INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

November 2026

SA3- General Insurance

Time allowed: 3 Hours 15 Minutes

Total Marks: 100

Q.1) BlueWood Company is a large growing general insurance company in India writing all classes of business. You are an actuary at this company.

Within BlueWood, a specialized underwriting manager runs a thriving motor portfolio that, in 2026, produced INR 7,450 crores of annual premium written at start of the year. All these policies have two-year exposures and the risk exposure increases in a discrete manner year on year.

The loss ratio for this business hit 100% for business written 2026. The reinsurance cession has been 35% of premiums.

For the niche portfolio, the leadership now wants to increase taxable profit in financial year 2027 by changing the underwriting and reinsurance strategy. Hence, in 2027, in BlueWood plans to implement all three changes simultaneously:

1. Reduce the loss ratio to 75% for new business written in 2027.
2. Double the premium volume and write policies that are one-year policies with a uniform risk profile over the policy period
3. Cut reinsurance cession by a half

With any necessary assumptions stated clearly:

i) Compare the direct loss ratio and the reinsurance financial year loss ratio experienced in 2026 vs. planned 2027, assuming all the above changes are implemented. **[12]**

ii) Calculate the impact of each of these changes on gross and net loss ratio implementing each change in isolation. **[6]**

iii) Identify which of the above change produces the largest impact on the 2027 results and why? Also, suggest ways in which this change can be achieved. **[7]**

BlueWood's advisors have cautioned the following:

- Do not slash reinsurance so drastically-it could destabilize the portfolio.

iv) In light of this, explain which factors influence BlueWood's appetite for reinsurance. **[10]**

[35 Marks]

Q.2) A large general insurance company, is reviewing its capital and reserving practices.

i) The CEO wants to reduce the risk-based capital calculated based on Tail VAR by half going forward. The CEO plans to achieve this goal by buying 50% quota share reinsurance on entire book of business. Explain why this goal will not be achieved by just increasing RI cession as suggested by the CEO. **[6]**

As the Head Actuary, you are tasked with evaluating the adequacy of case reserves for Motor Third party insurance in light of evolving litigation trends.

ii) How would you conduct a diagnostic exercise to assess whether the case reserves set by the claims team are appropriate, given the changes in litigation patterns over the years? **[6]**

iii) Why is it particularly concerning if case reserves for Motor Third Party are underestimated, whereas a slight overestimation is less problematic? **[10]**

iv) In reference to the Supreme Court judgment in Shishu Pal v. Surjeet (June 2026) regarding the valuation of unpaid domestic/care work by homemakers in motor accident claims: What was the key ruling, and what historic systematic issues prompted its introduction? **[3]**

v) How should you, as Head Actuary, respond to this judgment, and what ways would it impact the company going forward? **[6]**

[31 Marks]

Q.3)

i) What is the **Bima Sugam** platform introduced by the IRDAI? Explain the key benefits and potential operational/actuarial risks associated with this platform for an established general insurer. **[8]**

GoGet Insurance is a new company that has completed five years of operations. You are an actuary in this Company.

The Company is determined to expand its footprint in health insurance space and has been trying to launch new products. The Company has recently introduced a new product to address the critical need in prenatal care. While traditionally most products focus on delivery and post-natal treatment, this product centers on the protection of an unborn child during most delicate phase, inside the womb.

ii) Explain what coverage features could be included under such a product. **[4]**

iii) What is rating factor? What rating factors may be used to price such a product which would drive fair and sustainable pricing? **[4]**

iv) How can the actuarial control cycle be used to launch this product? **[10]**

In light of upcoming IND AS 117, the company wants to understand how discounting would impact claims liabilities under the new accounting standard.

v) Consider the following claims by loss year:

Loss Year	Paid Claims	Ultimate claims	Assumed Cumulative Claims payment pattern
2022	100	100	100%
2023	245	250	95%
2024	321	387	90%
2025	467	589	85%
2026	700	1050	70%

The forward yield curve as on 1st April 2027 for 15 years is as below:

Years	**Yield curve**
1	6.86%
2	6.85%
3	6.83%
4	6.81%

Years	Yield curve
5	6.80%
6	6.78%
7	6.79%
8	6.78%
9	6.77%
10	6.76%
11	6.75%
12	6.74%
13	6.75%
14	6.74%
15	6.73%

Stating the assumptions used, discuss the impact of discounting on claims reserves at 1st April 2027. **[8]**

[34 Marks]

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