October, 2013

ACTUARIAL ASPECTS OF PRODUCT DEVELOPMENT

[ Time : 3 Hours ]

Answer ANY FIVE questions only.
All questions carries 20 marks each.

Q.1 Write short notes on:
   a) Quota share reinsurance arrangement and surplus share reinsurance arrangement.
   b) Free look provision.
   c) Life Insurance benefit illustrations.
   d) Commutation Functions.

Marks
5 each

Q.2 
   a) Explain the Grievance Redressal Mechanism for Insurance policyholders.
   b) What do we understand by the clause of incontestability in accordance with section 45 of Insurance Act, 1938.
   c) How is the mortality rate determined in pricing of Insurance Products?
   d) What are the riders in Insurance contracts and what are their main characteristics?

Marks
5 each

Q.3 Describe in brief the Life Insurance Products that might be purchased by:
   a) A newly married young couple who plan to start a family.
   b) A medium sized company that employs 1000 people.

Marks
10 each

Q.4 
   a) Explain how expenses can be a source of risk to a life insurer.
   b) What measures the insurer may take to reduce its expenses.
   c) The insurer has decided to reduce the sale of one of its products. Explain why the insurer may want to review the expense assumptions used in pricing its product.

Marks
5
7
8

Q.5 A large life insurance company which does not at present sell annuity products wants to launch an immediate annuity product.
   a) What factors should be considered to design this new product.
   b) Describe in detail how you will set assumptions for pricing the product.

Marks
10 each

Q.6 
   a) Most of the life insurers often use their own sales forces or other forms of distribution channels to sell their insurance products on a face to face basis. Knowing that this arrangement increases the distribution cost, explain why the insurers use this method to sell their insurance products.
   b) Explain whether the use of different distribution channels have effect on product design and pricing?

Marks
5
15
Q.7 A life insurer which has been writing term assurance contracts over years has typically reinsured a small proportion of this line of business now wishes to reinsure a higher proportion of its term assurance business.

a) Explain why the life insurer has reinsured a proportion of its term assurance business. 6

b) Discuss why the insurer may now be willing to reinsure a higher proportion of its term assurance line of business. 10

c) State with appropriate reasons a type of reinsurance arrangement most suitable for this line of business. 4

Q.8 The Appointed Actuary has asked you as a student of Actuarial Science to describe the Formula Method of Pricing Products with specific reference to Whole Life, Endowment and Annuity contracts. Your report should also include how various types of expenses would be incorporated in the premium calculation under Formula Method. 20

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