Actuarial Society of India

EXAMINATIONS

30th October 2006

Subject SA2 – Life 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) An Indian life insurance company commenced operations five years ago selling both traditional reversionary bonus endowment contracts and unit linked regular and single premium contracts. The company's market efforts have been very successful and the company has posted very strong sales results and high growth rates.

The company originally planned to eliminate expense overruns within five years but has not succeeded and actual expenses are about double the expense allowances in the premium basis. As a result, the projected capital requirements are about equal to the projected expense overruns.

The shareholders are now having difficulty in raising the required capital and the directors are considering the company's options if no further capital is forthcoming.

Your projections show that if the company continues with the current business plan the minimum solvency margin will be breached within 12 months.

(a) Describe how you would use the analysis of surplus to explain sources of consumption of capital. (10)

(b) State the obligations on the appointed actuary in these circumstances, and list the warning signs that would be apparent to the regulator as the company's solvency margin falls. (5)

(c) Discuss the options available to the company and the actions it will need to take to avoid insolvency. (20)

(d) Discuss the risks the company will have to manage in implementing the options you have identified. (10)

(e) Discuss how the change in strategy required to maintain solvency might effect policyholders' reasonable expectations. (5)

[50]

Q.2) An established Indian life insurance company has been selling unit linked regular and single premium business largely through the banking operations of its major shareholder, but also through a small but productive agency force active in the middle income market segment.

The company has been experiencing difficulty in meeting its rural obligations under the legislation and it is now seeking to develop its rural business, both to meet its obligations but also to pursue the rural market as a profitable one in its own right.

To meet these objectives the marketing manager has proposed two new products:

? A simple reversionary bonus endowment insurance with a term of 10 years with a sum assured of Rs 50,000 payable on death or maturity, as well as payments of Rs 5,000 in the event of serious accident requiring hospitalization.

? A unit linked regular premium savings plan with a guaranteed minimum return of 5% pa packaged with a critical illness benefit. This product is to be offered for terms from 10 to 20 years with a minimum annual premium of Rs 25,000.

(a) List the factors that need to be taken into account in designing suitable products for the rural sector and discuss whether the proposed products satisfy these factors. (12)

(b) State how these products can be made more tax efficient. (4)

(c) Outline the professional guidance relating to the role of the Appointed Actuary in connection with premium rates and policy conditions for new products and for existing products currently on sale. (6)

During the first 6 months after launch of the products, the company finds that about 5% of its regular premiums are being received from the first new product and about 75% from the second new product.

(d) Discuss the impact of introducing the two new products on the capital requirements of the company. (6)

The Finance Director has suggested that as the company incurs high costs at the point of sale, the company should take credit for some part of these as 'Deferred Acquisition Costs'.

(e) Discuss whether and how you would quantify any 'Deferred Acquisition Cost' in respect of the two new products. (8)

(f) Describe how the company should manage the guarantees in the second product. (6)

(g) List the policy cash flows specified in IRDA (Assets, Liabilities and Solvency Margin of Insurers) Regulations, 2000 that are to be discounted while using the gross premium method of valuation for the conventional endowment insurance product, and explain the implications of these regulations for shareholder profits. (8)

[50]

****