

# Exam GI 201

**Date:** Friday, November 21, 2025

## 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.

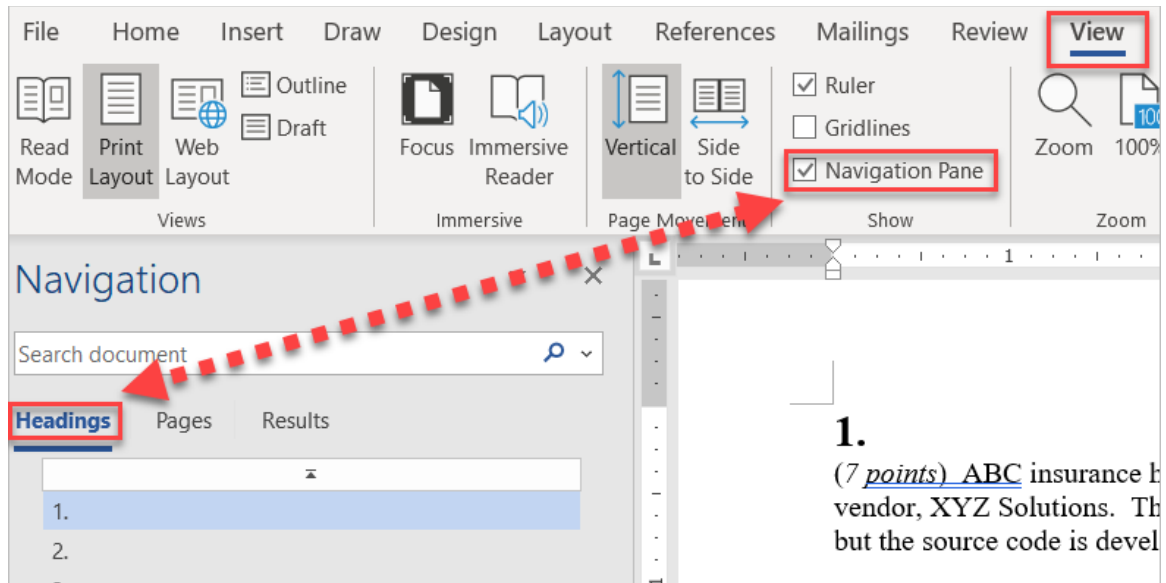
### Written-Answer Instructions

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,  $\beta_1$  can be typed as beta\_1 and  $\sigma^2$  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.

(4.5 points) An insurer's claims department is responsible for the assessment of claims. This involves establishing case reserves for each claim. There are several different methods used by insurers for this including: average value, expert system, formula and individual case.

Each method is described by:

- I. The process for setting case reserves, and
- II. The type of claims that typically have their case reserves set under the method.

- (a) (1.25 points) Compare the *average value method* to the *individual case method* with respect to both I and II.

ANSWER:

- (b) (1.25 points) Compare the *formula method* to the *expert system method* with respect to both I and II.

ANSWER:

An insurer's underwriting department typically includes both line underwriters and staff underwriters.

- (c) (1 point) Compare the underwriting activities of line underwriters to staff underwriters.

ANSWER:

Under certain circumstances, an insurer may make use of a managing general agent (MGA).

- (d) (1 point) Describe those circumstances.

ANSWER:

## 2.

(3 points)

- (a) (0.5 points) Describe the purpose of a residual insurance market.

ANSWER:

- (b) (0.5 points) Explain why residual market rates are frequently inadequate.

ANSWER:

There are both short-term and long-term costs from residual market rate inadequacy.

- (c) (1 point) Explain who are the bearers of the short-term and long-term costs.

ANSWER:

There are several different mechanisms for serving the residual market. One of these mechanisms is a special-purpose insurer with government backing.

- (d) (1 point) Describe the structure and operation of another residual market mechanism.

ANSWER:

### 3.

(4 points)

- (a) (0.75 points) Describe the concept of price optimization for insurance pricing.

ANSWER:

- (b) (0.75 points) Describe a regulatory concern for insurance pricing using big data.

ANSWER:

Some jurisdictions encourage marketing of pay-as-you-drive (PAYD) automobile rating plans, but do not support pay-how-you-drive (PHYD) automobile rating plans.

- (c) (1 point) Compare the PAYD and PHYD methods of auto insurance pricing.

ANSWER:

- (d) (1.5 points) Explain why a jurisdiction may encourage PAYD rating, while disapproving PHYD rating.

ANSWER:

#### 4.

(4.5 points) In the United States, the federal government provides flood insurance through the National Flood Insurance Program (NFIP).

- (a) (1 point) Explain why the U.S. government created the NFIP.

ANSWER:

- (b) (0.75 points) Describe NFIP insurance cross-subsidies, including their purpose.

ANSWER:

Providing flood insurance is one of the two main policy goals of the NFIP.

- (c) (0.75 points) Describe the other key policy goal.

ANSWER:

Over the past ten years, private sector insurers have been increasing their share of flood insurance policies in the United States.

- (d) (1.5 points) Describe one advantage and two disadvantages of increasing private sector involvement.

ANSWER:

Advantage:

Disadvantage 1:

Disadvantage 2:

- (e) (0.5 points) Identify two barriers to private sector involvement in providing flood insurance in the United States.

ANSWER:

1:

2:

## 5.

(4.25 points) The civil law system and the common law system are two of the legal systems used in many jurisdictions for both torts and crimes.

- (a) (0.5 points) Contrast torts with crimes.

ANSWER:

- (b) (1.5 points) Describe three differences between the civil law system and the common law system.

ANSWER:

1:  
2:  
3:

Some jurisdictions implement a no-fault system of compensation for automobile bodily injury.

- (c) (1.75 points) Explain why a jurisdiction may prefer a no-fault system over a tort law system for automobile bodily injury compensation.

ANSWER:

- (d) (0.5 points) Describe the distinguishing characteristic of a modified no-fault system compared to a pure no-fault system.

ANSWER:

## 6.

(6 points) Tort awards may be classified as:

- I. Economic
- II. Non-Economic
- III. Non-Compensatory

- (a) (1.5 points) Identify the classification for each of the following types of tort awards in the table below.

ANSWER:	
Tort Award	Classification
Pain and suffering	
Additional living expenses	
Nominal damages	
Loss of future earnings	
Punitive damages	
Emotional Distress	

- (b) (0.5 points) Identify two external information sources for estimating tort cost trends that are commonly used by insurers.

ANSWER: 1: 2:
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- (c) (1 point) Compare the two sources identified in part (b) regarding their use as a tort cost trend estimator.

ANSWER:
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- (d) (0.5 points) Define social inflation based upon a broad interpretation.

ANSWER:
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## 6. Continued

- (e) *(1 point)* Describe two strategies used by plaintiffs' lawyers that have contributed to social inflation.

ANSWER:

1:

2:

- (f) *(1 point)* Describe two societal attitude shifts that have contributed to social inflation.

ANSWER:

1:

2:

Torts may be considered as either a routine tort or a mass tort.

- (g) *(0.5 points)* Identify two characteristics of a mass tort claim that distinguish it from a routine claim.

ANSWER:

1:

2:

## 7.

(3.5 points) Behavioral finance drops the traditional assumption of rational decisions in efficient markets. Decision making often includes patterns of cognitive bias such as overconfidence and mental accounting.

- (a) (1.5 points) Identify and describe two other patterns of cognitive bias as discussed by Ritter in *Behavioral Economics*.

ANSWER:

1:

2:

- (b) (2 points) Evaluate whether an insurance market for personal lines property is an efficient market.

ANSWER:

## 8.

(4 points) Accounting for insurance liabilities considers “pre-claim liabilities” and “post-claim liabilities” separately. They are often referred to as “premium liabilities” and “claim liabilities.”

- (a) (1.5 points) Describe these two types of insurance liabilities for a general insurance company, using an example for each.

ANSWER:

Pre-claim (Premium) Liabilities:

Post-claim (Claim) Liabilities:

- (b) (1 point) Describe two key differences between life insurance and general insurance with respect to insurance liabilities.

ANSWER:

1:

2:

U.S. accounting standards use the concept “actuarial central estimate,” while Solvency II uses the concept “best estimate” for the estimation of claim liabilities.

- (c) (1.5 points) Compare these two concepts, including the treatment of uncertainty and risk margins.

ANSWER:

## 9.

(4.5 points)

- (a) (1.5 points) Compare assumed reinsurance to primary insurance for a general insurance company with respect to the following:

- (i) Report lag for claims
- (ii) Reporting for lines of business
- (iii) Treatment of loss adjustment expenses (LAE)

ANSWER:

(i):

(ii):

(iii):

- (b) (0.75 points) Compare IFRS 17 and U.S. statutory accounting with respect to the balance sheet reporting of ceded claims liabilities, assuming that the ceded reinsurance transfers significant insurance risk.

ANSWER:

- (c) (1 point) Describe two sources of credit risk that exist for an insurer regarding its ceded claim liabilities.

ANSWER:

1:

2:

- (d) (0.5 points) Identify the default measurement standard for the valuation of investments under IFRS 9.

ANSWER:

- (e) (0.75 points) Describe the situation under IFRS 9 in which fixed-income securities do not use the default measurement standard. Include the standard that should be used in the situation you just described.

ANSWER:

## 10.

(4 points) There are two levels of capital requirements under Solvency II, the Solvency Capital Requirement (SCR) and the Minimum Capital Requirement (MCR).

- (a) (0.75 points) Identify the statistic used to define each capital standard, and the required mathematical relation between the two the standards.

ANSWER:

Insurance companies are given the choice of using an internal capital model or the Solvency II Standard Formula for calculating the SCR and MCR.

- (b) (1 point) Describe two advantages and two disadvantages for using the Standard Formula.

ANSWER:

The Solvency II Standard Formula uses an average across all companies for the standard deviation of the one-year claims development ratio to develop a generic capital charge for reserving risk. The formula uses a volume-weighted average to calculate this factor.

- (c) (1.5 points) Explain why a volume-weighted average was selected over a straight average across all companies.

ANSWER:

Elements within the Solvency II SCR for catastrophe risk include a dependance structure in which there is either positive correlation or no correlation.

- (d) (0.75 points) Describe how this dependency structure is applied in the formula.

ANSWER:

## 11.

(4 points)

- (a) (1 point) Compare actuarial standards of practice and regulations as they relate to the provision of actuarial services.

ANSWER:

The International Actuarial Association (IAA) publishes International Standards of Actuarial Practice (ISAPs).

- (b) (0.5 points) Describe the role of the IAA's ISAPs.

ANSWER:

ISAP 1 outlines considerations for an actuary's selection of the materiality standard.

- (c) (0.5 points) Describe the situation in which the actuary does not determine the materiality standard, as stated in ISAP 1, *General Actuarial Practice*.

ANSWER:

- (d) (0.5 points) Describe the limitation on the size of the selected materiality standard as stated in ISAP 4, *IFRS 17 Insurance Contracts*.

ANSWER:

- (e) (1 point) Describe two potential pitfalls with the application of materiality.

ANSWER:

1:  
2:

Related to the concept of materiality is the principle of proportionality (PoP).

- (f) (0.5 points) Describe how the PoP applies to actuarial services.

ANSWER:

## 12.

(3.75 points) Many jurisdictions require insurance companies to periodically conduct an Own Risk and Solvency Assessment (ORSA) process.

- (a) (0.75 points) Describe what an ORSA is intended to provide.

ANSWER:

- (b) (2 points) Describe the benefit of ORSA reporting to the following parties regarding an insurer:

- (i) Board of Directors
- (ii) Senior Management
- (iii) Employees
- (iv) Regulators

ANSWER:

- (i):
- (ii):
- (iii):
- (iv):

There are limitations to consider regarding the ORSA process. These include the “risk of incompleteness” and the “risk of unnecessary complexity.”

- (c) (1 point) Describe what is referred to in each of these risks for an ORSA process.

ANSWER:

Risk of incompleteness:

Risk of unnecessary complexity:

**\*\*END OF EXAMINATION\*\***