

Exam GI 201

Date: Tuesday, March 24, 2026

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This examination has 12 questions numbered 1 through 12 with a total of 50 points.

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

2. 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.

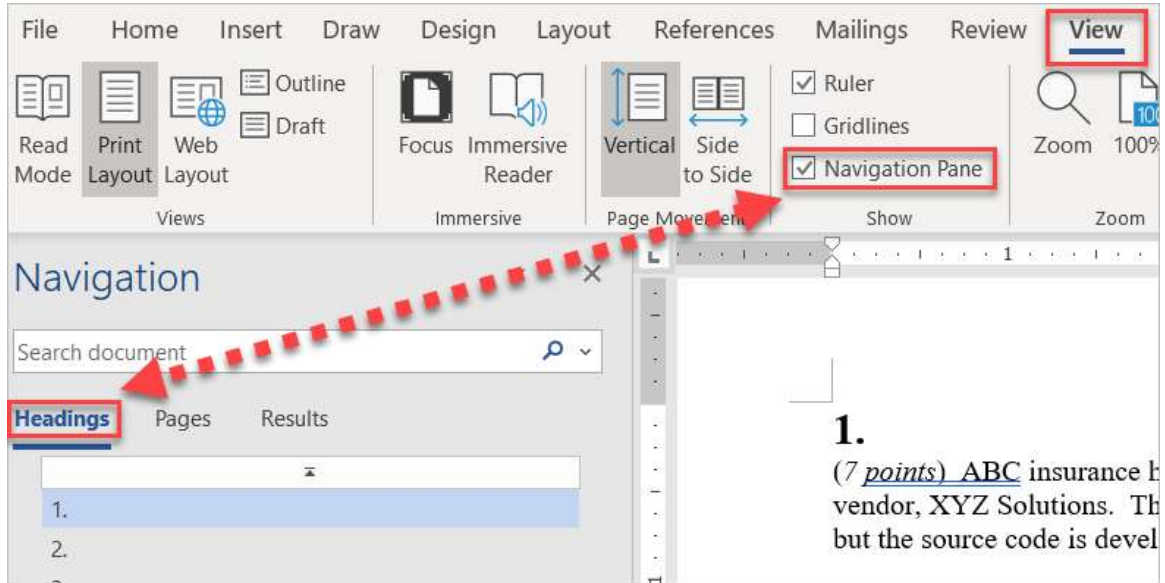
Written-Answer Instructions

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 σ^2 can be typed as sigma^2.
 - b) Calculations should be done in Excel and entered as formulas. 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. Rows can be inserted to the answer input area as required to provide space for your answer.
 - c) Individual exams may provide additional directions that apply throughout the exam or to individual items.
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.
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.

(4 points) Reinsurer QRS Re offers the following types of reinsurance contracts:

- I. Aggregate excess of loss (Agg XL)
- II. Per risk excess of loss (Risk XL)
- III. Per occurrence excess of loss (Occ XL)
- IV. Quota share (QS)
- V. Surplus share (SS)

The following three insurers are considering ceding business to QRS Re.

Insurer	Reinsurance Needs
Alpha Vehicle	Alpha is an automobile insurer that has begun writing long-haul trucking (LHT) policies but lacks LHT underwriting and pricing experience. Alpha requires a reinsurer that can assist it in the proper underwriting and pricing of these policies in addition to reducing the risk from writing LHT.
Beta General	Beta is a multi line insurer that includes writing product liability. It is concerned about the potential for extremely large claims that can weaken its financial position.
Gamma Home	Gamma is a property insurer in which most of its business is from homeowner's insurance. Gamma is concerned about poor underwriting results in a single year and wants to keep its annual loss ratio from exceeding 120%.

- (a) (3 points) Recommend which type of reinsurance contract offered by QRS Re best addresses the reinsurance needs for each of the three insurers. Justify your recommendations.

ANSWER:

Alpha:

Beta:

Gamma:

- (b) (1 point) Compare facultative to treaty reinsurance.

ANSWER:

2.

(4.5 points)

- (a) (1 point) Describe one advantage and one disadvantage of residual market coverage for personal lines automobile from the perspective of residual market policyholders.

ANSWER:

There are various mechanisms for providing residual market coverage. In the United States, these include joint underwriting associations (JUAs) and reinsurance facilities (RFs).

- (b) (2 points) Compare a JUA to a RF with respect to the process for providing coverage.

ANSWER:

- (c) (1.5 points) Describe the role of regulatory bodies in the operation of a residual market.

ANSWER:

3.

(5 points)

- (a) (1 point) Describe two potential concerns of regulators regarding usage-based-insurance (UBI) automobile insurance pricing.

ANSWER:

1:

2:

- (b) (1 point) Identify four policyholder benefits of the usage of UBI telematics.

ANSWER:

1:

2:

3:

4:

ABC Insurance, a personal-lines automobile insurer, implemented an advanced UBI telematics system for determining premiums. The system captures the following information each time the vehicle is driven:

- Distance
- Location(s)
- Total amount of driving time
- Amount of time driven during the night
- Amount of time heading into sunrise/sunset (that affects visibility)
- Amount of time driving in adverse weather-related road conditions (rain, ice, snow)
- Amount of time the driver appears to be impaired or not focused on driving
- Amount of time the vehicle is too close to the vehicle in front (considering vehicle speed)
- Number of times the vehicle was speeding, braking hard, accelerating too quickly, cornering too aggressively and making frequent lane changes.

3. Continued

ABC's system relies upon the driver's running the UBI app on their cell phone. ABC specifies that the policyholder must have a phone capable of running the app. Furthermore, the phone must be placed in a bracket (supplied by ABC) in such a way that the driver can be seen with the phone's front camera and conditions in front of the vehicle can be seen with the phone's rear camera.

The premium is determined as follows.

- A base premium which is 90% of the traditional premium is charged at policy inception.
- An artificial intelligence (AI) system analyzes the app information, as well as data from social media, to determine if there is to be a monthly surcharge or discount.

ABC uses surcharges to discourage policyholders from not running the app while driving the insured vehicle.

- (c) (3 points) Assess ABC's system with respect to at least three potential policyholder concerns.

ANSWER:

4.

(3 points)

- (a) (0.5 points) Describe an “adequate rate” from a regulator’s perspective.

ANSWER:

- (b) (1 point) Describe two reasons why an insurer may choose to file inadequate rates.

ANSWER:

1:

2:

- (c) (1.5 points) Describe how an insurer’s use of inadequate rates affects each of the following:

- (i) The insurer with inadequate rates
- (ii) Policyholders with this insurer
- (iii) Other insurers in the market

ANSWER:

(i):

(ii):

(iii):

5.

(4.5 points) There have been several notable mass torts in the United States including asbestos and tobacco.

Compare these two U.S. mass torts based on the following characteristics:

- (i) Issue with the product
- (ii) Number of defendants and plaintiffs
- (iii) Total cost of compensation to plaintiffs
- (iv) Courts' interpretation of insurance coverage
- (v) Implication of (iv)

ANSWER:

(i):

(ii):

(iii):

(iv):

(v):

6.

(6.5 points)

(a) (1 point) Describe the following with respect to an insurance contract.

- (i) Contract of *utmost good faith*
- (ii) The insured's reliance upon *utmost good faith*

ANSWER: (i): (ii):

An insurer may be able to void an insurance contract if it is determined by the courts that there is a violation of utmost good faith by the insured.

(b) (2 points) Describe the criteria courts use to make this determination for the following acts of the insured:

- (i) Concealment
- (ii) Misrepresentation

ANSWER: (i): (ii):

Negligence is the legal basis for many general insurance claims.

(c) (1.5 points) Describe three of the four essential elements of negligence that must be established by the injured party to prove negligence.

ANSWER:

6. Continued

To obtain relief from a court, an injured party must choose whom to sue.

- (d) (1 point) Explain how a person can be sued for the negligence of another party.

ANSWER:

Statutes of limitations and *statutes of repose* both limit the time period within which injured parties can file a suit.

- (e) (1 point) Compare these two statutes.

ANSWER:

7.

(3 points) Asset-liability management (ALM) is a risk management strategy used to mitigate interest/investment rate risk.

- (a) (1.5 points) Describe three differences between life insurance products and general insurance products that affect ALM strategies.

ANSWER:

1:

2:

3:

An ALM analysis is used by PQR General Insurance to select an investment portfolio with the objective of reducing any duration gap. PQR writes only homeowners insurance.

- (b) (1.5 points) Critique PQR using only financial statement information, such as reported equity, for this analysis.

ANSWER:

8.

(3 points) A consulting actuary, G. Goode, estimated unpaid claim liabilities for HIJ General Insurance Co.'s financial reporting as of December 31, 2025.

G. Goode's estimate was based on an analysis using data as of:	November 30, 2025
HIJ's books are closed for 2025 financial reporting on: <i>That is, data as of December 30, 2025 is used for the HIJ's financial reports as of December 31, 2025.</i>	December 30, 2025
G. Goode's estimate, using November 30, 2025 data, was completed on:	January 4, 2026
G. Goode was provided with data as of December 30, 2025 on:	January 14, 2026
G. Goode updated their year-end 2025 estimate of claims liabilities on: <i>This estimate of claim liabilities used the estimate of ultimate claims, based upon the November 30, 2025 data, and the paid claims for calendar year 2025.</i>	January 15, 2026
G. Goode completed the report on HIJ's year-end 2025 claims liabilities on:	January 18, 2026
HIJ's 2025 financial reports were filed with regulators on: <i>This filing included G. Goode's report on HIJ's unpaid claims liabilities as of December 31, 2025.</i>	January 20, 2026

Identify the following dates for G. Goode's report on HIJ's claim liabilities. Justify your identification for each of these dates.

- (i) Accounting date
- (ii) Valuation date
- (iii) Review date

ANSWER: (i): (ii): (iii):
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9.

(4 points) Claim liabilities include an estimate for incurred but not reported (IBNR) reserves. IBNR reserves can be categorized into several distinct components.

- (a) (0.75 points) Describe three of these components.

ANSWER:

A premium liability is established when the remaining coverage as of an accounting date is expected to be unprofitable. U.S. GAAP refers to this as premium deficiency reserves (PDR) while IFRS 17 refers to this as onerous contract liabilities (OCL).

- (b) (1.25 points) Identify which of PDR and OCL is more likely to be reported for a general insurer preparing both U.S. GAAP and IFRS 17 financial statements. Justify your identification.

ANSWER:

- (c) (2 points) Compare the components of insurance revenue under IFRS 17 to that for U.S. GAAP.

ANSWER:

10.

(4.5 points) An insurer's ORSA may use *reverse stress tests*.

(a) (2 points) Describe the following:

- (i) An ORSA reverse stress test
- (ii) Two reasons that reverse stress tests can be an important part of an ORSA

ANSWER:

(i):

(ii):

An emerging risk that insurance supervisors expect to see addressed in the ORSA report is the risk from changing environmental conditions (i.e., climate-change related risk). Typically, climate change risk for insurers is viewed as having three main elements.

(b) (1.5 points) Provide the following:

- (i) Identification of the three main elements of climate change risk
- (ii) An example for two of the three main elements identified in (i)

ANSWER:

(i):

(ii):

An insurer recently experienced a major operational loss due to cyber-failure. While the insurer's prior ORSA examined cyber risks, none of the scenarios considered resulted in a major operational loss. The insurer's ORSA development team is now preparing for the next ORSA cycle.

(c) (1 point) Identify two questions that should be asked by the insurer's ORSA development team as they begin the next ORSA cycle.

ANSWER:

1:

2:

11.

(3 points) The International Actuarial Association (IAA) International Standard of Actuarial Practice 1 (ISAP 1) covers model validation and documentation.

- (a) (1 point) Describe any two of the three assessments required by ISAP 1 regarding model validation.

ANSWER:

1:

2:

The actuary for an insurer is going to use a third-party model in their analysis. This actuary prepared documentation on the model that provides the following sections:

- I. Scope
- II. Methodology
- III. External data sources
- IV. Construction of the model
- V. Model operation
- VI. Statistical quality
- VII. Application

The actuary intends for this documentation to comply with ISAP 1. In its current form, this documentation is not in compliance with ISAP 1.

- (b) (1.5 points) Propose changes to the document, by the addition or deletion to the sections listed above, so that it will comply with ISAP 1.

ANSWER:

- (c) (0.5 points) Identify two purposes of documentation retention under ISAP 1.

ANSWER:

1:

2:

12.

(5 points) The level of equity (adjusted for inflation) held by the general insurance industry increased significantly from the 1970s to the 2000s. Additionally, the premium to equity ratio for the industry decreased significantly over that period.

- (a) (1 point) Identify four contributing factors for these trends.

ANSWER:

General insurance companies may allocate equity to blocks of business to estimate the ROE for that block.

- (b) (2 points) Describe four reasons that make this allocation complicated.

ANSWER:

1:

2:

3:

4:

A financial ratio analysis of an insurer assumes that:

- I. Financial ratios should exhibit stability.
- II. Financial ratios should reveal the causes of the outcome.

- (c) (2 points) Explain why each of these assumptions is required.

ANSWER:

I:

II:

****END OF EXAMINATION****