INSURANCE EXAM · IC-01

IC-01 Principles of Insurance

Revision book

11	2	92
chapters	master tables	numbered sections

FREE SAMPLE: Chapter 1 of 11

CHAPTER 1

Introduction To Insurance

1.1 Pure vs speculative
1.2 Other risk groups
1.3 Risk management
1.4 Insurance contract
1.5 Law of Large Numbers
1.6 Need for insurance
1.7 Benefits

MUST KNOW

1. Insurance = formal loss sharing among many facing the same risk.
2. Risk (insurance) = possible adverse deviation from expected outcome causing financial loss.
3. **Pure risk:** loss / no loss, involuntary, insured. Speculative: profit / loss / no profit no loss, voluntary, not insured.
4. Risk management covers all risks; insurance only pure risks.
5. **Treatment:** avoidance, mitigation (prevention + reduction), transfer, retention.
6. Prevention cuts frequency; reduction cuts severity.
7. **Definition:** insurer, for premium, makes good the insured's loss from an insured peril.
8. **Law of Large Numbers:** published **1713** (Jakob Bernoulli, who died in **1705**); statistical, not physical.
9. **Compulsory:** Motor Vehicles Act (third party cover only; own damage optional), Environment Protection Act, Real Estate Regulation Act. Not Marine Insurance Act.

1.1 Pure vs speculative

Feature	Pure	Speculative
Outcome	Loss or no loss	Profit, loss, no profit no loss
Control	Outside	Within
Cover	Insured	Not insured
Choice	Involuntary	Conscious
Examples	Accident, death, illness, disasters, liability	Speculation, business, adventure

- **Speculative kinds:** demand, fashion, government policy, tax rates, interest rates, forex rates, competition.
- **Why not insured:** voluntary; profits not shared so premium too high; cannot be predicted; would stop enterprise.

TRAP

Loss of market by fashion change = speculative. Rioters, hackers, loss of profit after fire = pure.

1.2 Other risk groups

- **Fundamental (whole society:** flood, war, inflation) vs particular (one person or firm: fire, theft).
- **Static (no change needed:** fire, theft) vs dynamic (from change: technology, tastes).

- Financial (measurable in money) vs non-financial (not measurable).
- Natural calamities cannot be prevented; only loss reduced or financed.

1.3 Risk management

- **Steps:** identify, evaluate, treat.
- **Identify:** past losses and near misses, losses of similar firms, Risk Register.
- **Evaluate:** frequency (number of losses) and severity (average amount).

FORMULA AND WORKED SUM

- Frequency x severity. Example: 8 losses x Rs 25,000 = Rs 2,00,000.

Treatment	Example
Avoidance	No factory in quake zone; skip obsolete technology; skip predatory-price industry; not exporting to avoid forex loss
Prevention	Helmets, seatbelts, speed breakers, housekeeping (frequency)
Reduction	Extinguishers, sprinklers, drills, packaging, audits (severity)
Transfer	Insurers; hedging cos (forex, interest); investment bankers (IPO under-subscription); asset reconstruction cos
Retention	Risk financing: capital (best), credit, ART, reserves; own fund instead of cover = self-insurance

TRAP

Insurance is not the only transfer route.

1.4 Insurance contract

- **Parts:** contract; consideration = premium (insurer's), promise (insured's); make good = indemnify; suffered by insured; insured peril.
- Indemnity = same financial position as before the loss. Insurer never promises to prevent loss.
- Loss suffered by insured = insurable interest. No interest, no payment.
- **Excluded or uninsured perils:** not paid. Even widest cover has exclusions.
- **Informal sharing:** voluntary, unorganised, sometimes unreliable.
- Premium comes from many; few suffer loss; fortuitous events.

1.5 Law of Large Numbers

- **Diversification:** spread risks over areas and groups not hit at the same time.
- Insurance transfers the money loss; it cannot prevent the event (death).
- **More trials:** gap between expected and actual goes to zero.
- **Random:** coin toss, die roll. Head = **50%**; die face 3 = 1/6 = **16.67%**.
- A priori = known without prior experience.
- **Estimates from past data:** many records + long period (**2020** lockdown = outlier year).
- **Limits:** statistical law not exact; pandemic and emerging risks (terrorism, cyber, climate); changing behaviour; too few risks written; catastrophe accumulation; court judgements widen liability.

TRAP

Estimate still fails if few risks are underwritten (e.g. 3 deaths per 1,000 expected, 1,000 lives written).

- **Remedies:** quota share for new insurer; watch trends; outside data (industry, road, health, death records, courts); catastrophe reinsurance; ART; analytics; actuaries (estimate, not predict); capital and reserves.

1.6 Need for insurance

Need	Point
Protection	Beyond own capacity to bear; life cover for family
Stability	Steady results for investors
Capital	Lower capital needed
Lending	Secures assets lent against
Legal compliance	MV Act; Environment Protection Act; RE Regulation Act (title insurance)
Contract requirements	Other party demands cover

TRAP

Marine Insurance Act does not make cover compulsory.

1.7 Benefits

Benefit	Point
Savings	Endowment, ULIP
Loss minimisation	Rating; deductibles; Co Pay; hospital and garage networks; cyber crime and piracy
Investments	Long-term funds, infrastructure
Security	Known small loss (premium) for unknown big loss
Social security	Government health, disaster relief, poor-life schemes
Trade and commerce	Risk spread, credit, liability cover

TODAY'S RULE

Stability = steady. Actuary = estimates probability of future losses.