

# INSTITUTE OF ACTUARIES OF INDIA

## EXAMINATIONS

11<sup>th</sup> May 2010

### Subject CA1 – Core Application Concept (Paper II)

Time allowed: 3 Hours (14.45\* - 18.00 Hrs)

Total Marks: 100

#### INSTRUCTIONS TO THE CANDIDATES

1. *Please read the instructions on the front page of answer booklet and instructions to examinees sent along with hall ticket carefully and follow without exception*
2. *Attempt all questions, beginning your answer to each question on a separate sheet.*
3. *\*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 then have 3 hours to complete the paper.*
4. *You must not start writing your answers until instructed to do so by the Supervisor.*
5. *Mark allocations are shown in brackets.*

#### AT THE END OF THE EXAMINATION

**Please return your answer book and this question paper to the supervisor separately.**

- Q. 1)** Outline reasons why a general insurance company may make an accounting loss during a period when it has been writing profitable business. [4]
- Q. 2)** (i) List three options you may offer under the below:
- (a) Household contents insurance (1.5 )
  - (b) Defined benefit pension scheme (1.5 )
- (ii) Outline the risks granting options could cause for providers? (2)  
[5]
- Q. 3)** Outline the reasons for performing an analysis of surplus? [5]
- Q. 4)** (a) Describe the four main accounting concepts that should be followed when preparing the accounts of an insurance company. (4)
- (b) Give two examples of possible conflicts between these concepts (2)  
[6]
- Q. 5)** Describe the most important factors to consider when setting the assumptions to be used for an actuarial task? [6]
- Q. 6)** (a) Outline the criteria that would be used while grouping data for a projection? (4)
- (b) State the considerations that should apply when choosing the number of model points to use in a modeling exercise? (2)  
[6]
- Q. 7)** A State, which provides free comprehensive healthcare through its own network of hospitals, has a large private medical insurance market as well. The Government is contemplating a change in taxation system so that those over age 60 who buy an individual private medical insurance policy can deduct the premiums they pay from their income before it is taxed.
- Explain the benefits to the State of this proposal and outline potential problems? [8]
- Q. 8)** (a) List the main factors that should be considered when designing or reviewing any life insurance contract? (6)
- (b) Describe the circumstances that would make the main variations found with term assurance contracts attractive to potential customers? (8)  
[14]

**Q. 9)** The pension regulator of a country is considering bringing out new guidelines relating to Defined benefit pension schemes. The guidelines pertain to the following –

- Limits on exposure to investments in any business or industrial sector
- Limits on exposure to investments in sponsoring employer owned or controlled entities
- Norms relating to Investments in unquoted domestic companies
- Employer contribution holidays

a) Discuss why in principle the above areas might be of concern to the regulator (5)

b) Describe any specific measures the regulator could introduce to address his concerns under the new guidelines (11)  
**[16]**

**Q. 10)** A life insurance company currently operating only in its home country using multiple distribution channels (including the web, plans to sell its products through the internet overseas.

Describe the possible implications arising from the main sources of risk associated with this project. (20)

For each source of risk, suggest how the consequences could be mitigated? (10)  
**[30]**

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