

Exam GHSPC

Date: Friday, May 3, 2019

Time: 2:00 p.m. – 4:15 p.m.

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This examination has a total of 40 points.

This exam consists of 7 questions, numbered 1 through 7.

The points for each question are indicated at the beginning of the question.
2. Failure to stop writing after time is called will result in the disqualification of your answers or further disciplinary action.
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 on the exam booklet.

Written-Answer Instructions

1. Write your candidate number at the top of each sheet. Your name must not appear.
2. Write on only one side of a sheet. Start each question on a fresh sheet. On each sheet, write the number of the question that you are answering. Do not answer more than one question on a single sheet.
3. The answer should be confined to the question as set.
4. When you are asked to calculate, show all your work including any applicable formulas.
5. When you finish, insert all your written-answer sheets into the Essay Answer Envelope. Be sure to hand in all your answer sheets because they cannot be accepted later. Seal the envelope and write your candidate number in the space provided on the outside of the envelope. Check the appropriate box to indicate Exam GHSPC.
6. Be sure your written-answer envelope is signed because if it is not, your examination will not be graded.

Recognized by the Canadian Institute of Actuaries.

Tournez le cahier d'examen pour la version française.

****BEGINNING OF EXAMINATION****

1. (4 points)

(a) (2 points)

- (i) Define a deterministic model including when it is helpful.
- (ii) Define a stochastic model including when it is helpful.
- (iii) Explain which model is preferred when pricing stop loss reinsurance business.
- (iv) Explain which model is preferred when evaluating the potential of future losses to completely absorb a company's surplus.

(b) (2 points) Describe the essential characteristics of ensuring a good model.

2. (7 points)

- (a) (3 points) List relevant and material disclosures required in ASOP 23.
- (b) (4 points) Assess how disclosures in the Proposed 2016 Cancer Claim Cost Valuation Tables study satisfy the list identified in Part A.

3. (5 points) You are the chief actuary for XYZ insurance company. The two largest holdings in XYZ's asset portfolio are stock in their affiliated company located in the United States and common stock for ABC company, a non-insurance company. You have been asked by your CFO to discuss the Health RBC formula.

- (a) (1 point) Describe how the risk parameters were developed for H2 (Underwriting Risk) in the Health Risk-Based Capital (RBC) formula.
- (b) (2 points) Compare and contrast the risk factors for XYZ's two largest holdings.

In late 2017, the United States government passed the Tax Cut and Jobs Act which effectively lowered the corporate tax rate from 35% to 21%.

- (c) (2 points) Evaluate the ramifications to the company's target Health RBC with regards to the reduced corporate tax rate.

- 4.** (5 points) You are working for a new co-op operating at the introduction of the ACA.
- (a) (1 point) Describe ACA-related federal policies that increased chances that co-ops would fail.
 - (b) (2 points) Recommend how to mitigate the risk in your co-op because of these federal policies. Justify your answer.
 - (c) (1 point) Define the following terms, per ASOP 47:
 - (i) Risk appetite
 - (ii) Risk tolerance
 - (iii) Risk mitigation
 - (iv) Risk limit
 - (d) (1 point) Describe items the actuary should consider when determining risk tolerance, per ASOP 47.

5. (7 points) You are given the following seller's actuarial appraisal:

	Existing Business (Millions)	Future Business (Millions)
Subtotal Pre-tax Earnings	\$320	\$200
Federal Income Tax	\$100	\$160
Cost of Capital based on 200% RBC	\$40	\$50

The present value of distributable cash flow is \$450 million.

- (a) (2 points)
- (i) Calculate the Adjusted Book Value. Show your work.
 - (ii) Critique the actuarial appraisal from the buyer's perspective.
- (b) (1 point) Verify the accuracy of the following four statements with respect to the major components of Actuarial Appraisal Value. Justify your answers.
- (i) Adjusted book value is equal to the net worth of the insurance company on a GAAP basis.
 - (ii) Asset valuation reserve is typically included in adjusted book value.
 - (iii) The opportunity cost of maintaining capital is included in order to meet regulatory requirements, but not management requirements.
 - (iv) The difference in an actuarial appraisal value and an embedded value is the adjusted book value.
- (c) (3 points)
- (i) Describe two key items sellers typically include in their actuarial appraisal report, in addition to the actuarial appraisal value.
 - (ii) Describe adjustments buyers typically make to the seller's analysis in developing their own actuarial appraisal.

5. Continued

You have been advised that a fundamental change in business operations is expected after sale.

- (d) *(1 point)* Recommend the method you would use in developing operating expenses after the sale. Justify your recommendation.

6. (7 points)

- (a) (4 points) Describe the common features of Medicare prospective payment systems.
- (b) (2 points) Describe the challenges with Patient Classification Systems based on coding systems.
- (c) (1 point)
 - (i) Explain how episodes of care provide a more comprehensive unit of analysis than more traditional utilization comparisons.
 - (ii) Explain the difference between the use of the *AgeSex* weighting in Episode Risk Groups (ERGs) prospective risk scores and retrospective risk scores.

7. (5 points)

(a) (1 point) Describe how a provider group-based ACO is expected to generate savings.

A Medicare ACO wants to share savings with CMS. In the first year, the ACO is not meeting or exceeding required quality standards and has fallen below 5,000 members.

(b) (2 points)

(i) Describe the requirements for the Medicare ACO to share savings with CMS.

(ii) Explain how the Medicare ACO's situation relates to the requirements.

(c) (1 point) Describe how the ACO's updated certified participant list is used.

(d) (1 point) For ACO risk adjustment:

(i) Define:

- a. newly-assigned beneficiaries
- b. continuously-assigned beneficiaries
- c. average risk ratio

(ii) Describe the basis for newly-assigned and continuously-assigned beneficiaries and when risk adjustment is applied.

****END OF EXAMINATION****

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