Institute of Actuaries of India

Subject SA3 – General Insurance

October 2009 Examination

INDICATIVE SOLUTION

Introduction

The indicative solution has been written by the Examiners with the aim of helping candidates. The solutions given are only indicative. It is realized that there could be other points as valid answers and examiner have given credit for any alternative approach or interpretation which they consider to be reasonable

1 (i)   Crop Insurance
           Losses from:
- Drought
- Flood
- Fire
- Disease
- Defective/ deficient growth affecting crop at different stages, either due to intrinsic reasons or due to external seasonal causes,

will be indemnified by the insurer.

Commercial Property Damage

Any damage due to fire, flood, storm, malicious acts, theft, lightning, etc. will be compensated by the insurer; e.g. contents and stock.

Business Interruption

If the agricultural company is unable to conduct the business due to flood, fire or default of food processing machinery, the losses will be indemnified.

Employers' Liability

Legal liability to compensate any employee or their dependents for injury, disease or death during the course of employment owing to the negligence of the employer. This may happen due to:
- Exposure to harmful substances like chemicals, pesticides, etc. or working conditions
- Accidents at work due to the negligence of the employer or other employees.

Public Liability

Any legal liability for the death or injury to a third party or any property damage belonging to a third party.

Product Liability

Any legal liability for the death or injury to a third party or any property damage belonging to a third party arising out of any defective products supplied by the insured e.g. contaminated food.

Motor

If the company owns its own motor fleet for distribution or other purposes, then it may need both property damage and bodily injury cover for any compensation payable to third parties. It may also need cover to its own vehicles for any damages due to theft, accidents, etc.

Group Medical and Personal Accident Insurance

Indemnifies the insured against all costs for medical treatment, financial compensation for loss of limbs, etc. of employees.

Fidelity Guarantee

Any financial losses caused by dishonest actions of its employees – loss of money, goods owned by the insured, etc.

Pecuniary Loss

Bad debts or failure of third parties especially in the recessionary times.

Goods-in-transit

The losses damaged during transit of the produce for distribution due to theft, vandalism, etc.

Market price variations a major risk in agri business but this is not covered by most insurances.

1 (ii)   Crop Insurance
Exposure Measure – value of crops, processed food or the sum insured
Rating Factors – Location (this would be classified more with reference to geographical sub division and suitability for crop), Past claims, Exclusions, Types of Produce, Fire/Theft Alarms or security arrangements.

Commercial Property
Exposure Measure – sums insured of the buildings, contents, machinery and average value of stock
Rating Factors – Location. Construction type and suitability for purpose of use, age of buildings, smoke/fire/burglar alarms, use of buildings

Business Interruption
Exposure Measure – sum insured linked to the turnover, profit or projected sales; additional cost of working e.g. after fire in food processing plant
Rating Factors – Types of Produce, Indemnity Period e.g. 24 months, Equipments used

Employers' Liability
Exposure Measure – Wage roll
Rating Factors – Limit of indemnity, Number of employees, use of contract labour, category of employees, Location, Past claims experience, Types of crop/machinery/materials handled, Staff Training, Health and Safety Measures in place.

Public and Products Liability
Exposure Measure – Turnover, profit or projected sales
Rating Factors – Limit of indemnity, Types of Produce, Location, Equipments/chemicals used, types of packaging and storing used

Motor
Exposure Measure – Types and Number of vehicles
Rating Factors – Type of cover, Excess, Use of vehicles, Age of vehicles, Past claims, Maintenance procedures, Location, Age of drivers

Group Medical and Personal Accident Insurance
Exposure – Number and category of employees
Rating Factors – Age and gender of employees, cover, sum insured for PA, Location

Fidelity Guarantee, Pecuniary Loss
Exposure Measure – Limit of indemnity
Rating Factors – years of trading, security measures (money safes)

Goods-in-transit
Exposure Measure – Number of vehicles and load limits
Rating Factors – Location, Types and value of goods, distances (radius) covered for transportation, Past claims

1 (iii)   Large Claims:
Potential for individual large claims from Fire, Employers Liability, Public and Products Liability, Motor Injury Claims. Crop failures due to adverse seasonal effects may also be involving large claims.

Claim Frequency may be very low with long settlement delays.
Recommend an individual risk excess of loss reinsurance.

Likewise, there is potential for multiple claims from the same event e.g. fire may cause injuries to large number of employees. Crop failures also covered by some form of CAT cover.
Recommend an event risk excess of loss reinsurance.

Accumulation risk:
Accumulation is possible; e.g. flood may cause damage to the crop, buildings, contents, stock and business interruption. Crop failures are also caused by seasonal factors of climate, humidity, etc.
Recommend an aggregate excess of loss reinsurance.

1 (iv)   Assumptions:
Business is written in the ratio of 30:30:40 over the 3 seasons of the year; therefore adjust the data by 6 months to reflect the unexpired risks.

Claims occur evenly throughout the year.

Reporting delays (a week to 4 months) are on average 2 months.

Therefore, on average the claims occur at the end of each underwriting year in respect of business written in that underwriting year.

Claims are settled on average in 3 months (could be a month or two) after reporting; large claims will take longer and we will ignore the settlement delays on those few claims for calculating the burning cost of the gross contract.

Premium has increased in line with claims inflation and the exposure over the past years and projected for the next year remains the same.
[Marks awarded for other reasonable assumptions for premium earning, claims occurrence, reporting and settlement patterns].
Method:
Increase past claims for inflation by 5% per annum to 31/12/2010 values. Because the split between paid and case reserves are not available, claims inflation is applied on the gross incurred.
Example: for 2005 underwriting year

(a) accidents occur on average at 31/10/2005
Assume on average the business is incepting half-way through the season; 30% of business incept on 01/03/2005 (the first season), another 30% of business incept on 01/07/2005 (the second season) and 40% of business incept on 01/11/2005 (the third season).
Assume on average, the losses occur after three months from inception (given the season spans across 4 months).
0.3 (01/06/2005) + 0.3 (01/10/2005) + 0.4 (01/04/2006)

Therefore, the average loss date is 31/10/2005.
(b) reporting delays of 2 months; (c) settlement delay of 3 months;
Therefore, 2005 underwriting year claims will be inflated for a period of 4.75 years.

Underwriting Year	Gross Premium (Rs 000s)	Gross Incurred Claims (Rs 000s)	Gross Incurred Claims after inflating @ 5% per annum (Rs 000s)
			1,026.3
2005	1,210	814	1,030.3
2006	1,240	858	1,071.5
2007	1,320	937	1,073.9
2008	1,310	986	928.4
2009 Projected	1,290	895	**5,130.4**
Total	**6,370**	**4,490**	

Hence the burning cost using the 5 years' claims history provided is Rs.5,130.4 ÷ 6,370 = 80.54% or Rs.805.40 per Rs.1,000 premium.

1 (v) (a)   Losses vary very widely by type of agri product and in particular for vegetables, fruits and flowers. Ideally separate data is required under at least these three classifications.

Obtain the individual claims data containing loss date, reporting date, cause of claim (theft, fire, etc.), payment dates, paid and outstanding amounts.

Validate the assumption about reporting and settlement delays.

Determine the burning cost for each type of claim – fire, theft, etc.

Adjust for claim frequency trend to the following underwriting year; e.g. recession/economic downturn generally increase the claim frequency for accidental damage, theft, arson claims.

Cap the individual large claims and spread the excess amounts over suitable periods such as 3 to 5 years.

Compare the claim frequency and average costs to its own experience; being a large general insurance company, experience based on wider market would have to be considered in addition, although geographical location factors play a major role. Need to consider the recent developments on factors affecting crop changes, cultivation methods and crop loss patterns.

Assign a credibility measure; say 0.8, to AGRI Foods & Flowers experience using the statistical methods like least squares.

1 (v) (b)   The other loadings/discounts need to be added to the burning cost:

(1) Broker commission, if any
(2) Claims handling costs,
(3) Expenses both direct costs of policy administration as well indirect costs for infrastructure, supporting function staff salaries like actuarial, finance, etc.
(4) Reinsurance costs,
(5) Required Profit; this would be based on the capital requirement for the underlying cover

and adjusted for any investment income from the policy inception date to the average claim settlement date.

(6) Discounts for good risk management measures; e.g. fire/burglar alarms

Finally, there may be market adjustments to the premium due to competition to a limited extent.

1 (vi)   Same assumptions and method in (iv) are applicable.
Two quota share reinsurances continue to be applicable before the excess of loss reinsurance.

Underwriting Year	Gross Incurred after inflating @ 5% per annum	GIC QS 10%	PQR Re QS 20%	Net of QS Reinsurance	Excess of Loss Cost of Claims (Rs.10 lakshs xs. Rs.5 lakhs)
2005	8,52,970	85,297	1,70,594	5,97,079	97,079
2005	15,84,545	1,58,455	3,16,909	11,09,182	6,09,182
2005	18,31,799	1,83,180	3,66,360	12,82,259	7,82,259
2007	8,52,367	85,237	1,70,473	5,96,657	96,657
2007	11,29,472	1,12,947	2,25,894	7,90,630	2,90,630
2007	28,44,847	2,84,485	5,68,969	19,91,393	10,00,000
2008	6,03,731	60,373	1,20,746	4,22,611	0
2008	9,60,641	96,064	1,92,128	6,72,449	1,72,449
2008	8,63,838	86,384	1,72,768	6,04,687	1,04,687
2009	8,65,840	86,584	1,73,168	6,06,088	1,06,088
Total	1,23,90,050	12,39,005	24,78,010	86,73,035	32,59,030

Example: top most claim

Claim Paid Rs. 6,76,526 inflated at 5% per annum for 4.75 years gives Rs. 8,52,970 + Case Reserves Rs. 0 = Rs.8,52,070

Quota Share Reinsurance cessions to GIC @ 10% gives Rs.85,297 and PQR Re @ 20% gives Rs. 1,70,594.

Gross claim after quota share reinsurances Rs. 8,52,970 – 85,797 – 1,70,594 = Rs.5,97,079.

Of this the first Rs.5, 00,000 will be retained by the insurer XYZ and the remainder Rs.97,079 will be payable by the excess of loss reinsurance contract.

The cost of claims per year of exposure based on 5 years history = 32, 59,030 ÷ 5 = Rs.6, 51,806.

The projected losses for 2009 year include only 1 large claim up to 30/06/2009 only.
Therefore the above projection needs to be adjusted for the exposure; 4.5 years experience to full 5 year period.
Rs. 6, 51,806 × 10/9 = Rs.7, 24,229.
Burning Cost = 7, 24,229/(63,70,000 ÷ 5) = 56.9% or Rs.569 per Rs.1,000 premium.

Correction in question - 2007 gross incurred in last column is Rs.24, 87,645 and not Rs.64, 87,645. Answer above will be the same even if the student used the figure of Rs.64, 87,645.

1 (vii)   Rating methodology:
For all the existing rating factors for assessing the appropriateness of each rating factor. Document the rationale (rationale is justified through statistical methods) for inclusion of each rating factor at each pricing review.

Document the changes to the trends in claim frequencies, claim severities and proportions of claims under the main categories of damage; discussions with claims staff and agri experts would help identify the causes for the trends and in this documentation. (e.g. how the crop produce may change over time, which is a rating factor) and the underlying reasons for those changes. This may come from the discussion/meeting notes with the underwriters/claims staff.

Policy cover:
There may be changes to the underlying policy cover over time; e.g. changes in deductible/excess, exclusions, etc. Loss computation methods a major element in agri risks insurance. This needs to be documented at each pricing review.

The changes may explain some of the underlying changes; e.g. when the policy excess is increased, claim frequency may reduce whilst the average cost may increase.

Underwriting Practice:
Sales method (direct, intermediary or through the local panchayat)

Eligibility criteria/Replies to the proposal questions

Risk management requirements; e.g. large risks may require survey and a visit by a surveyor may also provide other qualitative information about the quality/attitude of management to staff training, health and safety, etc.

Variance from the technical rate; discount may indicate the level of competition whilst loading may indicate a poor risk - may also indicate confidence level for risk assessment

Whether the loading/discount imply acceptable level of profit as per the strategic business plan. Normally other considerations such as size of premium at stake, other business relations with same client, etc. Influence discount level while loading could reflect risk experience and company's attitude to add such risk on to the books

Claims:
Analyse the claims along with the risk data by each risk factor

Establish the most effective rating factors by regression/other techniques

Actual vs. Expected claims – both volume of claims and average cost (+ variance)

Regular discussion with the claims staff including on claim admin influences on frequency/ average costs

Investigation of fraudulent claims; this may imply altering the underwriting eligibility.

Competition:
Research what competitors are using

Broker/Reinsurer may be able to provide some information.
There are agricultural science consultants willing to guide/ help.
This would help the company against anti-selection by policyholders/brokers.

General:
Outlook for the type of business being insured; in this instance retail foods and flowers.

Economic conditions – unemployment, inflation. If the economic outlook is not good, people may not spend money on expensive flowers and foods; may only spend on necessary items.

Claims environment – court awards, medical costs; this may mean increase in claims cost which may mean under pricing.

[50]

2 (i)   Assumptions:
- Business is written uniformly throughout the year; i.e. half of GWP written in year 1 is earned in year 1 and the remaining half is earned in year 2.
- The historic inflation is assumed to be indicative of the future.
- No reinsurance

AY		0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 +
2003		1.341	1.178	1.101	1.046	1.006	1.008
2004		1.357	1.188	1.114	1.057		
2005		1.396	1.127	1.079			
2006		1.470	1.166				
2007		1.355					
2008							
ldf		1.386	1.164	1.098	1.052	1.006	1.008
cdf		1.890	1.364	1.172	1.067	1.014	1.008

AY	Paid-to-date (Rs Lakhs)	cdf	CL Ultimate (Rs Lakhs)	GWP (Rs Lakhs)	GEP (Rs Lakhs)	Rate Changes	Cumulative Written Rate Changes	Cumulative Earned Rate Changes	Lo: Ra (A pri
2003	161	1.000	162.3	505.5	252.7	1.000	1.000	1.000	64
2004	186	1.006	188.7	521.2	513.3	0.950	0.950	0.975	65
2005	163	1.058	173.9	554.9	538.1	0.970	0.922	0.936	68
2006	197	1.162	230.8	540.8	547.8	1.010	0.931	0.926	69
2007	168	1.353	229.2	545.6	543.2	1.020	0.949	0.940	68
2008	130	1.875	245.7	549.1	547.3	1.050	0.997	0.973	60

Cumulative Written Rate Changes for 2005 is determined as 0.950 * 0.970 = 0.922
Cumulative Earned Rate Changes for 2005 is determined as (0.950 + 0.922)/2 = 0.936
Loss Ratio (A priori) for 2005 is determined as 64.2%/0.936 = 68.6%

2 (ii)   Assumptions:
No reinsurance.
Business is written uniformly throughout the year.
Claims occur evenly throughout the year.
Acquisition costs have been assumed to be 15% of written premium in 2007 and they are
earned over the policy period.
No change in ultimate losses for the years 2003-2007 as at the two valuation dates 31/02/2007
and 31/03/2008.
Shareholders' funds at 31/03/2008 is assumed to be the mean fund during the year for
calculating investment income.

Revenue Account for the year ended 31/03/2008 (Rs Lakhs):

Gross Earned Premium [from 2(i) above]	547.3
Gross Incurred Claims = Paid during the year + o/s claims Reserves c/f – o/s claims Reserves b/f [See working in Table 1 below]	-300.1
Acquisition costs = 15% of 545.6 (=81.84) + DAC b/f (15% of 540.80 × 0.5 = 40.56) – DAC c/f (15% of 545.60 × 0.5 = 40.92)	-81.5
Additional expenses = 12% of 545.6	-65.5
Claims handling costs = 4% of claims incurred = 4% of 300.1	-12.0
Underwriting Result =	**88.2**
Investment Income on Technical Reserves [See working in Table 2 below] =	41.0
Insurance Result =	**129.2**

Table 1

AY	Ultimate Losses at year end 2007	Paid-to-date at year end 2007	Reserves b/f at the beginning of 2008	Ultimate Losses at year end 2008	Paid-to-date at year end 2008	Reserves c/f at year end 2008	Paid duri 2008
[1]	[2]	[3]	[4] = [2] - [3]	[5]	[6]	[7] = [5] - [6]	[8] = [6] -
2003	162.3	160	2.3	162.3	161	1.3	
2004	190.7	176	14.7	190.7	186	4.7	
2005	180.2	151	29.2	180.2	163	17.2	
2006	244.9	169	75.9	244.9	197	47.9	
2007	266.0	124	142.0	266.0	168	98.0	
2008				300.1	130	170.1	1
Total	**1,044.1**	**780.0**	**264.1**	**1,344.2**	**1,005.0**	**339.2**	**2**

Table 2

Technical Reserves at beginning of 2008 (Rs Lakhs)
UPR (= 0.5 × 540.8)	270.4
Claims Reserves	264.1
Claims handling expenses (= 0.04 × 264.1)	10.6

Technical Reserves at year end 2008 (Rs Lakhs)
UPR (=0.5 × 545.6)	272.8
Claims Reserves	339.2
Claims handling expenses	13.6

Mean technical funds	585.4

Investment income =7% of Mean Funds	41.0

Profit and Loss Account for the year ended 2008 (Rs Lakhs):

Insurance Profit from Revenue Account	129.2
Investment Income on Shareholders' Funds = 0.09 * 2000	180.0
Pre-tax profits	309.2
Tax @ 30%	92.8
Post-tax profits	216.4
Dividend	100.0
Retained profits	116.4

2 (iii) The company only writes Commercial Fire class of business.
All Amounts are Rs Lakhs
Therefore,
RSM (1) = 20% of [gross written premium] = 0.20 × 545.6 = 109.12
RSM (2) = 30% of [gross claims incurred] = 0.30 × 314.9 = 94.47
Required Solvency Margin = Higher of RSM (1) and RSM (2) above = Rs. 109.12 Lakhs
Available Solvency Margin = Shareholders' Funds at the beginning of the year + Retained Profits
= 2,000.0 = 2,000.0
Solvency Ratio = Available Solvency Margin ÷ Required Solvency Margin = 2,000.0/109.12 = 1,833%

2 (iv)
- At at least 150% as required by IRDA.
To protect itself from change in the values of its assets:
- Change in market values for certain sectors or individual assets that the company holds.
- Change in exchange rates in assets held overseas. This is normally already reflected in the accounts.
- Returns from assets smaller than expected.
- Having to realise gains at unfavourable times; e.g. Sep 2008
- Fall in market values of equities and derivative instruments; e.g. general fall seen from

July 2008 after major banks sought for government funding.

To protect itself from change in the value of its liabilities:
- Unexpected deterioration in current claims/expenses reserves e.g. increase in the cost of steel, copper, cement, etc. all building materials.
- Unexpected deterioration in future liabilities from business already written but not yet expired; e.g. weather events.
- Commercial fire often includes consequential losses/loss of profits.
- Changes in risk characteristics due to new processes/ technology
- Inflationary effect on claims costs/expenses; e.g. increase in metal, cement prices increasing the cost of claims from the construction industry
- Judicial changes e.g. court awards such as decisions on "proximate cause"

To protect itself from the business operations and changes in the market conditions:
- Volume of business written e.g. lower volume of business may mean the contribution to the fixed expenses is low.
- Market competition; this may affect the level of premium charged (higher competition may lead to lower premiums charged to retain volumes)
- Changes in legislation e.g. admissibility rules for assets
- Changes in taxation e.g. tax rate
- Broker/reinsurer failure
- Expenses
- Poor management control
- Fraud – staff, brokers, other suppliers
- Note that additional capital is also needed for business expansion

2 (v)   Assumptions:
Claims frequency is increasing by 5% and claims cost is increasing by 1%; therefore ultimate losses will increase by $1.05 \times 1.01 = 1.0605$
Assume that the level of rates for 2009 remain the same as 2008; i.e. there are no increase or decrease in the rates.
The volume of business written and earned during 2009 remains at the same level as 2008.

Method:
Loss Ratio from ultimate calculations in 2 (i) = 54.3%
Projected loss ratio for 2009 = 54.3% × 1.0605 = 57.6%

2 (vi)   Amounts in Rs Lakhs
Shareholders' Funds at the beginning of 2009 = Rs 2,000.0
Expecting to grow the shareholders' funds by 2%; i.e.Rs. 2,040.0 Retained Profits = Rs.2,040.0 – Rs.2,000.0 = Rs. 40.0
Expected dividend distribution = 100.0
This is an assumption based on amount of dividend.
Post-tax profits need to be 140.0.
Assume that the tax rates remain the same,
Pre-tax profits need to be 140.0 ÷ 0.7 = 200.0

Assume that the investment income on shareholders' funds drops to 5% (as the market conditions have changed a lot since September 2008)

Investment Income on shareholders' funds = 0.05 × (2,040.0 + 2,000) ÷ 2 = 101.0. (Assuming mean shareholders' funds for the calculation of income earned during the year.)

Insurance Profit Required = 200.0 – 101.0 = 99.0

Let EP = Earned Premium during 2009

Underwriting Result = Earned Premium – Incurred Claims – Expenses

= EP – 0.576 EP – 0.29 EP = 0.134 EP

If the business is written uniformly and claims occur evenly throughout the year,

EP = 50% of 2009 GWP + UPR from 2008 = 50% of WP + 274.5 (From Table 2 in 2(ii) above).

Reserves b/f at the beginning of 2009 = 622.8 [From Table 2 in 2(ii)].

UPR at year end 2009 = 50% of GWP

Assuming there are no changes on the accident year ultimates for 2003 to 2008,

Claims Reserves c/f at year end 2009 = 0.576 EP – Paid during 2009 in respect of AY 2009

= 0.576 EP – 0.576 EP (1/1.890) = 0.271 EP {cdf 1.890 is from 2 (i)}

Assume that the investment income on technical reserves drops to 4%,

Investment Income of Technical Reserves = 0.04 × 0.5 × [622.8 + 50% of WP +0.271 EP]

= 0.02 × [622.8 + 50% of WP + 0.271 × (50% of WP + 274.5)]

= 13.94 + 0.013 of WP

Insurance Profit = Underwriting Result + Investment Income on Technical Reserves

99.0 = 0.134 × [50% of WP + 274.5] + 13.94 + 0.013 of WP

99.0 – 36.78 – 13.94 = 0.067 WP + 0.013 WP

WP = 48.28 ÷ 0.080 = 603.5

2 (vi)   Alternative Solution:

Amounts in Rs Lakhs

Shareholders' Funds at the beginning of 2009 = Rs 2,000.0

Expecting to grow the shareholders' funds by 2%; i.e.Rs. 2,040.0 Retained Profits = Rs.2,040.0 – Rs.2,000.0 = Rs. 40.0

Expected dividend distribution = 100.0

This is an assumption based on amount of dividend.

Post-tax profits need to be 140.0.

Assume that the tax rates remain the same,

Pre-tax profits need to be 140.0 ÷ 0.7 = 200.0

Assume that the investment income on shareholders' funds continues to be 9%

Investment Income on shareholders' funds = 0.09 × (2,040.0 + 2,000) ÷ 2 = 181.8. (Assuming mean shareholders' funds for the calculation of income earned during the year.)

Insurance Profit Required = 200.0 – 181.8 = 18.2

Let EP = Earned Premium during 2009

Underwriting Result = Earned Premium – Incurred Claims – Expenses

= EP – 0.576 EP – 0.29 EP = 0.134 EP

If the business is written uniformly and claims occur evenly throughout the year,

EP = 50% of 2009 GWP + UPR from 2008 = 50% of WP + 274.5 (From Table 2 in 2(ii) above).

Reserves b/f at the beginning of 2009 = 622.8 [From Table 2 in 2(ii)].

UPR at year end 2009 = 50% of GWP

Assuming there are no changes on the accident year ultimates for 2003 to 2008,

Claims Reserves c/f at year end 2009 = 0.576 EP – Paid during 2009 in respect of AY 2009
= 0.576 EP – 0.576 EP (1/1.890) = 0.271 EP {cdf 1.890 is from 2 (i)}
Assume that the investment income on technical reserves continues to be 7%,
Investment Income of Technical Reserves = 0.07 × 0.5 × [622.8 + 50% of WP + 0.271 EP]
= 0.035 × [622.8 + 50% of WP + 0.271 × (50% of WP + 274.5)]
= 24.40 + 0.022 of WP

Insurance Profit = Underwriting Result + Investment Income on Technical Reserves
18.2 = 0.134 × [50% of WP + 274.5] + 24.40 + 0.022 of WP
18.2 – 36.78 – 24.40 = 0.067 WP + 0.022 WP
WP = -42.98 ÷ 0.089 = -482.92
There is no additional growth in written premium required.

2 (vii)   (a) The following assets should be placed with value zero:
- Agent's balances and outstanding premiums in India, to the extent they are not realised within a period of 30 days;
- Agent's balances and outstanding premiums outside India, to the extent they are not realisable;
- Sundry debts, to the extent they are not realisable;
- Advances of an unrealisable character;
- Furniture, fixtures, dead stock and stationery;
- Deferred expenses;
- Profit and loss appropriation account balance and any fictitious assets other than pre-paid expenses;
- Reinsurer's balances outstanding for more than 3 months;
- Preliminary expenses in the formation of the company;

(b) The value of computer equipment including software shall be computed as under:
- 75% of its cost in the year of purchase;
- 50% of its cost in the second year;
- 25% of its cost in the third year; and
- 0% thereafter.

(c) All other assets of an insurer have to be valued in accordance with IRDA (Preparation of Financial Statements and Auditor's Report of Insurance Companies) Regulations, 2000, briefly:
- Real Estate, Investment Property – measured at historical cost less accumulated depreciation and impairment loss, residual value being considered zero and no revaluation being permissible;
- Debt securities – debt securities including government securities and redeemable preference shares shall be measured at historical cost subject to amortisation;
- Equity securities and derivative instruments that are traded in active market – measured at fair value as at the balance sheet date, the last quoted closing price of the stock exchanges where the securities are listed; unrealised gains/losses arising due to changes in the fair value of listed equity shares and derivatives as well as the profits/losses from the sale of investments shall be shown under 'Fair Value Change Account'; but this is not

available for distribution of dividends
- Unlisted and other than actively traded equity shares and derivatives instruments – measured at historical costs; any diminution/appreciation values should be considered up to a maximum of historical value.
- Loans – historical cost subject to impairment provisions
- Catastrophe reserve – in accordance with rules prescribed by the Authority

[50]
Total Marks   [100]

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