

Exam CP-341

Date: Thursday, November 20, 2025

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This examination has 9 questions, numbered 1 through 9, with a total of 50 points.

The points for each question are indicated at the beginning of the question.

2. If a question asks for a recommendation, you must justify your answer
3. While every attempt is made to avoid defective questions, sometimes they do occur. If you believe a question is defective, the supervisor or proctor cannot give you any guidance beyond the instructions provided in this document.

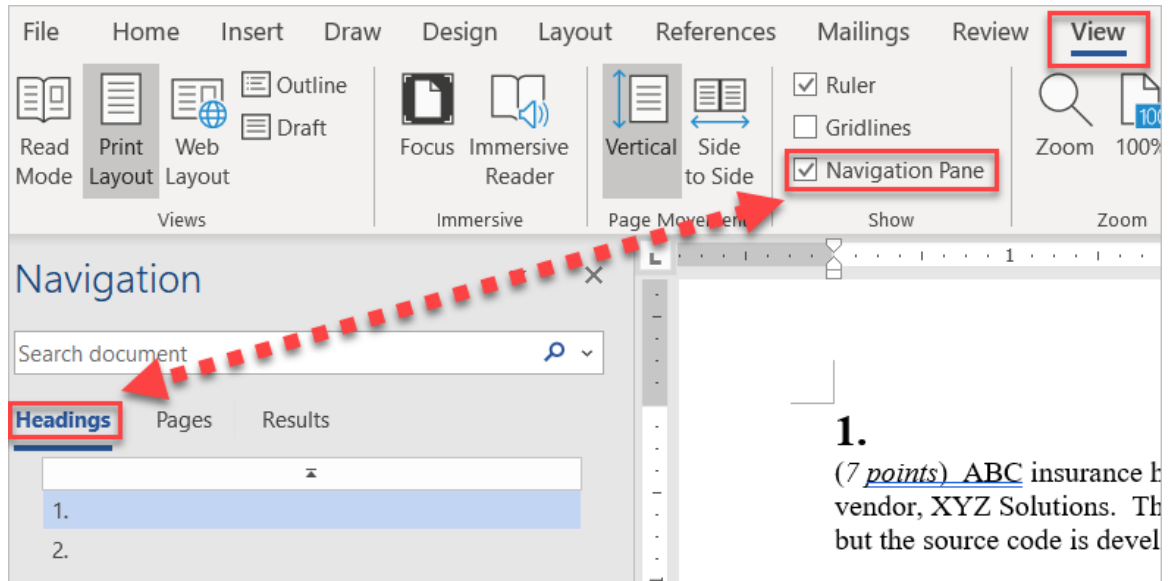
Written-Answer Instructions

1. Each question part or subpart should be answered either in the Word document or the Excel file as directed. Graders will only look at work in the indicated file.
 - a) In the Word document, answers should be entered in the box marked ANSWER. The box will expand as lines of text are added. There is no need to use special characters or subscripts (though they may be used). For example, β_1 can be typed as beta_1 (and ^ used to indicate a superscript).
 - b) In the Excel document, formulas should be entered. Performing calculations on scratch paper or with a calculator and then entering the answer in the cell will not earn full credit. Formatting of cells or rounding is not required for credit.
 - c) For each question part requiring an answer in Excel, (1) clearly identify the inputs to the calculations, (2) show the necessary interim calculations, adding rows and / or columns, if necessary, and (3) enter the final answer in some or all of the cells highlighted in yellow, as applicable in each circumstance. These cells should contain formulas with links to other calculations in the worksheet. Minimize the use of hard-coded figures and maximize the number of interim steps in the calculations that would demonstrate your line of thinking.
2. The answer should be confined to the question as set.
3. Prior to uploading your Word and Excel files, each file should be saved and renamed with your unique candidate number in the filename. To maintain anonymity, please refrain from using your name and instead use your candidate number.
4. The Word and Excel files that contain your answers must be uploaded before the five-minute upload period expires.

Navigation Instructions

Open the Navigation Pane to jump to questions.

Press Ctrl+F, or click View > Navigation Pane:



1.

(5 points) Maple Life, a Canadian life insurance company, has entered into a reinsurance agreement with FLR, which is an unregistered reinsurer. You are given the following information about the reinsurance contract:

Reinsurance Contract Held Assets	275
Reinsurance Contract Held Liabilities	0
Ceded Risk Adjustment	50
Aggregate Best Estimate Liabilities	200
Negative Reserves (Policy-by-Policy)	500
Term of the Contract	20 years

Assume no collateral or letters of credit have been posted by FLR.

(a) (2 points)

- (i) (1 point) Explain the required adjustments to Maple Life's LICAT Tier 1 and Tier 2 capital to reflect the reinsurance contract.

ANSWER:

- (ii) (1 point) Calculate the adjustments.

ANSWER:

FLR has proposed the following options for providing collateral for the unregistered reinsurance agreement:

1. A funds withheld arrangement lasting 5 years, after which full amount of all assets remaining in the funds withheld account is paid to FLR
2. A letter of credit issued by a bank equal to 100% of the aggregate best estimate liabilities

(b) (2 points) Calculate the LICAT capital credit that Maple Life would receive for each option.

ANSWER:

1. Continued

- (c) *(1 point)* Describe two alternative approaches that would provide Maple Life with full LICAT capital credit.

ANSWER:

2.

(4 points) You are an analyst at U.S.-based private equity (PE) firm XYZ, which specializes in asset management. XYZ is exploring expanding its business into life insurance companies for the first time, and you have been asked to research ABC Life.

ABC Life has the following investment portfolio:

Asset Category	Allocation
Corporate bonds	70%
Mortgage-backed securities	10%
Public Equity	5%
Cash	5%
Schedule BA Assets	5%
Real Estate	3%
Derivatives	2%

- (a) (1.5 points) Evaluate how the following asset classes' allocations and compositions would likely change with XYZ's involvement.

- Corporate bonds
- Mortgage-backed securities
- Schedule BA assets

ANSWER:

XYZ wants to form a strategic alliance with ABC Life.

- (b) (1.5 points) Explain the benefits of this relationship to each of XYZ and ABC Life.

ANSWER:

- (c) (1 point) Explain why Bermuda-based PE-influenced reinsurers using the Scenario-Based Approach may have a different investment mix relative to XYZ.

ANSWER:

3.

(5 points) You are a treaty manager at RBI, a large, well-established insurance company. RBI is considering ceding a portion of its large block of long-term care business via a quota share reinsurance agreement. There are multiple claim states and unique benefit structures. RBI's management has stated that cost minimization is a priority.

- (a) (2 points) Recommend the most appropriate reinsurance administration method.

ANSWER:

A recent internal audit discovered that some of RBI's life insurance policies, covered under an automatic reinsurance agreement, were issued in excess of the maximum allowed face amount or were issued above the maximum allowed issue age.

- (b) (1 point) Describe the potential consequences of this oversight.

ANSWER:

RBI's Chief Financial Officer suggests a reduction to the company's retention limits.

- (c) (2 points) Describe four potential consequences of such a reduction.

ANSWER:

4.

(4 points) AA Life is considering the following two reinsurance proposals for its whole life insurance portfolio:

1. A 50% quota share reinsurance arrangement.
2. An excess of 1 million per life 100% quota share with a premium rate of 1% of reinsured face amount.

AA Life has expected claims as follows:

Policy ID	Direct Face Amount	Direct Annual Premium
1	2,500,000	8,000
2	800,000	2,000
3	1,200,000	3,000
4	2,750,000	9,000

- (a) (1 point) Recommend which reinsurance proposal AA Life should select based on the above information.

The response for this part is to be provided in the Excel spreadsheet.

AA Life is considering the same two reinsurance proposals for its other products:

Product	Mass Market Term	High Net Worth Life Insurance
Underwriting	Standard	Rigorous medical and financial
Average Face Amount	200,000	5,000,000
Annual Face Amount Sales	940 million	450 million

- (b) (2 points) Explain which reinsurance proposal is better suited to each product.

ANSWER:

- (c) (1 point) Explain the characteristics of a portfolio that could benefit from a combination of the quota share and excess-of-loss reinsurance arrangement.

ANSWER:

5.

(7 points) RDR is a life and annuity reinsurer located in Bermuda that reinsures a \$10 billion block of annuities from a U.S. insurer under a coinsurance structure.

- (a) (2 points) Explain the impact of the Bermuda Monetary Authority (BMA) revised regulations regarding lapse and expense risk on RDR's capital and reporting requirements.

ANSWER:

You are given the following about RDR:

- The reinsurer is 100% owned by ECG, a private equity firm specializing in real estate and alternative asset management.
- The board of directors of RDR all hold senior leadership or investment oversight roles within ECG.
- RDR's current portfolio consists of 50% illiquid alternative assets, and ECG manages the investment portfolio to earn performance fees.
- ECG's asset managers can make their own decisions regarding asset class allocation and time for rebalancing.
- RDR uses the Scenario-Based Approach (SBA) to value its liabilities and reports an Enhanced Capital Requirement (ECR) ratio of 115%.

- (b) (3 points)

- (i) (1.5 points) Explain three regulatory concerns that the BMA might raise, in respect of RDR.

ANSWER:

- (ii) (1.5 points) Recommend one risk mitigation action to address each of the above concerns.

ANSWER:

5. Continued

RDR's Chief Risk Officer makes the following statements regarding the company's internal capital model:

1. The internal capital model considers moderately adverse conditions that include one or more unfavorable but not extreme events. This complies with both ASOP 22 and the BMA's Internal Model Approval Requirements.
2. Adopting the Solvency II standard formula for capital assessment can offset model risk concerns and align with international standards.

(c) (2 points) Critique each of the above statements.

ANSWER:

6.

(6 points) XYZ Life Insurance, a U.S. subsidiary within a large holding company system, is considering ceding a substantial portion of its reserves to an affiliated reinsurer. The transaction results in significant surplus relief to XYZ. The state insurance commissioner must be notified and their approval may be required before the transaction is finalized.

- (a) (2 points) Describe the impact of the proposed reinsurance transaction on XYZ Life's statutory balance sheet and net income.

ANSWER:

- (b) (0.5 points) Explain the potential effect of the transaction on XYZ Life's RBC ratio.

ANSWER:

- (c) (1.5 points) Describe potential areas of concern for the regulator as a result of this transaction.

ANSWER:

- (d) (2 points) Describe the key regulatory reporting and disclosure requirements for this inter-company reinsurance agreement under the NAIC Holding Company System Model Regulation.

ANSWER:

7.

(6 points) ABC has a \$1 billion in-force block of deferred fixed annuities of various maturities that were issued when interest rates were low. Many of the annuities will mature in the next few years. The pricing of the annuities assumed 60% of the contracts would be renewed. Current investment performance is leading to lower than expected renewals. You are considering using reinsurance to improve your investment performance.

You have contacted two reinsurers who have provided the following proposals for reinsuring the annuity block:

Proposal 1: DEF is a relatively new non-rated and non-authorized Bermuda-based reinsurer.

- Their structure incorporates segregated accounts for each prospective ceding company's business.
- Sidecars provide the capital for each segregated account.
- The investment manager for the sidecar would be a large, stable institutional investor.
- Reinsurance will be on a pure coinsurance basis with 80% quota share.
- Reserves will be overcollateralized in a trust at 102.5%.

Proposal 2: XYZ is a U.S. branch of a well-established Canadian reinsurer rated A by A.M. Best, A3 by Moody's, and qualifies as a certified reinsurer. It has assumed multiple blocks of deferred fixed annuities. XYZ has \$17 billion of assets under management and maintains top quartile investment returns.

- Reinsurance will be on a pure coinsurance basis with 75% quota share.

- (a) (4 points) Explain the advantages and disadvantages of each proposal from the cedant and reinsurer perspectives.

ANSWER:

- (b) (2 points) Explain how ABC can leverage the potential investment performance of each reinsurer to meet its objective of a 60% renewal rate.

ANSWER:

8.

(6 points) A U.S. insurance company has two blocks of inforce business. A description of each block and the reinsurance objectives are given below:

- Term block:
 - Policies have no cash value.
 - Reinsurance Objective: Reduce mortality risk and improve capital efficiency by reinsuring current retention on inforce issues.
- Flexible Premium Deferred Variable Annuity block:
 - Contracts have a GMDB equal to return of premiums.
 - Reinsurance Objective: Reduce required capital while maintaining investment control. The reinsurance structure should support long-term earnings stability and align with the nature of deferred annuity liabilities.

- (a) (2 points) Recommend an appropriate method of proportional reinsurance for each insurance block based on the stated objectives.

ANSWER:

- (b) (1 point) Describe one advantage and one disadvantage of the recommended method of reinsurance for the term block.

ANSWER:

- (c) (1 point) Describe one advantage and one disadvantage of the recommended method of reinsurance for the annuity block.

ANSWER:

- (d) (2 points) Explain four key reinsurance treaty considerations, from the reinsurer's perspective, on the annuity block.

ANSWER:

9.

(7 points) You are a consultant for a U.S. reinsurance company and have been asked to review a proposed indemnity reinsurance treaty with a U.S. life insurer.

The treaty contains the following conditions that a policy must meet to qualify for automatic reinsurance:

1. The policy is issued on plans described on the company's website.
2. The policy is issued in any U.S. state or territory.
3. The policy has been issued in accordance with the normal underwriting guidelines.

(a) (3 points)

- (i) (1 point) Critique the treaty's automatic reinsurance conditions.

ANSWER:

- (ii) (2 points) Describe four additional conditions that should be included in the treaty.

ANSWER:

9. Continued

The treaty contains a cut-through provision.

(b) (2.5 points)

(i) (0.5 points) Identify four key stakeholders for the provision.

ANSWER:

(ii) (0.5 points) Explain the primary benefit of the provision.

ANSWER:

(iii) (1 point) Explain the primary risk to the reinsurer under such a provision.

ANSWER:

(iv) (0.5 points) Recommend an important step to take prior to entering the agreement with this provision to mitigate the above risk.

ANSWER:

(c) (1.5 points) Describe three other clauses or provisions that address insolvency.

ANSWER:

END OF EXAMINATION*