SPECIALIZED DIPLOMA/CERTIFICATE EXAMINATION
(CASUALTY ACTUARIAL SCIENCE-NON LIFE )
FOUNDATIONS OF CASUALTY ACTUARIAL SCIENCE - PART-1

[ Time : 3 Hours ]
[ Total Marks : 100 ]

Multiple Choice: (All multiple choice questions carry 2 marks each).

Q.1 The costs under the different probable scenarios are as follows:

<table>
<thead>
<tr>
<th></th>
<th>No Contingency</th>
<th>Contingency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance</td>
<td>Rs. 357/-</td>
<td>Rs. 357/-</td>
</tr>
<tr>
<td>No Insurance</td>
<td>Rs. 0/-</td>
<td>Rs. 9,87,654/-</td>
</tr>
</tbody>
</table>

What is the expected cost if insurance is purchased to cover the contingency?

A) Rs. 357/-
B) Rs. 0/-
C) Rs. 9,87,654/-
D) Rs. 987,654

Q.2 An ideally insurable exposure does not have this characteristic:

A) The exposure transferred should be the subject of pure risk.
B) There should be a large number of independent entities with similar exposures.
C) The insured loss should be definite or determinate in time, place, cause, and amount.
D) The expected loss over some reasonable period of time need not be estimable.
E) The loss should be accidental from the viewpoint of the insured.

Q.3 Reported Losses =
A) Payments + Case Reserves.
B) Case Reserve Development + Unreported Occurrences or Claims Reserve.
C) Payments – Case Reserves.
D) Case Reserve Development – Unreported Occurrences or Claims Reserve.

Q.4 Incurred Losses =
A) Reported Losses + Un-Reported Losses.
B) Estimate of Incurred Losses.
C) Reported Losses – Un-Reported Losses.
Q.5  C.A.P.M. means:
   A) Control Analysis Payout Mechanism
   B) Changed Account Payment Method
   C) Capital Asset Pricing Model
   D) Company Account Profit Margin

Q.6  An Actuary’s primary responsibility in rate-making is:
   A) Pure Premium
   B) Affordability of Coverage
   C) Desired Level of Profit
   D) What the Competition is Charging
   E) Changes in Applicable Income-Tax Laws.
   F) Anticipated Marketing Expenses.
   G) Relationship between price and demand for coverage.

Q.7  A Risk-Financing Technique is not:
   A) Transfer to an Insurer
   B) Risk Avoidance
   C) Risk Retention
   D) Contractual Transfer to a Non-Insurer.

Q.8  This is not an attribute of a good rating system:
   A) It is simple to administer.
   B) It serves the need of the organization using it.
   C) It is easy to understand.
   D) It need not balance risk-sharing and risk-bearing.

Q.9  This is not of concern to risk managers:
   A) Legal Liability
   B) Personal Loss
   C) Property Loss
   D) Loss of Reputation
Q.10 This external factor, beyond the insurer’s control, does not affect profitability:
   A) Interest Rates
   B) Unemployment Rates
   C) Stability of the Government
   D) Inflation

Q.11 Severity is:
   A) Total amount of loss in an accounting year.
   B) Highest possible amount of loss.
   C) Average loss per unit.
   D) Largest amount of loss occurred in an accounting year.

Q.12 This is not an actuarial criterion for rating variables:
   A) Credibility
   B) Reliability
   C) Accuracy
   D) Homogeneity

Q.13 If:
   Pure Premium = Rupees 7,500/-,
   Fixed Expense for Exposure = Rupees 1,250/-
   Variable Expense Factor = 17.5%, and
   Profit and Contingency Factor = 5%;
   the Rate per Unit of Exposure is:
   A) Rupees 11,290/-
   B) 8.857%
   C) 8.857% 
   D) Rupees 8,065/-

Q.14 This equation is incorrect:
   A) Income = Change in Retained Earnings + Dividends to Owners.
   B) Owners’s Equity = Assets – Liabilities.
   C) Retained Earnings = Owner’s Equity – Contributed Capital.
   D) Incurred Losses = Paid Losses + Ending Claim Liability.
Q.15 Credibility can not have this possible value:
   A) 0.25
   B) 0.50
   C) 0.75
   D) 1.25

Essay-Type Questions: (All questions carry 10 Marks Each).

Q.16 Write Short Notes on:
   A) Risk Management Alternatives.
   B) Sources of Insurance Profit.
   C) Goals of Individual Risk Taking.
   D) Credibility Criteria.

Q.17 Explain ‘Experience Rating’.

Q.18 Explain, with examples:
   A) Utility Theory
   B) Reserve Discounting

Q.19 Explain the criteria for selecting rating variables

Q.20 Discuss ‘Stochastic Simulation’, briefing about its practical utility, and its usefulness for Actuaries working for non-life insurance companies.

Q.21 What are the methods for loss reserve estimation? Which is the most commonly used method? Why?

Q.22 Discuss the importance of data in the management of a General Insurance Company with specific reference to Claim Management including Loss Reserves.

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