SOCIETY OF ACTUARIES

Group and Health Core Exam – U.S.

Exam GHCORU

MORNING SESSION

Date: Wednesday, October 31, 2018
Time: 8:30 a.m. – 11:45 a.m.

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This examination has a total of 100 points. It consists of a morning session (worth 60 points) and an afternoon session (worth 40 points).

   a) The morning session consists of 8 questions numbered 1 through 8
   b) The afternoon session consists of 6 questions numbered 9 through 14.

   The points for each question are indicated at the beginning of the question. Questions 3 and 10 pertain to the Case Study.

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 morning or afternoon session for Exam GHCORU.

6. Be sure your written-answer envelope is signed because if it is not, your examination will not be graded.

Canadian version of this exam is recognized by the Canadian Institute of Actuaries.

Tournez le cahier d'examen pour la version française.

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Exam GHCORU

CASE STUDY INSTRUCTIONS

The case study will be used as a basis for some examination questions. Be sure to answer the question asked by referring to the case study. For example, when asked for advantages of a particular plan design to a company referenced in the case study, your response should be limited to that company. Other advantages should not be listed, as they are extraneous to the question and will result in no additional credit. Further, if they conflict with the applicable advantages, no credit will be given.

****BEGINNING OF EXAMINATION****
Morning Session

1. (*5 points*) Sixpoint Company is offering a retiree health insurance plan to its employees.

(a) (*1 point*) Describe ways in which administering plan benefits for working employees may be different than for retirees.

Full eligibility for the plan is age 60 and 20 years of service. Sixpoint pays 100% of the costs for single coverage. You are given the following information:

- Annual Discount Rate: 4%
- Trend: 8% decreasing by 0.5% until 5% per annum.
- Current pre-65 annual claim cost per capita: $9,000.
- Current post-65 annual claim cost per capita: $2,500.
- Expected termination age: 70
- All mortality is at the expected age
- No terminations before expected mortality
- No plan assets
- No unamortized balances
- Standard retirement age is 65 years old
- All benefit obligations are calculated at the beginning of the year

Time	Compound Discount	Trend Rate	Cumulative Trend
0	0.9615	1.080	1.0800
1	0.9246	1.075	1.1610
2	0.8890	1.070	1.2423
3	0.8548	1.065	1.3230
4	0.8219	1.060	1.4024
5	0.7903	1.055	1.4795
6	0.7599	1.050	1.5535
7	0.7307	1.045	1.6234
8	0.7026	1.040	1.6884

Employee	Status	Age at Hire	Current Age	Retirement Age
W	Working	25	60	Standard
X	Working	43	61	Upon full eligibility
Y	Retired		65	65
Z	Retired		68	65

(b) (*4 points*) Calculate Sixpoint's accumulated postretirement benefit obligation. Show your work.

2. (*4 points*) You are an actuary for a health insurance company complying with NAIC Annual Statement Instructions.

(a) (*3 points*) Describe the types of Statements of Actuarial Opinion for health insurance liabilities and assets you may prepare according to applicable standards of practice, and when an actuary may issue each type.

You are given the following situations:

- Less than $1 million total premiums and less than $1 million in combined expense reserves
- Cost of writing the opinion is 2% of the assumed annual premiums
- The actuary is calculating the Retiree Group Benefit Obligations
- Statement of actuarial opinion is meant to fulfill a contractual obligation that includes the review of a work product of another actuary

(b) (*1 point*) Explain whether each situation above may exempt an actuary from the actuarial opinion requirements set forth in the standards of practice.

Question 3 pertains to the Case Study

3. (*12 points*) You are an actuary at Skyfall assisting Goldfinger Insurance Company (GIC). While reviewing GIC's 2015 financial statements, you discover an error in the Statutory -- not GAAP -- claims unpaid reserves that were reported. The GIC actuarial model estimate of the claims unpaid reserve with no conservatism is $15,423,000.

(a) (*2 points*) Recommend a reasonable GAAP unpaid claims reserve amount. Justify your answer.

(b) (*6 points*) Revise the GIC year-end 2015 financial statements, based on the GAAP claims unpaid reserves recommendation from (a). Show your work.

(c) (*2 points*) Describe the four factors building to Return on Equity (ROE) per the DuPont Formula.

(d) (*2 points*) Assess the impact of reserve restatement on GIC's 2015 ROE. Show your work.

4. (*6 points*)

(a) (*5 points*) For each of the components of the Affordable Care Act (ACA) listed below:

- Cost Sharing Reductions
- Risk Corridor
- Risk Adjustment
- Federal Reinsurance
- Metal Level Actuarial Corridors
- Silver and Gold Plan Mandate
- Contraception Coverage Exemptions
- Federal Small Group Exchange

(i) (*2 points*) Describe the initial purpose of each component.

(ii) (*3 points*) Describe any changes that affected each component between enactment of the ACA and adoption of regulations by December 2017.

(b) (*1 point*) For both the Minimum Value Calculator and the Actuarial Value Calculator:

(i) Describe the intended use for each calculator.

(ii) Describe the non-standard plan design exception calculation options.

5. (*8 points*)

(a) (*2 points*)

(i) Describe the financing challenges facing the Medicare program.

(ii) Identify potential solutions.

Your client is an employer with a large population of retirees that has been covering prescription drugs with coverage using the Retiree Drug Subsidy (RDS) program. You decide to propose a Series 800 Employer Group Waiver Plan (EGWP) as a potential replacement.

(b) (*3 points*) Explain the benefits of an EGWP compared to these two options:

- Directly contracting with CMS
- Keeping the current plan

(c) (*3 points*) For 2019, you are given the following:

- The Part D cost threshold is $415
- The cost limit is $8,500.
- The number of retirees is 1,000
- The employer's drug costs in this corridor are expected to be $2,000,000.
- Switching to the EGWP is expected to result in total plan cost savings equal to 110% of the 2019 RDS.
- There is a one time administrative cost of $40,000 for printing new brochures, employee communication, and support.

(i) Calculate the 2019 RDS. Show your work.

(ii) Evaluate whether or not the switch to the EGWP will be worth the additional administrative cost. Show your work.

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6. (*10 points*) Your company has four lines of business, all within a single state in the United States. In 2016, the lines produced the following financial results:

Lines of Business	Medical Claims	Premiums/Fees Including Commission	Member Months
Fully Insured Small Group – ACA	$37,042,000	$56,988,000	113,000
Fully Insured Small Group – Grandfathered	$16,807,000	$28,012,000	51,000
Self Insured Large Group	$4,220,000	$409,000	13,000
Fully Insured Large Group	$5,553,000	$7,405,000	17,000

Additional information has been provided to you from the finance and accounting areas, as follows:

Lines of Business	Federal Taxes	State Taxes	Local Taxes
Fully Insured Small Group – ACA	$3,419,000	$1,710,000	$1,140,000
Fully Insured Small Group – Grandfathered	$1,681,000	$840,000	$560,000
Self Insured Large Group	$25,000	$12,000	$8,000
Fully Insured Large Group	$444,000	$222,000	$148,000

Lines of Business	Commission Rate
Fully Insured Small Group – ACA	2% of Premium
Fully Insured Small Group – Grandfathered	1% of Premium
Self Insured Large Group	$1.50 Per Member per Month
Fully Insured Large Group	$2.50 Per Member per Month

6. Continued

You are also given this table of per member per month (PMPM) and per member per year (PMPY) values:

Programs	Fully Insured Small Group ACA	Fully Insured Small Group Grandfathered	Self Insured Large Group	Fully Insured Large Group
Patient overpayment protection	$0.50 PMPY	$0.50 PMPY	$0.50 PMPY	$0.50 PMPY
Maternity Health Improvement	$0.75 PMPM	$0.75 PMPM	$0.75 PMPM	$0.75 PMPM
Reduce Readmissions	$2.00 PMPM	$2.00 PMPM	$2.00 PMPM	$2.00 PMPM
Smoking Cessation	N/A	N/A	$0.30 PMPM	$0.30 PMPM
Over-billing fraud detection	$5.00 PMPY	$5.00 PMPY	N/A	N/A
Diabetic outreach program	N/A	N/A	$1.50 PMPM	N/A
Electronic Health Record Dr. to Dr. sharing technology	$1.00 PMPM	$1.00 PMPM	N/A	N/A
Mental Health awareness and outreach program	$3.00 PMPY	$3.00 PMPY	N/A	$3.00 PMPY

(a) (*6 points*) Calculate the ACA Medical Loss Ratio (MLR) and the Traditional MLR for each line of business. Assume new business is not a significant portion of any line of business. Show your work.

You are given the following credibility table:

.**Life Years**	**Base Credibility Factor**
<1,000	No Credibility
1,000	8.3%
2,500	5.2%
5,000	3.7%
10,000	2.6%
25,000	1.6%
50,000	1.2%
>75,000	Full Credibility

(b) (*2 points*) Calculate the total MLR payment to be made to members from each line of business. Assume no deductible adjustments and linear interpolation for credibility. Show your work.

(c) (*2 points*) List and describe the recommended practices for a filing actuary to demonstrate compliance with the applicable laws for Small Group Rate Filing.

7. (*6 points*) Flatbush Insurance Company (FIC) has decided to offer an early retirement program to all employees aged 60 or older. Postretirement health care benefits currently offered to employees aged 65 and older will now be offered to the new early retirees. You have been asked to help determine the Accumulated Postretirement Benefit Obligation (APBO) for FIC.

(a) (*1 points*) Explain the relationship between the APBO and Expected Postretirement Benefit Obligation (EPBO).

You are given the following data and assumptions:

Employee Category	Number of Employees
Active: Under 60	900
Active: 60 - 64	100
Retired: 65+	100

- Current APBO = $10,000,000
- Current Annual Claims Cost Per Capita = $2,000
- Age 60 Annuity Factor = 15
- Age 65 Annuity Factor = 10

(b) (*3 points*)

(i) Explain how the addition of early retirement benefits impacts the APBO.

(ii) Calculate the impact to the APBO for FIC resulting from adding the early retirement program benefits. Show your work

You are performing a peer review of demographic assumptions underlying the calculation of the APBO.

(c) (*2 points*) Describe considerations when modeling the covered population according to relevant practice standards.

8. (*9 points*) Best Little Insurance Plan (BLIP) has health plans for the Medicaid, Medicare and commercial populations. The new CFO has experience in health insurance, but only for large group self-insured plans. You have been tasked with briefing her on some basics of government plans.

(a) (*2 points*) Outline differences between benefits in Medicaid plans compared to typical private insurance plans.

(b) (*2 points*) Compare and contrast the following components of risk adjustment models under Medicaid, Medicare and ACA Individual:

(i) Membership stability

(ii) Factor development

(c) (*1 point*) Describe the two main types of managed care in Medicaid.

(d) (*1 point*) Compare the general parity requirement for a Medicaid plan and a commercially insured plan under the Mental Health Parity and Addiction Equity Act (MHPAEA).

(e) (*3 points*) One of BLIP's group health plans has the following levels of copayments for outpatient medical surgical benefits.

Benefit Type	In-Network Benefit Category 1	In-Network Benefit Category 2	In-Network Benefit Category 3	In-Network Benefit Category 4	Out-of-Network Benefit Category 1	Out-of-Network Benefit Category 2
Copayment Amount	$ 0	$ 35	$ 50	$ 75	$ 100	$ 200
Projected Total Allowed Plan Costs (000s)	$ 360	$ 460	$ 460	$ 320	$ 200	$ 200

(i) Assess if the plan meets the general parity rules for the substantially all test for Mental Health/Substance Use Disorder (MH/SUD) benefits.

(ii) Recommend the copayment amounts for the MH/SUD benefits. Justify your response.

****END OF EXAMINATION****
Morning Session

USE THIS PAGE FOR YOUR SCRATCH WORK