

Exam CP-341

Date: Friday, March 27, 2026

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This examination has 8 questions, numbered 1 through 8, 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.

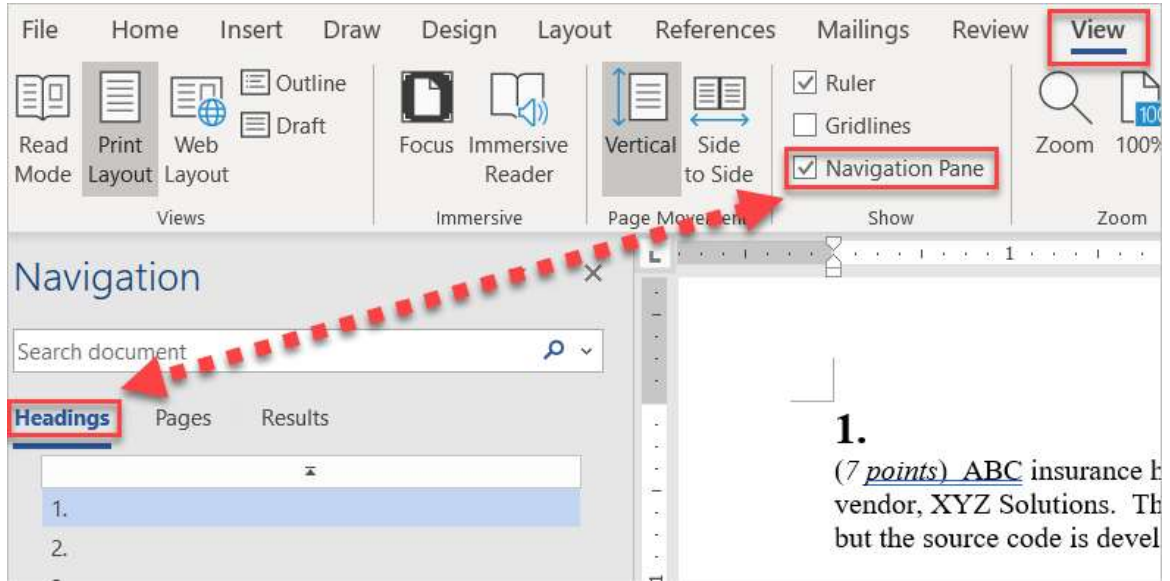
Written-Answer Instructions

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.

(8 points) ABC Insurance is reviewing its capital management strategy across key blocks of business. The company is exploring reinsurance arrangements to achieve surplus relief and risk transfer.

Your colleague makes the following statements:

1. YRT reinsurance provides sufficient relief from risks associated with annuities.
2. A modified coinsurance treaty would provide surplus relief if ABC were using an unauthorized reinsurer.
3. YRT reinsurance is typically more cost prohibitive than coinsurance or modified coinsurance.

(a) (2 points) Critique each statement.

ANSWER:

ABC is evaluating reinsurance for the following blocks:

- Participating whole life policies with large face amounts
- Universal life products with level death benefits and high reserves

For the whole life block, ABC is interested in entering either a coinsurance or YRT reinsurance agreement. ABC is primarily concerned with the mortality exposure of these policies, and it also wants to reduce the capital requirements associated with Risk Based Capital (RBC).

(b) (2 points) Recommend the form of reinsurance that should be used by ABC for its whole life block.

ANSWER:

1. Continued

For its universal life block, ABC is exploring the use of a special purpose vehicle (SPV) to manage redundant reserves associated with Actuarial Guideline AXXX.

(c) (4 points)

- (i) (2 points) Describe three conditions under which the use of an SPV might be a viable solution for ABC.

ANSWER:

- (ii) (1 point) Identify the components of the SPV that are utilized, in the event of losses, before losses are allocated to investors.

ANSWER:

- (iii) (1 point) Explain two other protections that the SPV structure provides to investors.

ANSWER:

2.

(8 points) XYZ Life has two main lines of business:

1. Guaranteed savings products with low guaranteed interest rates: The products are sold through banks, financial advisors, and brokers. Most products in this portfolio tend to be large and sold to an affluent target market.
2. Term life insurance products and medical insurance products: The products are sold through an in-house agency network. Most products in this portfolio are subject to surrender penalties and include tax incentives.

- (a) (2 points) Explain the conditions under which reinsurance on a medical insurance product would qualify as reinsurance under FASB rules.

ANSWER:

- (b) (2 points) Compare and contrast the following two methods of testing the presence of risk transfer in a reinsurance contract:

- 10-10 Rule
- Expected Reinsurer Deficit (ERD) Method

ANSWER:

- (c) (2 points) Describe two advantages and two disadvantages of entering into a mass lapse treaty, for each of XYZ Life's lines of business.

ANSWER:

- (d) (2 points) Recommend one alternative to entering into a mass lapse treaty for managing lapse risk, for each of XYZ Life's lines of business.

ANSWER:

3.

(5 points) DEF, a Canadian insurance company, is in the process of developing a template for reinsurance contract provisions.

- (a) (2 points) Explain the differences in DEF's capital treatment when ceding business to a registered reinsurer versus an unregistered reinsurer.

ANSWER:

Your colleague proposes that the following items be included in DEF's Reinsurance Risk Management Policy:

1. The Appointed Actuary can approve ceding limits up to 100% of all insurance risks.
2. The effectiveness of each reinsurance arrangement is to be monitored through annual profitability analysis.
3. The company has a list of three pre-approved reinsurers, each of which has been selected based on rating agency evaluations.
4. To minimize counterparty risk, the proportion ceded to any reinsurer shall not exceed 50% of the reinsurance pool.

- (b) (3 points) Critique each of the above proposed items.

ANSWER:

4.

(5 points) STIC is a large U.S. insurance company that sells life insurance and annuity products. STIC has reinsurance on its term insurance block of business with Reinsurer A, which is domiciled in the U.S. The reinsurance arrangement is uncollateralized.

- (a) (1 point) Explain why STIC might have minimal concerns about counterparty risk with this reinsurer.

ANSWER:

STIC would like to reinsure its significant whole life and universal life portfolio of business. Reinsurer B, a large multinational reinsurer has approached STIC about reinsuring this portfolio through its Bermuda entity. Reinsurer B has suggested a ModCo structure.

- (b) (1 point) Explain how the ModCo structure impacts the assets backing the reinsured business.

ANSWER:

STIC's Chief Legal Officer has reviewed the draft reinsurance agreement with Reinsurer B and states "if STIC monitors the quality of assets to be transferred to the collateral account, then all of the risk involved will be sufficiently mitigated."

- (c) (1 point) Critique the Chief Legal Officer's statement.

ANSWER:

Reinsurer C has offered a coinsurance arrangement with assets held in trust. STIC's Chief Legal Officer insists that the assets in trust should equal 110% of the statutory reserves and the cedent should retain full and unencumbered audit rights on the collateral account.

- (d) (1 point) Explain why the Chief Legal Officer would want these conditions.

ANSWER:

4. Continued

STIC has a mature and complex technology landscape and has seen a push in recent years to shorten the quarterly financial reporting cycle.

- (e) *(1 point)* Recommend the most appropriate reinsurance administration method.

ANSWER:

5.

(8 points) A company sponsors a defined benefit pension plan that is closed to new entrants and has frozen benefit accruals for current participants. The company's objective is to reduce the uncertainty associated with future funding requirements. It is willing to increase annual contributions or make a significant one-time payment to achieve this goal.

The company is evaluating three potential strategies to manage or transfer these pension liabilities:

1. Purchase a terminal funding annuity contract from a life insurer to fully transfer the plan's obligations.
2. Establish a special purpose vehicle (SPV) that would assume the pension liabilities, potentially supported by reinsurance or other capital arrangements.
3. Enter into a stop-loss reinsurance agreement under which a reinsurer guarantees that the plan's assets will achieve a minimum target level.

- (a) (2 points) Explain four of the risks that are transferred through a terminal funding contract and how transferring them supports the company's objective.

ANSWER:

- (b) (2 points) Explain how the company's ability to achieve its objective is affected by the following SPV investor expectations:

1. The company's funding of the SPV
2. The investor's return target
3. The investor's loss tolerance

ANSWER:

- (c) (2.5 points)

- (i) (1 point) Identify four typical characteristics of stop-loss insurance.

ANSWER:

5. Continued

- (ii) (1.5 points) Assess the extent to which each of the identified characteristics aligns with the company's objectives.

ANSWER:

- (d) (1.5 points) Recommend the most appropriate strategy for the company to manage or transfer these pension liabilities.

ANSWER:

6.

(6 points) A U.S.-based life insurance company is evaluating a reinsurance arrangement to manage its solvency and risk exposure. The company is considering two options:

1. A quota share treaty with a certified reinsurer based in the United Kingdom.
2. An excess-of-loss treaty with a non-admitted reinsurer domiciled in Bermuda.

- (a) (2 points) Assess the impact of NAIC accreditation and codification requirements on the company's ability to take reserve credit for each of the reinsurance options.

ANSWER:

- (b) (1 point) Explain how the company could secure reserve credit under NAIC rules for option #2.

ANSWER:

For option #1, you are considering two potential reinsurers, one with an A rating from S&P and another with a BBB rating from S&P.

- (c) (3 points) Explain the financial implications to the ceding company of the reinsurer's certification status and financial strength rating.

ANSWER:

7.

(4 points) A U.S. life insurer holds significant excess reserves on a closed line of business. The company is considering the formation of an affiliated offshore reinsurer to assume a significant share of this business to help it focus on new business.

An actuary at the company makes the following statements:

1. An offshore affiliated reinsurer will always require at least as much capital as we currently hold.
2. We will be able to generate a higher return since we will have fewer investment restrictions.
3. The structure will be tax-free in the U.S.
4. An alternative arrangement would be to seek private capital, which would require keeping the affiliated reinsurer onshore.

(a) (3 points) Critique each of the above statements.

ANSWER:

(b) (1 point) Explain three reasons why the cession of a significant quota share of this business to the affiliated reinsurer may be considered credit negative by the company's rating agency.

ANSWER:

8.

(6 points) A large insurance company is considering sponsoring the formation of a reinsurance captive to be owned by some of its largest producers of business.

- (a) (2 points) Explain the advantages and disadvantages of such a captive.

ANSWER:

The profits from the captive would be shared equally amongst the participating producers. A group of eligible producers is concerned that the benefits from their efforts would be unfairly shared through the captive.

- (b) (2.5 points)

- (i) (0.5 points) Assess the group's concern.

ANSWER:

- (ii) (1 point) Revise the captive ownership and participation structure to address this concern.

ANSWER:

- (iii) (1 point) Explain the drawbacks of your revised structure.

ANSWER:

- (c) (1.5 points) Recommend three specific proactive steps that the company can take to limit the captive's insolvency risk.

ANSWER:

END OF EXAMINATION*