BACHELOR OF COMMERCE (HONOURS) DEGREE

REINSURANCE PRINCIPLES AND APPLICATION - CIN 2102

FIRST SEMESTER EXAMINATION – DECEMBER 2001

INSTRUCTIONS TO CANDIDATES

1. Answer any five (5) questions
2. All questions carry equal marks

Question 1

Discuss the principal reasons why insurance companies buy reinsurance.

[20 marks]

Question 2

Compare and contrast Quota Share treaties and Risk (Working) Excess of Loss treaties focusing primarily on the following aspects:

(i) Protection against losses to the reinsured. [5 marks]
(ii) Financing the cedant's growth. [5 marks]
(iii) Accumulation of losses [5 marks]
(iv) Limiting the reinsurer's liability and treaty balance [5 marks]

[Total 20 marks]

Question 3

(a) What is meant by a "table of limits" with regard to proportional reinsurance? What is its purpose?

[10 marks]

(b) What is an umbrella excess of loss cover? What is its function?

[10 marks]

[Total – 20 marks]

Question 4

Why might a direct insurance company prefer to reinsure its account on an excess of loss basis rather than on a proportional basis? Are there any drawbacks to the Excess of Loss method?

[20 marks]

Question 5

A fire insurance company (reinsured) sets its maximum net retention at $2 000 000 for any one risk. What in each case is the maximum gross line it can write with:

(a) an 80% quota share treaty;
(b) a nine line first surplus treaty and a five line second surplus treaty;
(c) a 50% quota – share treaty with a four line surplus treaty on gross retention?
(d) Assuming the company protects its net retention on the 80% quota share treaty referred to in (a) above with a risk excess of loss treaty of $1 500 000 excess of $500 000. Show how a loss of $450 000 will affect the reinsured, the quota share reinsurers and the risk excess of loss reinsurers.

[20 marks]

Question 6

(a) A factory is insured for $10 000 000 on a coinsurance basis with insurers A carrying a 60% line and insurer B carrying a 40% line. Insurer A decides to restrict its net loss to maximum of $1 000 000 by making use of its 8 line surplus treaty. Reinsurer X takes 10% of the treaty.

A loss of $4 800 000 (100%) occurs. However at the same time it is learned that insurer B and reinsurer X are in liquidation.

Calculate the amount which insurer A will have to pay (net of reinsurance recovery) in these circumstances.

[10 marks]

(b) An insurer is offered a share of a fire insurance covering a large furniture manufacturing risk. The main factory is sprinklered. The sums insured for the three items on the policy schedule are:

Timber yard	$2 800 000
Main factory	$10 000 000
Finished Goods Warehouse	$4 800 000

All three are separate risks. The insurer limits his retention for this class of risk to a maximum sum insured of $200 000. This retention is doubled for sprinklered risks.

The insurer has a 5-line surplus treaty. It has an arrangement with another insurer to provide facultative cover equivalent to one line on the timber yard, two lines on the finished goods store and four lines on the main factory.

(i) What is the maximum percentage which the insurer could accept on each of the three units above?

(ii) What percentage would you recommend that the company accept and why?

[10 marks]

Question 7

(a) At 1 January 1996 Continental Insurance decided to set up a reinsurance facility which would cover department stores and warehouses among other risks. Continental's net retention for this class of business is $500 000. It has a first surplus treaty of 10 lines and a second surplus of 5 lines. Continental are offered a risk valued at $10 000 000 and wishes to accept the whole risk.

(i) How could the reinsurance be arranged to accommodate this?
(ii) How would a loss of $5 000 000 be apportioned between the insurer and reinsurer?

[10 marks]

(b) Continental's fire insurance account had an average ratio of net claims to net premium of 62% for the last 5 years.

In re-assessing the performance of the account the Fire Manager decides that he needs to purchase some reinsurance cover. He feels the cover should cater for :
(a) The loss ratio exceeding 70% but not going higher than 100%;
(b) Continental taking a 10% share of any cover arranged.

(i) Name the t reaty which could cater for this.
(ii) Why does this arrangement usually insist that the cedant takes a share of the cover arranged?
(iii) Assume the fire account results are as follows

Premium	$20m
Claims	$20.1m

How would the claims be apportioned between continental and the reinsurer in the cover you have mentioned in (i) above.

[10 marks]

Question 8

A company has a Risk Excess of Loss treaty covering its motor business arranged as follows:

First Layer	$2 500 000 excess of $250 000
Second Layer	$5 000 000 excess of $2 750 000

The following losses are reported after the occurrence of a major flood:

$188 000
$270 000
$605 000
$750 000
$5 560 000

(i) Show how these losses will affect the reinsured and its reinsurers.
(ii) Assuming the second layer was meant to operate as a catastrophe cover with a two risk warranty from the same event to trigger its operation, how would the above losses be paid.
(iii) Briefly outline the circumstances under which a Risk Excess of Loss would be less desirable compared to a Quota Share treaty.
(iv) Under what conditions would you recommend use of a Risk Excess of Loss treaty?

[20 marks]

Question 9

Suggest what information a reinsurer would need to have from a cedant when negotiating a reinsurance contract. Give reasons in each case.

[20 marks]

END OF EXAMINATION!!!