI protection gap and enhance the product's appeal to a broader customer base. List and outline the data sources that can be used to establish Critical Illness (CI) claim incidence rates for this new rider. **[6]**

Q. 2) Government of India recently announced its intention to reduce the issuance of long-tenure government bonds, citing declining demand from institutional investors. As an Actuary at a major life insurance company with a substantial annuity and participating business portfolio,

Assess the potential implications of this policy shift from the perspective of the insurer, focusing on:

a) Investment strategy and asset-liability matching (8)

b) Pricing and capital management for long-term liabilities (8)

[16]

Q. 3) Reinsurance is a key component of an insurance company's risk management framework. State the primary purposes and benefits of reinsurance from the perspective of the insurer. **[6]**

Q. 4) Your company has a substantial portfolio of participating life insurance business. Following a period of higher-than-expected investment returns, the estate has grown significantly. Senior management is proposing to distribute majority of this surplus to existing policyholders through increased terminal bonuses, while reducing future bonus declarations.

As the Appointed Actuary, explain the key factors you would consider before advising on the appropriateness of this approach. **[7]**

Q. 5) Outline the key factors an insurer should consider when setting expense assumptions for product pricing and actuarial valuation purposes. **[5]**

Q. 6) XYZ Life is planning to migrate its policy administration system to a new cloud-based platform. The new system will support both in-force policies and new business processing, with the migration scheduled to take place over the next 1–2 years.

Explain the key actuarial considerations and potential risks that should be evaluated and addressed during this system migration. **[8]**

Q. 7) ABC General Insurance Company has a significant concentration of its property insurance portfolio in coastal regions. Climate change models project a material increase in the frequency and severity of cyclones in these areas over the next 20 years.

As an Actuary, outline the key steps the company should consider to effectively manage this evolving risk while continuing to underwrite business in these regions. **[7]**

Q. 8) List the following (no explanation necessary):

a) Primary metric used to track performance of an investment manager of a gold exchange traded fund (1)

b) Method to adjust for luck in timing of cashflows for investment managers while evaluating their performance (1)

c) Measure of when the sum of individual investment manager's benchmark does not equal to the total fund benchmark (1)

d) Framework in companies to minimize agency risk (1)

e) Method to select assets so they move consistently with liabilities (1)

f) The process of converting an illiquid asset into a tradable asset (1)

g) Return earned on the part of asset that is not required for provision for future liabilities (1)

h) Risk arising from the chosen benchmark not matching the actual liabilities (1)

i) Type of valuation which considers the immediate realizable value of assets (1)

j) What are the components remaining when risk free rate of return is subtracted from the required rate of return for bonds? (1)

[10]

Q. 9) Describe the key reasons why monitoring actual experience against assumptions is important for an insurance company. **[5]**

Q. 10) State the fundamental principles that actuaries should adhere to when delivering actuarial advice. **[5]**

Q. 11)

a) Explain how each of the four principal objectives of financial services regulation is typically achieved in practice. (8)

b) A recent study by an NGO revealed that GL Ltd, a publicly listed company, charges, on average, 1% higher interest rates on gold loans to individuals speaking a specific language compared to speakers of other languages. This finding has triggered widespread public backlash among the affected community and resulted in significant reputational damage to GL Ltd due to negative media coverage.

GL Ltd maintains that there was no intentional bias, stating that language was not explicitly used as an input in its pricing model. However, the company acknowledges that a combination of other variables may have acted as a proxy for language, unintentionally leading to discriminatory outcomes.

Discuss how regulatory intervention can help address and prevent such situations. (5)

[13]

Q. 12) Gio Life is planning to launch a new guaranteed annuity product in a market environment characterized by high-interest rate volatility. As a member of the actuarial project team responsible for developing the product model, describe the key considerations and steps you would take in designing the actuarial model, including the selection of appropriate methods and assumptions for pricing and risk assessment. **[12]**

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