INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

November 2025

SP2 - Life Insurance

Time allowed: 3 Hours 15 Minutes

Total Marks: 100

Q. 1) NKM Insurance manages one of the India's largest with-profits funds, where asset shares play a central role in setting bonuses and maintaining fairness between different generations of policyholders.

The fund has evolved over time — older cohorts (policies sold between 2005 and 2010) were managed with a lower equity exposure and more conservative investment mix, while newer cohorts (policies sold post-2018) have been invested more heavily in equities to enhance long-term returns.

Recently, the company has faced several challenges:

Investment volatility: The equity markets have delivered strong returns in the past few years but suffered losses in the most recent financial year.

Expense pressures: Substantial investments have been made to expand the agency channel, alongside rising distribution costs in semi-urban bancassurance business.

Experience issues:
Higher mortality rates than expected in semi-urban markets.
Lower persistency among younger cohorts, particularly for bank-sold policies.

Bonus policy: NKM Insurance aims to smooth payouts over time; however, policyholders and the media have increasingly questioned why declared returns appear lower than market indices.

As the Appointed Actuary, you are required to brief NKM Insurance's Board on how asset shares should be applied in managing the with-profits fund under these evolving circumstances.

a) Enlist the uses of asset shares in the management of with-profits business. (6)

b) Discuss how the following recent experience is likely to impact asset shares for NKM Insurance's endowment policies:

- **i)** Increased lapses in among younger less-risky cohorts, particularly for bank-sold policies. (4)
- **ii)** Higher mortality experience than expected in semi-urban policies. (3)
- **iii)** Rising distribution expenses. (3)

c) Comment on the risks of excessive smoothing in NKM Insurance's context of volatile equity returns. (4)

d) Evaluate how NKM Insurance should ensure fairness when comparing older cohorts (sold in 2005–2010 with lower equity exposure) with newer cohorts (post-2018, equity-heavy). (7)

e) You are preparing policyholder communication on bonuses. Draft bullet points in simple language such that policyholders can easily understand why declared bonuses may not fully reflect recent strong stock market gains. (5)

[32]

Q. 2) Recent GST reforms of exempting GST on premiums for individual life insurance products in India have significantly affected the taxation framework for life insurers. The government has not only restricted the ability of insurers to claim input tax credit (ITC) on key expenses such as commission, rent, marketing, IT services, and consultancy fees, but has also suggested that insurers should pass on the full benefit of any GST reduction to policyholders.

a) Explain why the loss of input tax credit is a concern for life insurers. (2)

b) Analyse the potential impact of increased expenses due to this change under the following lenses:

i) Profit and Loss account (4)

ii) Embedded Value (3)

iii) Competitiveness and strategic response (2)

[11]

Q. 3) A mid-sized life insurer is preparing its annual valuation. The appointed actuary discovers that in the past year, the company migrated policy administration from a legacy system to a new digital platform. During the migration, some inconsistencies were noted in policyholder dates of birth and premium payment records.

a) Explain why accurate policy data is critical for a life insurer's financial management and reporting. (4)

b) Suggest the types of data checks that should be carried out to ensure reliability of the company's policy data after the migration. (5)

[9]

Q. 4) ABC Life is considering launching a new retirement annuity product. The product shall have the following features:

- A guaranteed minimum annuity rate (GMAR) at vesting
- Allow customers to switch premiums between equity and debt funds during accumulation
- Be distributed primarily solely through a new digital platform
- Target the growing middle-class segment
- Relatively low-ticket sizes but high expected volumes

a) Discuss the key considerations for pricing this product, including setting assumptions and profit criteria. (11)

b) Discuss how the guaranteed minimum annuity rate will affect the company's reserving and capital requirements. (3)

c) Discuss strategic implications of launching this product via a digital platform. (2)

d) Comment on competitive positioning given the target market and product features. (3)

e) Identify and discuss the main risks the company faces from this product, including:
- Mortality/longevity risk
- Persistency risk
- Asset–liability mismatch (ALM) and investment risk
- Operational/distribution risk
- Reputational/regulatory risk

…. also discussing how each risk could be managed. (10)

[29]

Q. 5) A mid-sized life insurer is expanding its term assurance portfolio. The company's Board has asked the appointed actuary to review the reinsurance strategy.

a) Describe the main types of reinsurance contract that could be used for term assurance business. (5)

b) Outline the factors that the company should consider when determining its retention limits and choice of reinsurance structure. (6)

[11]

Q.6) An insurer writes conventional without-profits endowment policies. The Board has asked the actuary to review its surrender value basis.

a) State the principles that should be followed when determining surrender values for without-profits contracts. (5)

b) Discuss whether it would be reasonable to offer surrender values on immediate annuity contracts. (3)

[8]

****