

Actuarial Society of India

EXAMINATIONS

30th October 2006

Subject SA3 – General Insurance
Specialist Applications

Time allowed: Three Hours (10.15*am – 1.30 pm)

INSTRUCTIONS TO THE CANDIDATE

- 1. Do not write your name anywhere on the answer scripts. You have to write only your Candidate Number on every answer script.*
- 2. You have 15 minutes at the start of the examination in which to read the questions. You are strongly encouraged to use this time for reading only. But notes may be made. You have then three hours to complete the paper.*
- 3. Mark allocations are shown in brackets.*
- 4. You must not start writing your answers in the answer papers until instructed to do so by the Supervisor.*
- 5. Attempt all questions, beginning your answer to each question on a separate sheet.*
- 6. Fasten your answer sheets together in the numerical order of the questions.*
- 7. The answers are expected to be India Specific application for the syllabus and corresponding core reading. However, substantially the core reading material is still taken from material supplied by Actuarial Education Company which are meant for UK Fellowship examination. The core reading also contains some material which is India Specific, mostly the IRDA regulation. In view of this, it should be noted that focal point of answers is expected to be India Specific application. However if application specific to any other country is quoted in the answer the same should answer the question with reference to Indian environment.*
- 8. In addition to this paper you should have available Actuarial Tables and your own calculator.*

Professional Conduct:

“It is brought to your notice that in accordance with provisions contained in the Professional Conduct Standards, If any candidate is found copying or involved in any other form of malpractice, during or in connection with the examination, Disciplinary action will be taken against the candidate which may include expulsion or suspension from the membership of ASI.”

Candidates are advised that a reasonable standard of handwriting legibility is expected by the examiners and that candidates may be penalized if undue effort is required by the examiners to interpret scripts.

AT THE END OF THE EXAMINATION

Hand in BOTH your answer script and this question paper to the supervisor.

Q.1)

- (i) State what is the present minimum solvency margin required to be satisfied by a general Insurer in India at the end of the financial year.

The Regulating authority proposes to change the method of calculating solvency margin to Risk Based Capital. Define Risk Based Capital and state the merits and demerits of the proposed method and that of the existing MCR (minimum solvency method). (25)

- (ii) Give a formula establishing the relationship between growth/market share measured in terms of premium, insurance profits after allowing for tax and dividends to shareholders and solvency margin (expressed as a percentage of premium) from year $n-1$ to year n . Hence or otherwise determine the rate of gross insurance profit given the following:

- (a) Written Premium to increase next year by 30%
- (b) Solvency margin to be maintained at 40% of the written premiums this year.
- (c) Dividend at 50% of net insurance profits after tax.
- (d) Gross interest rate 9% and tax at 33%

Comment on the insurer's proposed strategy.

(25)
[50]

Q.2) The following information for the latest year of a General insurance Company is made available to you.

The CFO has made some calculations and recommended that the Company will be better off by stopping the E.L. business and increase the Motor and Household business. While coming to these conclusions, he allocated overheads and investment income in proportion to Earned premium income. He further suggested a reduction of 5% in the premium rates of motor and household business to increase the sales to make good any reduction in profit by not writing the EL business

Revenue Account	Household	Motor	E.L.
	Rs.000s	Rs.000s	Rs.000s
Written premium	12000	15000	8500
UPR b/f	4000	2750	4000
UPR c/f	6000	7750	2500
Earned Premium	10000	10000	10000
Paid Claims	6000	6500	3000
O/S b/f	2500	3000	9000
O/S c/f	3500	4000	15000
Incurred Claims	7000	7500	9000
Expenses	1500	600	500
Underwriting Profits	1500	1900	500

Profit & Loss A/C	
U/W profit	3900
H.O.Expenses	6000
Investment income	3900
Insurance profits	1800

Prepare a Note analyzing

- 1) The CFO'S calculations
- 2) Whether his conclusions are correct
- 3) If you differ, what calculation you would perform
- 4) The impact of his recommendation to cut rates by 5%

[50]
