

PGDM (Insurance Business, 2015-17)

Reinsurance

Code: INS-407

Trimester – IV, End-Term Examination, September-2016

Time allowed: 2½ Hours

Max Marks: 50

Roll No: _____

Instruction: Students are required to write Roll No on every page of the question paper, writing anything except the Roll No will be treated as **Unfair Means**. In case of rough work please use answer sheet.

Part-A

Attempt any 3 questions. Each question carries 5 marks. No answer should have more than Two Hundred Fifty words.

- A1. a) EOL treaty bears a reinstatement clause. Describe the Purpose of a reinstatement clause in an excess of loss treaty.
b) Explain a reinstatement premium which is 100% to time and pro rata to amount. Give an example.
- A2. Proportional treaty accounts are prepared either on u/w year basis or A/C year basis. What is the difference between the two and why A/c year method is called as clean cut system?
- A3. Explain the three different types of clauses available which could be used to define the procedures for notifying and setting losses to a treaty.
- A4. Outline five components that make up a non-proportional reinsurance premium.
- A5. What do you mean by portfolio premiums and portfolio losses, explain with examples.

Part-B

Attempt any 2 questions. Each question carries 10 marks. No answer should have more than Five Hundred words.

B1. What are different methods to control the aggregate amount of loss of the reinsured on a given class of business on an annual period? Explain with examples.

B2. A ceding company has the following Fire reinsurance program:

1. 40% Quota share on a maximum gross retention USD 30,000 any one risk, maximum cession to Quota share is USD 12,000 any one risk.
2. Eight line **gross** First Surplus, maximum cession USD 240 000 any one risk.

Contd.2/-

3. Five line **gross** Second Surplus, maximum cession USD 150,000 any one risk.
4. Three line **gross Facultative/Obligatory** maximum cession USD 90,000 any one risk.
5. Possible facultative placements where necessary.

Calculate:

- the liability (sums insured)
- the premium
- the loss

to each section of this program for the following three risks:

	A	B	C
Sum insured	240,000	430,000	600,000
Premium	2,400	5,500	8,000
Loss	8,000	430,000	20,000

B3. (a) Company A's Maximum fire retention is £500,000 sum insured per risk and has in place a gross twelve-line surplus treaty giving it an overall capacity of £6.5 million per risk. Further, the retention is protected by treaty per risk excess of loss for £400,000 XS £100,000.

The company underwrites a risk with a sum insured of £8 million, retains £400,000 and buys additional proportional facultative reinsurance for the proportion of the risk that cannot be ceded to the treaty.

Calculate the allocation of the liability amongst insure and reinsurers, if a loss of £4 million occurs.

Part-C

Case Study : Compulsory question.

Carries 15 marks.

(a)

(7.5)

The Alliance Insurance Company writes private and commercial property business in the US coastal area. Previously, Alliance had limited hurricane/windstorm cover on its policies to 20% of the sum insured. Now the insurer has decided for reasons of competition to remove the limitation for new business and for existing business at the next renewal and that too without charging an increase in premium to the insured.

Alliance plans to maintain its current reinsurance arrangements of working risk excess and catastrophe excess of loss as it is but wants to be sure that it will have adequate reinsurance cover. As a insurance consultant the Co seeks your advices about the adequacy of reinsurance cover to meet the new business plan.

- a) What are the issues arising from the new situation as it affects reinsurance cover?; and
- b) Analyze evaluate each issue to ask necessary information you would require in each case and what advice would you give?

(b) The Sylvania Insurance Company (SIC) writes homeowners insurance in Florida. It specializes in large, expensive homes. Assume that the amount of insurance (SI) on each home is \$1,000,000. Summary of SIC's Exposures: (7.5)

County	Number of Homes	Amount of Exposures (\$)
Broward	1,500	\$1,500,000,000
Dade	2,000	\$2,000,000,000
Palm Beach	1,000	\$1,000,000,000
Total	4,500	\$4,500,000,000

A severe hurricane striked Broward, Dade County and Palm Beach counties, causing insured losses equal to 40% of total insured exposures in each county. Assume that these 40% of the homes insured by SIC are totally destroyed but there are no losses on the other homes insured by SIC.

Contd.4/-

SIC has the following reinsurance program in place for its homeowners business in Florida:

- A surplus share reinsurance treaty with Reinsurer A in which SIC retains the first \$250,000 of losses on each home and Reinsurer A assumes any losses exceeding \$250,000 up to a limit of \$1,000,000 on each home.
- A per occurrence excess-of-loss reinsurance treaty with Reinsurer B with a \$100 million retention by SIC and an upper limit of \$400 million.

1. How much will Reinsurer A pay to SIC according to its reinsurance contract?
2. How much will Reinsurer B pay to SIC according to its reinsurance contract?
3. What will be the amount of losses that SIC will retain after it is paid by its reinsurers?

Reinsurer	Retention	Upper Limit
Reinsurer A	\$250,000	\$1,000,000
Reinsurer B	\$100,000,000	\$400,000,000
SIC	\$0	\$0
Total	\$100,250,000	\$1,400,000,000