INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

November 2025

CP1B - Actuarial Practice

Time allowed: 3 Hours 15 Minutes

Total Marks: 100

Q.1) IslandProtect Insurance Co. is the largest insurer in the small island nation. The country is developing and depends largely on tourism. There is also a significant proportion of the population engaged in agriculture. It writes property, motor, crop and group accident business, and because of the small market size, it holds a very high share of national insurance coverage.

a) Define catastrophe (cat) risk. (2)

b) Explain why catastrophe risks require a different approach for estimating premiums compared to attritional or large individual risks. (4)

c) Why is assessing cat risk particularly important for a small island country. (8)

d) Assess the importance of reinsurance for IslandProtect in this scenario. (4)

e) Under normal conditions, explain kinds of reinsurance agreements that you would recommend for IslandProtect's books of

i) Motor accidental damage (2)

ii) Motor third party liability (2)

iii) Property (residential, commercial and industrial) (4)

iv) Group accident business (2)

v) Crop insurance (2)

Recently, a very severe cyclone struck the island, causing devastation to homes, vehicles, and infrastructure. There were also significant fatalities and injuries.

IslandProtect has reinsurance protection, including catastrophe excess-of-loss treaties placed with global reinsurers. However, management is concerned that:

- The scale of claims may exceed treaty limits.
- Certain losses may not be covered (e.g. storm-surge damage under motor).
- Reinsurance recoveries may take months to arrive, creating liquidity strain.

As the dominant insurer, its financial distress could destabilise the wider economy. The government is under pressure to ensure quick claim payments for recovery and has convened a joint task force with the insurer and regulator.

f) Explain the impact of the cyclone on IslandProtect's

i) UW results (5)

ii) Reserving (5)

iii) Solvency position (5)

g) What could be potential limitations of reinsurance coverage that IslandProtect has? (5)

h) Discuss strategies IslandProtect and the government could adopt post-catastrophe to strengthen resilience of the insurance sector. (10)

[60]

Q.2) The Pension's regulator in a large rapidly growing country is considering reforms to its pension system. Currently, pension fund houses mainly offer a limited set of standardised options for pension fund investments. The regulator proposes to allow fund houses to design customised pension plans, with the stated aims of:

- Allowing individuals greater choice and flexibility in retirement planning.
- Encouraging industry growth through product innovation.
- Permitting higher fees to reflect more complex, value-added services.
- Targeting specific groups, such as women, gig-economy workers, and other underserved segments.
- Introducing risk-based investment solutions tailored to individual needs.

You are an actuary working with one of the largest pension fund managers. The Board has asked you to prepare a report on the implications of the proposed reforms.

a) Outline the potential benefits and risks to pension scheme members from this reform. (10)

b) Assess the implications for pension fund houses, including:

i) Product design and pricing (5)

ii) Operational complexity (5)

iii) Risk management. (5)

c) In this new environment, explain how investment planning could be carried out to meet diverse member needs while maintaining sound risk management. (5)

d) Evaluate the wider regulatory and systemic challenges if these reforms are implemented. (10)

[40]

****