

P97

Diploma in Insurance

Unit P97 – Reinsurance

October 2013 examination

Instructions

- Three hours are allowed for this paper.
- **Do not begin writing until the invigilator instructs you to.**
- **Read the instructions on page 3 carefully before answering any questions.**
- Provide the information requested on the answer book and form B.
- You are allowed to write on the inside pages of this question paper, but you must **NOT** write your name, candidate number, PIN or any other identification anywhere on this question paper.
- The answer book and this question paper must **both be handed in personally by you** to the invigilator before you leave the examination room. **Failure to comply with this regulation will result in your paper not being marked and you may be prevented from entering this examination in the future.**

Unit P97 – Reinsurance

Instructions to candidates

Read the instructions below before answering any questions

- **Three hours** are allowed for this paper which carries a total of 200 marks, as follows:

Part I	14 compulsory questions	140 marks
Part II	2 questions selected from 3	60 marks
- You should answer **all** questions in Part I and two out of the three questions in Part II.
- You are advised to spend no more than two hours on Part I.
- Read carefully all questions and information provided before starting to answer. Your answer will be marked strictly in accordance with the question set.
- The number of marks allocated to each question part is given next to the question and you should spend your time in accordance with that allocation.
- You may find it helpful in some places to make rough notes in the answer booklet. If you do this, you should cross through these notes before you hand in the booklet.
- It is important to show each step in any calculation, even if you have used a calculator.
- If you bring a calculator into the examination room, it must be a silent, battery or solar-powered non-programmable calculator. The use of electronic equipment capable of being programmed to hold alphabetic or numerical data and/or formulae is prohibited. You may use a financial or scientific calculator, provided it meets these requirements.
- Answer each question on a new page. If a question has more than one part, leave six lines blank after each part.

PART I

Answer ALL questions in Part I

Note form is acceptable where this conveys all the necessary information

1. State **four** advantages and **four** disadvantages to the reinsured of quota share treaties. (8)
2. (a) State what an aggregate excess of loss treaty is. (3)
(b) Outline **two** advantages and the **two** disadvantages to the reinsured of aggregate excess of loss treaties. (4)
3. (a) Explain briefly the concept of reciprocity and the reasons for its use. (6)
(b) State **five** factors that need to be taken into consideration when selecting a reciprocal partner. (5)
4. Describe the main incentives for selling reinsurance. (12)
5. State the **three** advantages and **three** disadvantages of using capital market solutions compared to conventional reinsurance. (12)
6. An insurance company decided to retain, for its own account, any property risk with a sum insured up to £200,000 but wished to write individual risks up to £1 million.

It arranged a four-line surplus treaty to provide maximum reinsurance cover of £800,000.

Calculate for the following risks and losses:

Risk	Sum insured (£)	Loss (£)
A	50,000	
B	200,000	100,000
C	400,000	100,000
D	800,000	100,000
E	1,000,000	100,000

- (a) the reinsurance cessions to the surplus treaty; (5)
- (b) the claims recoveries from the reinsurer. (4)

The company wants to write a risk with a sum insured of £1.25 million and arranges a separate facultative proportional reinsurance for the balance.

- (c) Calculate how that risk and a £100,000 loss would be shared between the parties. (3)

7. Explain the purpose and use of common account protection, providing an example of its operation. (8)
8. Identify **three** uses of the Market Reform Contract. (6)
9. Outline **six** key provisions of an arbitration clause. (6)
10. Describe the key features of engineering insurance business, identifying the differences from other classes and state how this impacts on the way this class of business is reinsured. (14)
11. Outline the information required by a reinsurer for a new motor reinsurance treaty. (12)
12. Describe the role of rating agencies in evaluating reinsurers' security. (12)
13. Identify the class specific underwriting considerations that need to be taken into account when a reinsurer is asked to protect exploration and drilling risks. (12)
14. Explain briefly the use and effect of AVN 61 agreed value clause in aviation reinsurance. (8)

Questions continue over the page

PART II

Answer TWO of the following THREE questions
Each question is worth 30 marks

15. A company has a catastrophe cover for £5 million in excess of £1 million with one reinstatement at 100% pro rata to amount, with a final adjusted premium of £250,000. It is subject to 72 hours limit for windstorm and 168 hours limit for winter weather (burst pipes etc).

The total claims paid on each day are as follows:

Day	Loss amount (£)
1	900,000
2	200,000
3	500,000
4	300,000
5	750,000
6	700,000
7	350,000
8	650,000

- (a) Explain the purpose and operation of the hours clause. (7)
- (b) Calculate the maximum the reinsured can collect from its reinsurance treaty:
- (i) assuming the disaster is caused by winter weather; (7)
- (ii) assuming the disaster is caused by a windstorm. (8)
- (c) Calculate the reinstatement premiums payable in each case of part (b)(i) and (ii) above on collection of the losses on the catastrophe cover. (8)

16. You are a reinsurance buyer for a casualty insurance company and have received the following figures from the company's Board. The figures do not include incurred but not reported claims estimates.

Year	Reinsurance premium paid (£)	Reinsurance claims paid and outstanding (£)	Result	Claims ratio
2008	25,000,000	35,000,000	-10,000,000	140%
2009	35,000,000	25,000,000	10,000,000	71%
2010	30,000,000	20,000,000	10,000,000	67%
2011	30,000,000	25,000,000	5,000,000	83%
2012	40,000,000	20,000,000	20,000,000	50%
Total	160,000,000	125,000,000	35,000,000	78%

The Board have commented that the reinsurance premium paid has changed from year to year yet the change to the original business was minimal.

In view of the fact that the programme has been profitable to reinsurers over the five year period, they wondered why the company needed to buy reinsurance and not simply retain the profit made by reinsurers.

In the light of the Board's comments, explain:

- (a) the possible reasons for the fluctuation in the reinsurance premiums over the five year period; (10)
- (b) the reasons for continuing to purchase reinsurance; (12)
- (c) the possible action needed to reduce the reinsurance costs. (8)
17. The Property Reinsurance Company is looking to purchase a 50% quota share treaty with 25% ceding commission on gross ceded premium and 2.5% brokerage on gross ceded premium. The past five year figures are as follows:

Year	Gross premium (£)	Gross claims (£)
2008	5,000,000	2,500,000
2009	4,500,000	1,750,000
2010	6,250,000	3,000,000
2011	7,000,000	2,500,000
2012	7,500,000	20,000,000

During 2012 the company suffered a number of losses as a result of hurricane activity.

- (a) Calculate, **showing all your workings**, the annual and the overall net loss ratio for the treaty reinsurers over the five year period, had this arrangement already been in place. (16)
- (b) State the options available to control catastrophe exposure under the quota share treaty. (5)
- (c) Outline the alternative ceding commission structures that may be applicable to the proposed quota share treaty. (9)

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