GH CORU Model Solutions
Spring 2015

1. **Learning Objectives:**

4. The candidate will understand how to describe Government Programs providing Health and Disability Benefits in the U.S.

Learning Outcomes:

(4a) Describe benefits and eligibility requirements for Medicare including Part D

(4c) Describe benefits and eligibility requirements for Medicaid.

Sources:

Rosenbloom, Ch. 21 Medicare Part D Prescription Drug Benefits

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Describe beneficiary protections related to formulary design which ensure necessary drug treatments are provided to enrollees in Part D plans.

Commentary on Question:

The majority of candidates were able to get most grading points available in this section. Listing of the specific items noted in the solution is what the graders were looking for. There was not a lot of variation available to gain credit.

The beneficiary protections include the following:

- At least two drugs must be covered in every one of the 146 therapeutic classes
- Six classes of drugs are protected and virtually every drug in them must be covered.
  - These classes covered are antidepressants, antipsychotics, anticonvulsants, anticancer, immunosuppressant, and HIV/AIDS medications
- For non-protected classes, members with the help of their physicians can file for medical exceptions for drugs that are not on their Part D plan's formulary.
  - They may and likely will include prior authorizations, step therapy, generic drug requirements, and preferred brand drugs.
- If a generic is available, it must be on the formulary

(b) Identify the steps an enrollee would take to get a Part D plan to pay for a drug that is not on the plan's formulary.

1. Continued

Commentary on Question:
Candidates had the most difficulty with this section of the question. The majority of candidates were able to answer that if a drug were medically necessary for an enrollee (as other on-formulary drugs weren't effective), along with help from the enrollee's physician, there was a way to get a drug covered, however very few went on to list the steps in the exception process. Those candidates who were able to recognize the listing of the steps of the exception process was necessary, only listed one or two steps. A lot of candidates tried to answer what it would take to get added to the formulary instead of what it would take to get an exception.

The enrollee, with its physicians help, must prove that other on-formulary drugs in that class do not work for the enrollee.
Following that, the enrollee would pursue an exception process, which steps are as follows:

- Redetermination by the plan sponsor
- Reconsideration by an independent review entity
- Review by an administrative law judge
- Review by a Federal District Court.

(c) Explain which of their coverage(s) will provide reimbursement towards each item for each customer.

Commentary on Question:
The majority of candidates performed well in this section, however some points were missed. A lot of candidates weren't able to differentiate coverages between the two vaccines, indicating Medicare Part B covered all vaccines or Medicare Part D covered all vaccines, and didn't recognize coverage differed between the two. Also, many had difficulty indicating that the Antibiotic Brand Medication was covered ONLY if it was on the formulary. The graders of this question were looking for a list or table (as illustrated below) for each customer and their respective coverages for each drug.

1. Continued

For each customer, the table below illustrates which coverage will provide reimbursement for each customer:

	Customer A	Customer B
Pneumococcal vaccine	Original Medicare since a Part B benefit	Original Medicare since a Part B benefit
Shingles vaccine	Part D	Part D, cost sharing is reduced since low-income member and in some states Medicaid may even pay the reduced cost sharing
Anticonvulsant brand medication	Part D plan since protected class drug	Part D, cost sharing is reduced since low-income member and in some states Medicaid may even pay the reduced cost sharing
Antibiotic brand medication	- If on formulary, Part D plan will pay -If not on formulary, then none of the coverages will pay	- If on formulary Part D, plan will pay first, cost sharing is reduced since low income member and in some states Medicaid may pay the reduced cost sharing - If not on formulary, then Medicaid will pay if on the Medicaid plan formulary
Multi-Vitamin	NONE of the coverages will pay	Medicaid will pay if on the Medicaid Plan Formulary
Dandruff shampoo	NONE of the coverages will pay	NONE of the coverages will pay

2. Learning Objectives:

5. Understand how to prepare and be able to interpret insurance company financial statements in accordance with US Statutory Principles and GAAP

Learning Outcomes:

(b) Prepare financial statement entries in accordance with generally accepted accounting principles

Sources:

US GAAP for Life Insurers, Herget, 2ndEdition, Ch. 10 Individual Health Insurance

Commentary on Question:

On part a) most candidates use the lapse information properly. However many candidates had trouble calculating the benefit net premium and did not get the correct answer.

On part b) most candidates used incorrect formulas and / or did not correctly apply the lapse rates.

On part c) many candidates were able to calculate the Deferred Expense Net Premium. However most candidates did not know or apply the correct DAC formulas and / or did not correctly apply the lapse rates.

Solution:

(a) Benefit reserve at the end of the 2^{nd} policy duration

Calculate Benefit Net Premium
No interest or mortality
Only decrement is lapses

BNP = 11.78

BV(1) = [BNP – claims(1)] / (1Px) = (11.78 – 2) / .70 = 13.97
BV(2) = BV(1) + [{BNP – claims(2)] / (2Px)] = (13.97 + 11.78 – 5) / (.70 × .85) = 24.42

BV(1) = [claims(2) - BNP] + [claims(3) - BNP] * 1Px + [claims (3) - BNP] * 1Px * 2Px + [claims (4) - BNP] * 1Px * 2Px * 3Px= (5-11.78)+(10-11.78)*.85+(20-11.78)*.85*.9+(20-11.78)*.85*.9*.9= 13.97

BV(2) = [claims(3) - BNP] * 3Px + [claims (3) - BNP] * 3Px * 4Px + [claims (4) - BNP] * 3Px * 4Px * 5Px= (20-11.78)+(20-11.78)*.9+(20-11.78)*.9*.9= 24.42

(b) Maintenance expense reserve at the end of the 2^{nd} policy duration

2. Continued

Maintenance expense reserve at the end of the 2nd policy duration

Calculate Maintenance Expense Net Premium
No interest or mortality
Only decrement is lapses

MENP = $5

Using retrospective formula

MEV(1) = [5 – ME(1)] / (1Px)] = (5 – 5) / .70 = $0
MEV(2) = MEV(1) + [{MENP – ME(2)] / (2Px)] = (0 + 5 – 5) / (.70 × .85) = $0

(c) DAC reserve at the end of the 2nd policy duration

Calculate Deferred Expense Net Premium
No interest or mortality
Only decrement is lapses

DENP = $9.04

Using retrospective formula from p. 336

DAC(1) = [DENP – AE(1))] / (1Px)] = (9.04 – 30) / .70 = -$29.92
DAC(2) = DAC(1) + [{DENP – AE(2)] / (2Px)] = (-29.92 + 9.04 –05) / (.70 × .85) = -$24.54

3. Learning Objectives:

6. Evaluate the impact of regulation and taxation on insurance companies and plan sponsors in the US.

Learning Outcomes:

(b) Describe the major applicable laws and regulations and evaluate their impact

Sources:

Group Insurance, Bluhm, 6th Edition

- Ch. 15 Regulation in the United States
- Ch. 20 Federal Regulation and Taxation of Employer-Sponsored Group Insurance Benefits

GHC-801-13: U.S. Health Insurance Taxation

Commentary on Question:

Candidates generally received most of the points on this question, though there were some common errors. On part (a), while many candidates correctly described the taxation status of health and life insurance, disability coverage was often not mentioned. On part (b), candidates typically identified that the chart was inaccurate. However, some candidates made mistakes with recommending changes to items 5 and 6 in the table. Candidates who mentioned the $2,000 threshold for a tax-free benefit for item 7 were not penalized. On any portion of the question, candidates who described changes as a result of the Affordable Care Act were not penalized.

Solution:

(a) Describe key features of U.S. tax law related to group health and life benefits.

- Health coverage has a favorable tax status overall
  - Employer gets to deduct premiums from taxes
  - Employees receive benefits tax-free
  - Highly compensated employees may have coverage taxed
- Life coverage is tax-free for 100% of salary up to the first $50,000 of coverage. Income above that amount is taxable.
- Disability coverage has either the premiums or benefits taxed, but not both.

(b) Your manager has given you the following chart detailing the tax treatment for various group benefits for the HR manual. Evaluate the accuracy of the information in the chart, and recommend any corrections or additional qualifying footnotes.

3. Continued

	Taxable?
1. Premiums paid by employer for HMO plan benefits	Sometimes[1]
2. Disability income benefit payments	Never
3. Premiums paid by employer for group term life insurance benefit of 100% of salary	Always
4. Cafeteria plan cash benefits	Sometimes
5. Long term care insurance benefit payments	Always
6. Payments made from medical savings account (MSA) or flexible spending account (FSA)	Never
7. Premiums for dependent life insurance coverage of $10,000	Sometimes

Premiums are taxable for employees with salaries below $40,000.

Listed below are the recommended changes to the table.

1. Premiums paid by the employer are never taxable, except for highly compensated employees. Change the taxable field in the chart to "Never" and remove the footnote.
2. Disability income benefit payments could be taxed. If the premium was taxed, the benefits would not be taxed. If the premium was not taxed, the benefits would be taxed. Change the taxable field in the chart to "Sometimes" and add an appropriate footnote concerning whether the premium was taxed.
3. Premiums for group term life up to 100% of salary may be taxable, depending on the employee's salary. The first $50,000 in coverage is exempt from taxation, but any and all coverage above that is taxable. Change the taxable field in the chart to "Sometimes" and add a footnote stating that tax-free status is only available on the first $50,000 of coverage.
4. Cash benefits are always taxable. Change the taxable field in the chart to "Always".
5. Long Term Care benefit payments are taxable if the plan was not qualified and therefore not treated like a health policy. Change the taxable field in the chart to "Sometimes" and add a footnote describing the requirements of a qualified policy.
6. Payments from MSA or FSAs are taxable if the funds were used for non-medical expenses, along with an additional penalty. Change the taxable field in the chart to "Sometimes" and add a footnote describing that non-medical expenses would be taxable.
7. Premiums for dependent life insurance coverage are taxable. Change to taxable field in the chart to "Always."

4. Learning Objectives:

7. Evaluate Retiree Group and Life Benefits in the United States

Learning Outcomes:

(b) Determine appropriate baseline assumptions for benefits and population

(c) Determine employer liabilities for retiree benefits under various accounting standards

Sources:

Fundamentals of Retiree Group Benefits, Yamamoto, Ch. 7 Accounting under FAS 106

Fundamentals of Retiree Group Benefits, Yamamoto, Ch. 8 Other Accounting

Commentary on Question:

Many candidates hit the major points related to FAS 106, however few candidates provided they key elements of GASB and IAS 19. Also many answers lacked supporting detail.

Solution:

Prepare a chart in which you compare and contrast the following [A] accounting standards across the following [B] dimensions:

List [A] – Accounting Standards:

- FAS 106
- GASB
- IAS 19

List [B] – Dimensions:

- The types of benefits to which the standards are applied.
- The types of organizations to which the standards apply.
- Philosophy of benefit allocation over employment years.
- Treatment of settlement costs.

4. Continued

	FAS 106	GASB	IAS 19
The types of benefits to which the standards are applied.	Post-retirement benefits other than pensions. Includes: • Group Health • Life Insurance • Legal Services Disability is not included!	Other Post Retirement Benefits (OPEBs) – non pension benefits after a person leaves employment Termination benefits are not included.	1. Short term employee benefits for current employees 2. Post retirement benefits 3. Long term employee benefits 4. Termination benefits
The types of organizations to which the standards apply.	U.S. based single employers providing group retiree benefits to current and future retirees. Also: • multiple employer trusts • some individual employer plans	U.S. State and local government employers. Plans: • Single • Agent • Cost Sharing	Non-US employers and organizations providing benefits. Particularly: • Post-retirement • Long term employee benefits
Philosophy of benefit allocation over the employment years.	Expected future benefit accrued over working lifetime. Usually form hire date to full eligibility	Recognized when employee receives the benefit – "pay as you go"	Future Benefits are allocated to past and future years of service. Stops when benefits no longer increase.
Treatment of settlement costs.	Gains are used to offset remaining transition obligations then taken into earnings. Losses are taken directly into earnings	Not covered in syllabus.	Gains and losses are immediately recognized. The portion of the previously unrecognized gains or losses now recognized is equal to the portion of the benefit which has been settled.

5. Learning Objectives:

5. The candidate will understand how to prepare and interpret insurance company financial statements in accordance with U.S. Statutory Principles and GAAP.

Learning Outcomes:

(5c) Interpret the results of both statutory and GAAP statements from the viewpoint of various stakeholders, including regulators, senior management, investors.

Sources:

Higgins 10th Ch1 Interpreting Financial Statements

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) The VP would like to better understand the Cash Flow-Production Cycle.

(i) Describe the Cash Flow-Production Cycle.

(ii) Describe the two principles demonstrated by the Cash Flow-Production Cycle.

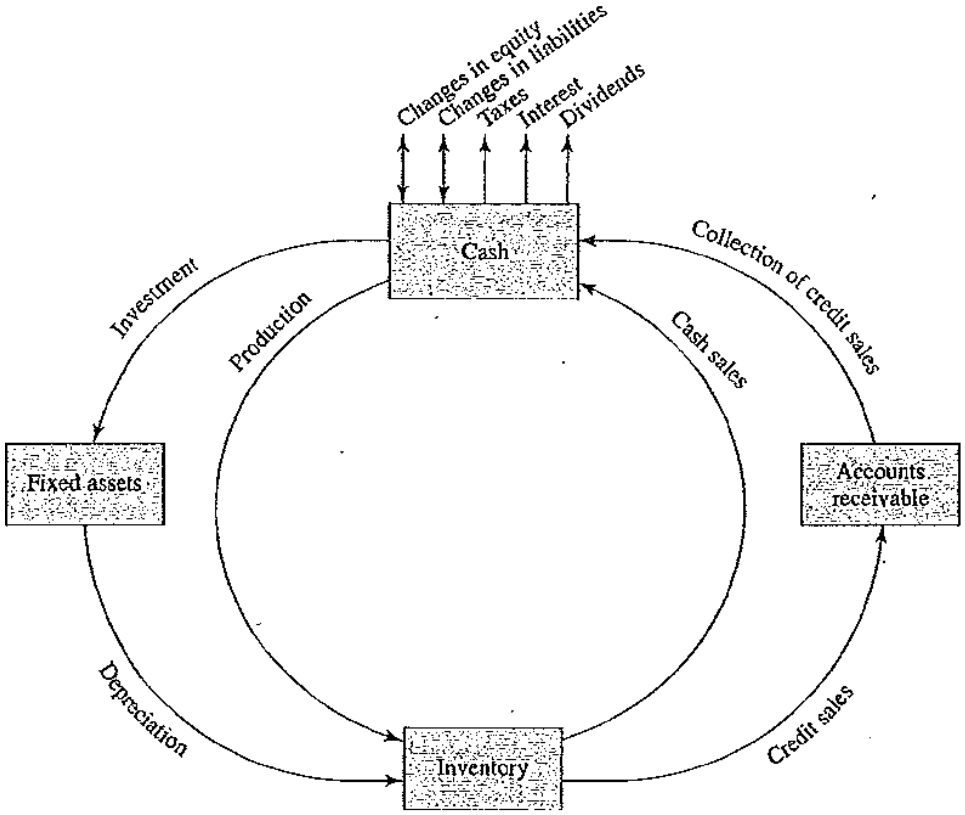
Commentary on Question:

For part (i), candidates are required to describe or illustrate the picture below. It is not necessary to draw the picture as long as a reasonable description of the production cycle is provided.

About half the candidates were able to identify the components of the cash flow-production cycle to receive full marks. The majority of incorrect responses provided a description of a cash flow statement or the life cycle of a business.

For part (ii), very few candidates were able to identify the two principles as outlined in the source material.

5. Continued



Definition: the movement of cash to inventory, to accounts receivable and back to cash is the firm's operating, or working capital, cycle.

- Cash is used to purchase raw materials and hire workers
- Raw materials used to make products which sit in inventory
- Sell products, which either generates cash or receivable (which will generate cash later)

Key principles:

1. First, financial statements are an important window into reality. A company's operating policies, production techniques, and inventory and credit-control systems fundamentally determine the firm's financial profile. The linkage between a company's operations and its finances is our rationale for studying financial statements.

2. The second principle illustrated in Figure 1.1 is that profits do not equal cash flow. Cash and the timely conversion of cash into inventories, accounts receivable, and back into cash is the lifeblood of any company. If this cash flow is severed or significantly interrupted, insolvency can occur.

5. Continued

Yet the fact that a company is profitable is no assurance that its cash flow will be sufficient to maintain solvency. When a company has insufficient cash to pay its maturing obligations, it is insolvent. Then, even though the company is profitable, it may have too little cash to meet its obligations. The company will literally be "growing broke."

(b) Describe the three main sources of information in evaluating the financial health of a company based on financial statements, and how they relate to each other.

Commentary on Question:
Candidates are required to list and describe the three financial statements, and explain how they relate to each other as shown in the picture below. If they are able to provide sufficient description or examples as to how three statements relate to each other, it is not necessary to draw the picture to receive full marks.

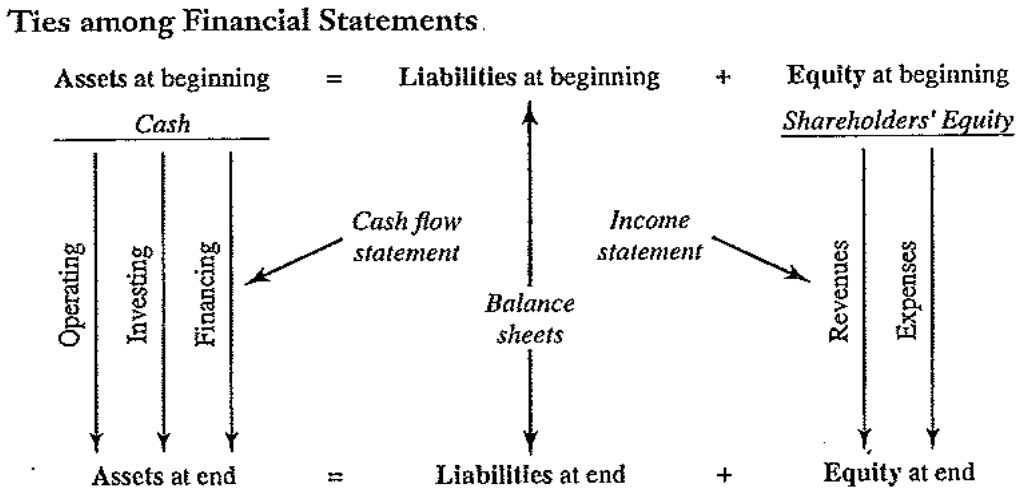
The majority of candidates were able to identify the three sources of information and provide a description of each. However, fewer candidates were able to provide a sufficient description of how the three statements are interrelated. Candidates who didn't fare well typically provided financial metrics (i.e. ROA, ROE, Profit Margin, etc.) as opposed to the financial statements.

- A balance sheet is a financial snapshot, taken at a point in time, of all the assets the company owns and all the claims against those assets.
  - Assets = Liabilities + Shareholders' equity (definitions of each item in the formula should be provided)

- Cash flow statement of a company shows principal sources and uses of cash through three activities:
  - Operating activities
  - Financing activities
  - Investing activities
  - It is easier to understand, provides more accurate information about certain activities, and it is used to evaluate firms' solvency by highlighting the extent to which operations are generating or consuming cash

- Income statement shows the extent to which net sales generated during the accounting period exceeded expenses incurred in producing the sales.
  - Formula: net sales – cost of goods sold – operating expenses – nonoperating expenses – taxes = net income
  - Earnings should also note concepts such as accrual accounting, depreciation and taxes

5. Continued



- While balance sheet shows the financials at a point in time, the cash flow and income statements show the movement between two dates.
- Examples of interrelation include:
  - Cash changes can affect various items in assets and liabilities (e.g. cash, accounts payable, accounts receivable)
  - Revenue/expense items from income statement can be shown as increases in cash, accounts receivable and accounts payable.
  - Net income from the income statement is used to determine the change in equity between balance sheets.

6. Learning Objectives:

6. Evaluate the impact of regulation and taxation on companies and plan sponsors in the U.S.

Learning Outcomes:

(6a) Describe the regulatory and policy making process in the U.S.

(6b) Describe the major applicable laws and regulations and evaluate their impact.

(6c) Apply applicable standards of practice.

Sources:

Bluhm, Group Insurance, Chapter 24, ASOP 8, ASOP 23, ASOP 26, ASOP 41

Commentary on Question:

This question was intended to evaluate candidate's in-depth understanding of small group rate filings and certifications.

Solution:

(a) List rate increase restrictions which may apply to RIC's small group block of business.

Commentary on Question:

To achieve full marks for part (a), candidates must provide sufficient support for each rate increase restriction.

1. Between Class - the rating differential between the lowest and highest class index rates is limited to 20%
2. Within Class - the rating differential within a class of business cannot vary from the index rate by more than 25%
3. Increase Restrictions - rate increases are limited to the sum of the following:
   a. Percent change in new business rate measured from the first day of the prior rating period to the first day of the new rating period.
   b. 15% annually for experience
   c. Adjustments due to case characteristics and changes in coverage
4. Alternative Increase Restrictions – the change in premium for a small employer shall produce a revised premium rate that is no more than:
   a. The base premium for the small employer multiplied by
   b. One plus the sum of the risk load applicable to the small employer during the previous rating period and 15%

(b) Discuss testing which the state department of insurance (DOI) may require in the certification

6. Continued

Commentary on Question:
To achieve full marks for part (b), candidates must provide sufficient support for each test.

1. Intra Class Range Testing
   a. Rate differentials within a class of business are not more than 25% different from the highest index rate to the lowest index rate for groups with similar characteristics and benefit plans
2. Between class testing
   a. Rate differentials on index rates are not more than 20% different from the highest index rate to the lowest index rate
   b. Minimum sample of 100 cases should be tested from each class, to ensure all are within 20% of each other
3. Testing for Actuarial soundness
   a. Can be retrospective or prospective
   b. Compare experience to expected loss ratios or expected claim costs for certification period
4. Class Rate Increase Testing - Rate increases are limited to the sum of the following:
   a. Percent change in new business rate measured from the first day of the prior rating period to the first day of the new rating period.
   b. 15% annually for experience
   c. Adjustments due to case characteristics and changes in coverage

(c) Review last year's outline below and recommend additions and changes.

(i) Purpose of Filing

(ii) Assumptions:
- Increase requested
- Mortality
- Impact of contractual arrangements with providers

(iii) Use of Past Experience to Project Future Results
- Demographic changes

(iv) Projected Loss Ratio, with comparison to statutory requirement

(v) Reliance on junior actuarial student

Commentary on Question:
The following response is a sample of the acceptable responses that were granted full credit. Other correct answers not listed below were also accepted.

6. Continued

Necessary Changes:

- The increase requested should be plainly described during the purpose of the filing, and not in the assumptions section.
- Mentioning the reliance on a junior student may not be necessary. Reliance on an actuarial student does not qualify as disclaiming responsibility.

Necessary Additions

- Under Assumptions, additional information should include;
  i. Premium levels and future rate changes
  ii. Morbidity and lapsation levels and trends
  iii. Expenses, commissions, and taxes
  iv. Health cost trends
- For a more well-rounded filing, there should be a section which considers what was used to project results and should cover:
  i. Use of past experience to project future results, (already listed) – this area is deficient and many more additions are needed, including
     1. Selection of risks
     2. Policy provision
     3. Provider contracts
     4. Economic conditions
  ii. Use of Business Plans to Project future results – all plans should be reviewed as part of setting assumptions and methodologies used in filing
- Projection of future capital and surplus – taking into account future internal or external actions that are likely to have a material effect
- Reasonableness of Assumptions – should be reasonable both in aggregate and in total as verified by past experience, business plans, or relevant industry information
- Reliance on data and other information supplied by others – in support of ASoP 23
- Documentation – in compliance with ASoP 23, ASoP 31 and ASoP 41, including:
  i. Unresolved concerns about information supplied by others
  ii. Limitations on work product
  iii. Conflicts arising from applicable law
  iv. Any deviation from the standard

7. Learning Objectives:

4. The candidate will understand how to describe Government Programs providing Health and Disability Benefits in the U.S.

Learning Outcomes:

(4a) Describe benefits and eligibility requirements for Medicare including Part D

(4b) Describe benefits and eligibility requirements for Social Security, including disability income.

(4c) Describe benefits and eligibility requirements for Medicaid.

Sources:

Group Insurance 6th Edition Ch 12, Ch 13

Commentary on Question:

The purpose of this question is to have the candidate cohesively explain the publicly-funded benefits available for a particular situation. Most candidates knew the source of the four publicly-funded programs in questions, but were missing details that would demonstrate more than a cursory overview. Some candidates included details that were not pertinent to the scenario.

Solution:

(a) Describe publicly-funded retirement, health, disability, and long-term care benefits available to your aunt as she ages, assuming she does not work or remarry.

Regarding health insurance, my aunt would possibly be able to access Medicaid depending the state's decision to expand Medicaid under the ACA or the state's current assets and income requirements. If my uncle's income was the sole source of income, then it is likely she will qualify. Also under Medicaid she would have access to LTC insurance, but she would have to spend down assets in order to use the benefits.

She has disability coverage as a surviving spouse under Social Security, but this is not indefinite. This coverage began at the age of 50. Since she is healthy now, she would need to become disabled within seven years of my uncle's death to receive benefits.

Social security will provide survivor benefits for retirement income as early as age 60.

7. Continued

(b) Describe how your response to (a) changes, if your aunt starts working. Assume the maximum work requirement applies regardless of her age.

If my aunt starts working, assuming her income from the job is above the income threshold for Medicaid, she will not qualify for Medicaid but will have access to health insurance through her employer, or federally subsidized health insurance purchased through the exchange if her income is below 400% FPL.

She will be eligible for her independent Social Security retirement and Medicare benefits after working for 3 years since she will then have 40 quarters of coverage.

She will also be earning credits to get her independent social security disability coverage.

8. Learning Objectives:

7. The candidate will understand and evaluate Retiree Group and Life Benefits in the United States.

Learning Outcomes:

(7a) Describe why employers offer retiree group and life benefits.

(7b) Determine appropriate baseline assumptions for benefits and population.

(7d) Describe funding alternatives for retiree benefits.

Sources:

Group Insurance, Bluhm, 6th Edition, Ch. 19 Retiree Group Benefits

Fundamentals of Retiree Group Benefits, Yamamoto

- Ch. 7 Accounting under FAS 106
- Ch. 8 Other Accounting
- Ch. 9 Actuarial Methods and Assumptions (pages 251-278 and 287-291)
- Appendix F- Measuring Retiree Group Benefit Obligations (through pg. 37)

GHC-104-13: CIA Note - Overview of Post-retirement Benefit Calculations Statement of Financial Accounting Standards No. 106, Appendix C - Illustrations

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Kurgan is of the opinion that the Affordable Care Act (ACA) has reduced the need for employers to offer postretirement medical coverage.

(i) List and describe provisions of the ACA which impact postretirement medical plans.

(ii) Evaluate the applicability of each provision to the Highlander Industries postretirement medical plan.

Commentary on Question:

Candidate should be able to provide at least four provisions and explain their applicability to Highlander Industries. One grading point per valid reason and one grading point per valid explanation, for a maximum of eight grading points. Many candidates listed general changes that occurred as part of ACA rather than specifically identifying those that impacted postretirement medical plans.

8. Continued

- Loss of tax deductibility of the RDS. Very relevant to this situation as the employer currently files for RDS. Change in tax-status of RDS should trigger re-evaluation of the post-65 prescription drug benefit.
- Additional funding of Medicare Part D closes the coverage gap. Relevant to this situation as post-65 retirees will now have access to more affordable benefits in the individual market if the employer postretirement plan is discontinued.
- Reduction in Medicare Advantage payments over time – expectation of higher premium rate increases long-term. Not relevant to this situation since the group plan is not MA.
- Excise (Cadillac) tax on high cost plans – not applicable since post-65 and Medicare supplement.
- Early retiree reinsurance program – not applicable since post-65 retirees only.
- Introduction of health insurance exchanges and guaranteed issue ensure that pre-65 retirees with pre-existing conditions will be eligible for individual coverage if there is no postretirement medical coverage. Not applicable since post-65 retirees only.

(b) You are given the following information about the existing plan. Calculate the Net Periodic Postretirement Benefit Cost for 2015.

Commentary on Question:
Four grading points for correct determination of interest cost, four points for correct answer. Partial credit was awarded for correct use of formulas and amortizations. Candidates generally did well on these calculations though some did not use the correct service cost and others did not realize the amortizations were already amortized.

Note that other timing factors may be used, but 0.5 was used in the source material. For example, if benefits are paid on the 1st of the month the factor would be 13/24=0.5417.

- Service cost: $0 (retirees only)
- Interest cost: ($10,000,000 - $800,000x(0.5 timing factor))*5% = $480,000
- Expected return on plan assets: $0 (unfunded)
- Amortization of net transition asset (obligation): $0
- Amortization of prior service cost: ($35,000)
- Amortization of net (gain) or loss: $65,000

NPPBC: $480,000 - $35,000 + $65,000 = $510,000

8. Continued

(c) List and describe assumptions required to perform an actuarial valuation of the Highlander Industries postretirement medical plan.

Commentary on Question:
One grading point for each of the assumptions as listed below, up to a maximum of four grading points. Candidates generally did well at identifying assumptions.

- Discount rate
- Mortality
- Current retiree plan costs (benefit cost net of RDS subsidy)
- Healthcare trend rate
- Future retiree contribution increase rate
- Attrition assumption – will retirees discontinue/drop the employer coverage

(d)

(i) (*2 points*) Calculate the revised Net Periodic Postretirement Benefit Cost for 2014, assuming a straight-line amortization method.

(ii) (*1 point*) Discuss the impact of the plan design and contribution requirements from the perspective of the retiree.

Commentary on Question:
Part (d)(i): Four grading points for correct determination of prior service cost, four points for correct answer. Partial credit was awarded for correct determination of interest cost and amortizations. Many candidates struggled with this section, unsure of what to do with the 20% reduction in APBO.

Note that other timing factors may be used.

Part (d)(ii): Four grading points for an answer that addresses future cost increases and potential benefit differences (two grading points for each). Some candidates did not understand that a fixed contribution from Highlander Industries does not mean retiree contributions are fixed; rather, it means retirees will fund the difference of the plan cost and Highlander Industries' contribution.

- Service cost: $0 (retirees only)
- Interest cost: ($8,000,000 - $800,000x(0.5 timing factor))*5% = $380,000
  - Reflects 20% reduction in APBO. Expected benefit payments are unchanged, as the contribution was set equal to current cost.
- Expected return on plan assets: $0 (unfunded)
- Amortization of net transition asset (obligation): $0
- Amortization of prior service cost: ($195,000)
  - ($2,000,000)/12.50 = ($160,000) + ($35,000) = ($195,000)
- Amortization of net (gain) or loss: $65,000

8. Continued

NPPBC: $380,000 - $195,000 + $65,000 = $250,000

- Contributions
  - Retirees contributions are not impacted in the initial year but will bear the full cost of future rate increases
  - Contributions will increase at a rate greater than trend due to leveraging
- Benefits
  - Potential formulary differences between employer plan and Medicare Part D formulary
  - Medical management under the MA plan versus the unmanaged Medicare Supplement benefit
  - Potential additional cost-sharing (or benefits) under the MA plan

(e) List and describe changes to the actuarial assumptions which would be required to value the amended plan.

Commentary on Question:
One grading point per assumption and one grading point per explanation, for a maximum of eight grading points. Candidates need to describe the actuarial assumptions they identify. Minimal credit was awarded for insufficient explanation.

- Discount rate: may need to be revised to reflect the change in the employer benefit payment stream (future cash flows)
- Healthcare trend rate: may need to be revised to reflect the change in Medicare Advantage expected premium increases (follow up from the Healthcare Reform question in part b regarding MA payment rates)
- Future retiree contribution increase rate is no longer the same as the healthcare trend rate
- Attrition assumption – will retirees discontinue/drop the employer coverage as a result of the change in coverage and future contributions?

9. **Learning Objectives:**

6. Evaluate the impact of regulation and taxation on companies and plan sponsors in the U.S.

Learning Outcomes:

(6a) Describe the regulatory and policy making process in the U.S.

(6b) Describe the major applicable laws and regulations and evaluate their impact.

Sources:

Bluhm, *Group Insurance*, chapters 14 & 15

Commentary on Question:

Parts (a) and (b) of this question tested the candidate's knowledge of ERISA's applicability in the group insurance marketplace. Part (c) broadened the scope by including state insurance regulation.

Solution:

(a) Explain the applicability of ERISA to the group plans below.

(i) Group A – government plan maintained by state or local government for their employees

(ii) Group B – church plan maintained by a tax-exempt church

(iii) Group C – plan required by state law such as disability insurance

(iv) Group D – covering self-employed persons

(v) Group E – fully-insured group health coverage at a small, publicly-traded company

Commentary on Question:

Candidates who correctly identified whether or not ERISA applied to each of the plans AND explained "why" were given full credit. Candidates who only stated "Applies" or "Does Not Apply" received partial credit.

(i) ERISA does not apply – Government plans maintained by federal, state, or local governments for their employees are exempt from ERISA's requirements.

(ii) ERISA does not apply – Plans maintained by a tax exempt church are exempt from ERISA's requirements.

(iii) ERISA does not apply – Plans required by state law are exempt from ERISA's requirements.

9. Continued

(iv) ERISA does not apply – Plans covering self-employed persons are exempt from ERISA's requirements.

(v) ERISA applies – ERISA applies to an employee benefit group health plan regardless of whether the plan is fully-insured or self-insured.

(b) Outline coverage offerings which are subject to ERISA.

Commentary on Question:
Candidates were given full credit if they identified several unique employee benefit plans that are subject to ERISA requirements. Candidates who stated ERISA only applies to "fully insured" plans did not receive full credit.

ERISA governs any employee benefit plans of an employer organization including:

- Medical / Health
- Pension / 401k
- Vacation benefits
- Disability

(c)

(i) Identify the overarching means or steps of insurance regulation.

(ii) Provide two examples of specific state regulatory actions for each of the steps identified in (i).

Commentary on Question:
Full credit was given to candidates who listed the steps of insurance regulation in (i) and supported those steps with two unique examples for each in (ii). Many candidates made statements in (i) and then restated the same information in (ii). Duplicate credit was not given if a candidate restated in (ii) what they had already stated in (i).

(i) Licensing
Information Gathering
Prior Approval
Enforcement
Receivership

9. Continued

(ii) Licensing

- Providing licenses to insurance companies to sell insurance with the state.
- Licensing agents and monitoring their continuing education

Information Gathering

- Collect and review company financial statements to assess reserve adequacy
- Review company's RBC

Prior Approval

- States approve policy forms before they can be used
- Rate filings or re-filings (rate increases)

Enforcement

- Investigating consumer complaints
- Imposing fines on companies when misconduct is found

Receivership

- Monitoring a company's financial status to prevent insolvencies
- Taking over an insolvent company

10. **Learning Objectives:**

7. The candidate will understand and evaluate Retiree Group and Life Benefits in the United States.

Learning Outcomes:

(a) Describe why employers offer retiree group and life benefits

(c) Determine employer liabilities for retiree benefits under various accounting standards

Sources:

Bluhm, Group Insurance, chapter 19

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Describe the challenges Celtic Dreams might have providing retiree health benefits and what solutions the company could develop to meet these challenges.

Commentary on Question:

While this question can be fully answered from chapter 19 of Bluhm, other answers can be derived from the rest of the material. We gave credit to any reasonable answers. More points were awarded for going into greater depth; however there was limited credit per challenge cited. Candidates frequently only mentioned one challenge and went into excessive depth with regard to solutions.

1. Challenge: FASB negatively impacts financials
   Solutions: Ways to lessen impact are stringent eligibility requirements, service related benefits, early retirement reductions, and fixed employer subsidy.
2. Challenge: Healthcare costs are generally high and growing
   Solutions: Apply techniques like increasing cost sharing, reducing network size, and using more care management. Change the value proposition of retiree healthcare through consumerism initiatives, overall total cost management, and coordination with Medicare.
3. Challenge: Retirees can be difficult to communicate with (relative to active employees)
   Solutions: Create material that is easy to read and understand. Use multiple methods of communication including printed and mailed material.
4. Challenge: Data challenges may present difficulties in projecting future retiree costs
   Solutions: Ensure data is properly split between active and retiree populations and utilize historical claims experience for an appropriate retiree population.

10. Continued

(b)

(i) (*1 point*) List and describe methods of coordinating benefits between Medicare and other group health insurance.

(ii) (*4 points*) Calculate Mandolin's cost for these medical expenses using these different methods. Show your work.

Commentary on Question:
Candidates generally did well naming and describing the methods of coordinating benefits. We wanted Candidates to think through the steps of calculating each of the methods of coordination, and they did well with the formulas and calculating the plan costs for part ii. Most candidates omitted calculating Mandolin's costs.

(i)

- Standard COB: Plan pays lesser of regular plan benefit and the difference between covered expenses and primary plan benefit payment
- Exclusion: Medicare payments are excluded and then the secondary benefit is applied
- Carveout: The benefit is first determined assuming that Medicare did not exist, and then Medicare is subtracted from the result

10. Continued

Standard COB

	Allowed Cost		Medicare Benefit		Secondary Plan Benefit			
	C		M		Cx%	C-M	Payout = min(Cx%,C-M)	Mandolin's cost
IP Stay	13000	C-1200	11800	(C-500)*.95	11875	1200	1200	0
PCP	750	(C-150)*.8	480	C-(3*50)	600	270	270	0
Med Eq.	100	C*.8	80	C*.9	90	20	20	0
SNF	600	C	600	C*.9	540	0	0	0
	14450		12960		13105		1490	0

Exclusion

	Allowed Cost		Medicare Benefit		Secondary Plan Benefit			
					(C-M)x%			Mandolin's cost
IP Stay	13000		11800	(C-M-500)*.95	665			535
PCP	750		480	C-M-(3*50)	120			150
Med Eq.	100		80	(C-M)*.9	18			2
SNF	600		600	(C-M)*.9	0			0
	14450		12960		803			687

Carveout

	Allowed Cost		Medicare Benefit		Secondary Plan Benefit			
					(Cx%)-M			Mandolin's cost
IP Stay	13000		11800		75			1125
PCP	750		480		120			150
Med Eq.	100		80		10			10
SNF	600		600		0			0
	14450		12960		205			1285

11. Learning Objectives:

5. Understand how to prepare and be able to interpret insurance company financial statements in accordance with US Statutory Principles and GAAP

Learning Outcomes:

(b) Prepare financial statement entries in accordance with generally accepted accounting principles

(c) Interpret the results of both statutory and GAAP statements from the viewpoint of various stakeholders, including regulators, senior management, investors

Sources:
US GAAP, Chapter 10, pp. 358-363

Commentary on Question:
Commentary listed underneath question component.

Solution:

(a) Your supervisor requested you provide additional information on developing claim reserves with respect to:

Claim reserve development in general

Commentary on Question:
Candidates did not recognize the difference between active lives reserves and claims reserves. Most listed claim reserves in the context of major medical. Very few identified the impact of large deductibles and open disability claims to claim reserves.

Claim reserves consist of incurred-but-not-reported (IBNR) and pending claims (also known as in-the-course-of-settlement). The relative magnitude of IBNR and pending claims depends on the risk/precision of the benefit amounts, policyholder behavior, and administration. Large claims and DI take longer to adjudicate, and may have longer reporting lags. Large claims with high deductibles or long waiting periods may have long reporting lags. DI may pay over a long period of time, and therefore has a large reported-but-unpaid reserve component.

(b) Your supervisor requested you provide additional information on developing claim reserves with respect to:

An established Major Medical block

11. Continued

Commentary on Question:
Several candidates mentioned the claim lag method, but did not identify the use of a large block's historical patterns as a means to determine future liabilities. Many listed the considerations that affect IBNR.

- The appropriate claims method is the "lag table" (or, "development method", "completion factor" or "claim triangle")
  - As the block is established, claim reserves based on pricing are inappropriate
  - As the block is not DI, disability income benefit claims are not appropriate
- The initial working assumption is that future payment patterns will be similar to the recent past.
- Past claim payments are sorted according to the date incurred and the date paid.
- Special adjustments may be necessary as items can impact future claims payments
  - Changes in contractual provisions
  - Changes in admin systems
  - Large claims
- Large claims are typically adjusted by using a case reserve method.
- If the lag table is from incurral to payment, the reserve calculated is the total unpaid claim liability (IBNR plus pending)—this is the most common approach.

(c) Your supervisor requested you provide additional information on developing claim reserves with respect to:

A newly released critical illness line

Commentary on Question:
Candidates listed several external sources of information to determine reserves, instead of using the product's pricing assumptions. Very few identified the effect of underwriting, and how pricing loss ratios are used to arrive at the claim reserve.

11. Continued

New Critical Illness Line

- Determine reserves based upon pricing
- New lines typically are insufficient for lag table methods
- Lag studies typically need 2 or 3 years of experience
- Reserve would be set equal to pricing loss ratio minus actual claims paid
- The anticipated loss ratio by duration should be reflected
- Loss ratios are typically lower in the first few years that ultimately due to underwriting selection or presumption of good health at outset

12. Learning Objectives:

2. The candidate will understand and recommend a manual rate for each of the coverages described in Learning Objective 1.

Learning Outcomes:

(2d) Calculate and recommend a manual rate.

Sources:

Bluhm 6th Edition Chapter 32 – Estimating Claim Costs for Life Benefits

Commentary on Question:

The question tests candidates' knowledge of how manual claims rates are calculated for life insurance benefits, as well as making experience adjustments to the rates. In addition, candidates are tested on how to calculate credibility-weighted premiums.

Solution:

(a) Calculate the manual claim rate per $1,000 of coverage. Show your work.

Commentary on Question:

Candidates needed to show sufficient work to obtain full credit for this question. Intermediate steps such as calculating total benefit exposure and total monthly premium were required. Candidates must show the application of the reduction on insured amount for employees over age 65. Note that the retention should not be applied to the manual claim rate.

		(a)	(b)	(c) = 3 * (b)	(d)	(e) = (d)*(c)/1000	(f) = (e) * (a)
				Insured	Monthly		Total
Age	Gender	Employees	Salary	Amt	Rate	Expected Claims	Premium
30-40	M	70	65,000	195,000	0.16	$ 31.20	$ 2,184.00
30-40	F	82	67,000	201,000	0.08	$ 16.08	$ 1,318.56
40-50	M	35	120,000	360,000	0.2	$ 72.00	$ 2,520.00
40-50	F	55	118,000	354,000	0.1	$ 35.40	$ 1,947.00
50-60	M	6	167,000	501,000	0.4	$ 200.40	$ 1,202.40
70-80	F	3	170,000	382,500	0.5	$ 191.25	$ 573.75
Total							$ 9,745.71

Total Benefit Exposure = Σ (c)*(a) = $66,355,500

Average Expected Claims Rate = Totally Monthly premium / Total Benefit Exposure

= 0.1469 per month per $1000 of coverage

(b) Calculate the experience rate per $1,000 of coverage. Show your work.

12. Continued

Commentary on Question:
Note that the retention is not applied to the manual claim rate.

Annual Experience claims rate	70,000	= 350,000 / 5
Benefit Exposure	$66,355,500	from part (a)
Annual Experience claims rate	$1.055	= (70,000/$66,355,500) x 1,000
Monthly Experience claims rate	$0.088	= $1.055 / 12

(c) Calculate the credibility-weighted monthly premium. Show your work.

Commentary on Question:
This question required candidates to demonstrate their knowledge of credibility. In addition, the question asks for the monthly premium paid by Lombard Group. Most candidates applied the retention factor to calculate the credibility-weighted monthly premium rate, but failed to calculate the total monthly premium.

Credibility factor	53%	= SQRT(5,529,625/20,000,000)
Credibility-weighted rate	$0.115	= ($0.088 x 53%)+($0.146 x (1-53%))
Monthly "Pure" premium	$7,647.71	= ($0.115/$66,355,500) / 1,000
Retention of 5%		
Monthly premium	$8,050.23	= $7,647.71 / (1 - .05)

13. Learning Objectives:

2. The candidate will understand and recommend a manual rate for each of the coverages described in Learning Objective 1.

Learning Outcomes:

(2d) Calculate and recommend a manual rate.

(2f) .Describe the product development process including risks and opportunities to be considered during the process.

Sources:

Group Insurance, Bluhm, 6th Edition, Chapter 31: Pricing of Group Insurance

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Calculate the resulting annual rates for:

(i) A four-tier rating structure using the table above.

(ii) A two-tier rating structure where the second tier factor is 2.000.

Commentary on Question:

Well-prepared candidates recognized that they needed to calculate "effective members" by multiplying contracts by the tier factor. By dividing the total expected cost by the total effective members, the single tier factor is obtained, and the other tiers can be derived from it. A common error was to multiply members by the tier factor, and then proceeding with calculations.

(i) Annual Rates Using a Four-Tier Rating Structure

Contracts * Tier Factor
S: 1,000 (1.00) = 1,000
C: 500 (2.10) = 1,050
PC: 200 (1.90) = 380
F: 300 (3.125) = 937.5

1,000 + 1,050 + 380 + 937.5 = 3,367.5 "members" based on tier factors under four-tier rating structure

$9,000,000 / 3,367.5 = $2,672.61 revenue per "member"

13. Continued

Revenue per "member" * Tier Factor = Annual Rate per contract (PCPY= per contract per year)
S: $2,672.61 (1.00) = $2,672.61
C: $2,672.61 (2.10) = $5,612.47
PC: $2,672.61 (1.90) = $5,077.95
F: $2,672.61 (3.125) = $8,351.89

(ii) Annual Rates Using a Two-Tier Rating Structure

Contracts * Tier Factor
S: 1,000 (1.00) = 1,000
F: 1,000 (2.00) = 2,000

1,000 + 2,000 = 3,000 "members" based on tier factors under two-tier rating structure

$9,000,000 / 3,000 = $3,000 revenue per "member"

Revenue per "member" * Tier Factor = Annual Rate per contract (PCPY= per contract per year)
S: $3,000 (1.00) = $3,000
F: $6,000 (2.00) = $6,000

(b) Identify possible risks to the client associated with the change in tier structure.

Commentary on Question:
Well-prepared candidates answered the question as asked, namely, citing possible risks to the client that would be faced if the tier structure were changed as indicated. Such risks generally focused on cross-subsidies and the anti-selection they can engender, costs to the client arising from changes in enrollment patterns, and employee dissatisfaction/productivity. Common errors included making mere observations about the rate structure without taking the next step and identifying the risks (to the client) that the two-tier structure might foster.

Identify possible risks to the clients associated with the change in tier structure.

The company may want to achieve equity in its benefit plan design. Fewer tiers in the rating scheme could create cross-subsidies between smaller and larger families which may not achieve the equity that meets company goals.

If some families opt out because of cross-subsidies, then productivity may decrease if they don't have coverage. Meeting the employees' needs for coverage reduces the chance of missed work days or distracted work time.

13. Continued

If contributions are a percent of the total rate by tier, then Singles, Couples, and Parents with Child(ren) would see increases in the amount they would have to pay for coverage. This could cause problems with morale since these employees will be losers under the new plan.

There could be antiselection: if it is the same cost for a family of four as it is for a family of three, then the smaller family may opt out because they are subsidizing the larger family (all else equal). Families that do not opt out may have a higher chance of being bad risks and overall costs could increase (assuming employee contributes a part of their cost).

14. Learning Objectives:

3. Evaluate and recommend an employee benefit strategy.

Learning Outcomes:

(3a) Evaluate and recommend an employee benefit strategy in light of an employer's objectives

Sources:

Tacess, page 4

Canadian Handbook of Flexible Benefits, Ch 14

Commentary on Question:

Generally, candidates – from the U.S. and Canada – did better with parts A through C, but struggled with the calculations required in part D, in many cases not attempting the question at all. Furthermore, many candidates did not state their assumptions made in respect of taxes that apply or do not apply; however, a correctly answered part A and part D without any reference to taxes was awarded near full marks.

Solution:

(a) Calculate the expected company savings achieved with the proposed plan design, assuming that premiums under the current plan exactly cover claims and applicable expenses and premium taxes.

Plan costs under current design:
Paid Claims = $2,500 * 25% * 600 + $6,000 * 75% * 600 = $3,075,000
Paid Premiums = $3,075,000 / (1 – 6.5% – 2.0%) = $3,360,660
Therefore, company costs under current design **are $3,360,660**

Plan costs under proposed design:
Paid Claims = $2,000 * 25% * 600 + $4,800 * 75% * 600 = $2,460,000
Admin Expenses = 6.0% * 2,460,000 = $147,600
GST = 5% * $147,600 = $7,380
Therefore, company costs under proposed design are: $2,460,000 + $147,600 + $7,380 = $2,614,980
Savings = $3,360,660 – $2,614,980 = $745,680

14. Continued

(b)

(i) (*1 point*) List and describe the four pricing objectives employers frequently want to achieve with their flexible benefit pricing structure.

(ii) (*1 point*) List and describe the various flexible benefit pricing structures available.

(i) Objective 1: Realistic price tags
Price tags should reflect the cost as if everyone only that one option was beingoffered.

Objective 2: Equity
Each employee should receive an equal dollar amount or percentage of pay in credits or employer subsidies.

Objective 3: No losers
Employees should be able to repurchase their current coverage (or most comparable coverage) with no increase in costs.

Objective 4: No additional company cost
The new flex plan should be cost-neutral compared with the projected costs of the current plan.

(ii) Pricing structures fall into three categories

- Flat-credit structures
- Buy-back structures
- Election-based structures

Flat-credit structures:
Gives all employees the same amount of flex credits, which are typically equal to the Single costs (which saves the employer money, and creates losers), Family costs (which costs the employer money, but creates no losers), or Average costs (which is cost-neutral, but may create losers).

Buy-back structures:
To ensure there are no losers, the employer gives enough credits to allow everyone – whether Single or Family – to buy-back their previous coverage at no additional costs. While no losers are created, there are equity concerns as the employer is giving families more credits for the simple fact that they are a family.

Election-based structures:
This type of structure varies the amount of flex credits by option to ensure that, on a net basis, the plan is equitable.

14. Continued

(c) Describe drivers of adverse selection and potential mitigation strategies.

Two Drivers of Adverse Selection
Predictability of occurrence
Availability of choice

Changes to limit Adverse Selection
- Limit frequency of choice to every two or three years, instead of every year.
- Minimize the spread between the options. There is a large spread in the two options currently.
- Test the program with employees.
- Incorporate expected adverse selection into price tags or credits.

(d)

(i) (*1 point*) Calculate single and family price tags for the Bronze, Silver and Gold options. Justify your decision and show your work.

(ii) (*5 points*) Calculate the total company costs under each pricing structure identified in part (b), and identify which pricing objectives are achieved. State any assumptions made and show your work.

(iii) (*2 points*) Draft an email to the CEO recommending whether Bits n' Bytes should adopt the flexible benefits plan. Justify your position.

Commentary on Question:
Note: for all pricing scenarios, expected claims and price tags received are the same.

(i)

	Relative Value	Costs before Adverse Selection	Costs Reflecting Adverse Selection	Realistic Price Tag
Bronze (single)	100%	$2,126	$1,913	$2,126
Silver (single)	130%	$2,764	$3,040	$2,764
Gold (single)	160%	$3,402	$3,912	$3,402

The price tag should reflect company costs. The Bronze price tag should then be:
= $2,000 + 6.0% * $2,000 (administrative expense) + 5.0% * $2,000 (GST)
= $2,126

14. Continued

The actual cost would be 90% of this, due to antiselection. However, the realistic price tags are set assuming that everyone in the group is in that particular option.

The Silver and Gold costs would be:
$2,126 * 1.3 = $2,764
$2,126 * 1.6 = $3,402

The family price tags would simply be set at 2.4 times the single.

(ii) Company costs = expected claims + flex credits given - price tags received
Expected claims costs after adverse selection from (d) i:
60% * ($1,913 * 25% * 600 + $4,591 * 75% * 600)
+ 30% * ($3,040 * 25% * 600 + $7,296 * 75% * 600)
+ 10% * ($3,912 * 25% * 600 + $9,389 * 75% * 600)
= $1,411,740 + $1,121,760 + $481,190
= $3,014,690

Realistic price tags received from (d) i:
60% * ($2,126 * 25% * 600 + $5,102 * 75% * 600)
+ 30% * ($2,764 * 25% * 600 + $6,634 * 75% * 600)
+ 10% * ($3,402 * 25% * 600 + $8,165 * 75% * 600)
= $1,568,880 + $1,019,970 + $418,460
= $3,007,310

Flat credit structures

Single credits:

		Price Tag	Credit	EE Cost
Bronze	Single	$2,126	$2,126	$0
(proposed)	Family	$5,102	$2,126	$2,976
Silver	Single	$2,764	$2,126	$638
	Family	$6,634	$2,126	$4,508
Gold	Single	$3,402	$2,126	$1,276
	Family	$8,165	$2,126	$6,039

Flex Credits given:
$2,126 * 600 = $1,275,600

Total costs = $3,014,690 + 1,275,600 – 3,007,310 = $1,282,980

14. Continued

Which objectives are achieved?
Objective 1: Realistic prices? YES
Objective 2: Equity? YES
Objective 3: No losers? NO – even if tag set at $2,126, then realistic pricing is not maintained
Objective 4: No additional company cost? YES

Family credits

		Price Tag	Credit	EE Cost
Bronze	Single	$2,126	$5,102	($2,976)
(proposed)	Family	$5,102	$5,102	$0
Silver	Single	$2,764	$5,102	($2,338)
	Family	$6,634	$5,102	$1,532
Gold	Single	$3,402	$5,102	($1,700)
	Family	$8,165	$5,102	$3,063

Flex Credits given:
$5,102 * 600 = $3,061,200

Total costs = $3,014,690 + 3,061,200 – 3,007,310 = $3,068,580

Which objectives are achieved?
Objective 1: Realistic prices? YES
Objective 2: Equity? YES
Objective 3: No losers? YES
Objective 4: No additional company cost? NO

Average credits

		Price Tag	Credit	EE Cost
Bronze	Single	$2,126	$4,358	($2,232)
(proposed)	Family	$5,102	$4,358	$744
Silver	Single	$2,764	$4,358	($1,594)
	Family	$6,634	$4,358	$2,276
Gold	Single	$3,402	$4,358	($956)
	Family	$8,165	$4,358	$3,807

Flex Credits given:
$4,358 * 600 = $2,614,800

Total costs = $3,014,690 + 2,614,800 – 3,007,310 = $2,622,180

14. Continued

Which objectives are achieved?
Objective 1: Realistic prices? YES
Objective 2: Equity? YES
Objective 3: No losers? NO – and if price tag is reduced to $4,358, then realistic pricing is not achieved
Objective 4: No additional company cost? NO! (due to antiselection effects)

Buy-back pricing structure

		Price Tag	Credit	EE Cost
Bronze	Single	$2,126	$2,126	$0
(proposed)	Family	$5,102	$5,102	$0
Silver	Single	$2,764	$2,126	$638
	Family	$6,634	$5,102	$1,532
Gold	Single	$3,402	$2,126	$1,276
	Family	$8,165	$5,102	$3,063

Flex Credits given:
$2,126 * 600 * 25% + $5,102 * 600 * 75% = $2,614,800

Total costs = $3,014,690 + 2,614,800 – 3,007,310 = $2,622,180

Which objectives are achieved?
Objective 1: Realistic prices? YES
Objective 2: Equity? NO – families get more credits
Objective 3: No losers? YES
Objective 4: No additional company cost? NO! (because of antiselection effects)

Election-based pricing structure

		Price Tag	Credit	EE Cost
Bronze	Single	$2,126	$2,126	$0
(proposed)	Family	$5,102	$5,102	$0
Silver	Single	$2,764	$2,126	$638
	Family	$6,634	$5,996	$638
Gold	Single	$3,402	$2,126	$1,276
	Family	$8,165	$6,889	$1,276

Flex Credits given:
60% * ($2,126 * 600 * 25% + $5,102 * 600* 75%)
+ 30% * ($2,126 * 600 * 25% + $5,996 * 600 * 75%)
+ 10% * ($2,126 * 600 * 25% + $6,889 * 600 * 75%)
= $1,568,880 + $905,130 + $341,900
= $2,815,910
Total costs = $3,014,690 + 2,815,910 – 3,007,310 = $2,823,290

14. Continued

What objectives are achieved?
Objective 1: Realistic prices? YES
Objective 2: Equity? YES – on a net basis
Objective 3: No losers? YES
Objective 4: No additional company cost? NO

(iii)

Dear CEO:

The purpose of this email is to provide you with my recommendations with respect to adopting a flexible benefits program. Flexible benefits are under consideration, as there are some employees who would be worse off under the proposed plan design on its own.

Your stated objectives in adopting a flexible benefits program are:
1. No losers among the employees (i.e. employees should be able to elect the basic plan design with no additional out-of-pocket costs)
2. Equitable credits (i.e. Single members and Family members should receive the same amount of credits)
3. Cost increase of no more than 10%

The suggested pricing structure is the "election-based" structure, where Single members and Family members are out-of-pocket the same amount on a net basis, even though Families would require more credits. This structure creates no losers, as employees electing Bronze coverage would not be out-of-pocket.

Furthermore, the "election-based" structure is expected to increase costs by approximately 8%, which is within your stated 10% threshold. For completeness:
The current plan design is expected to cost: $336,066
The proposed plan design is expected to cost: $261,498
The flexible benefits plan design is expected to cost: $282,329

It should be noted that there is another structure which also creates no losers and is equitable, but it would require the company to provide credits equal to Family costs, and is therefore outside your stated 10% threshold.

15. Learning Objectives:

1. The candidate will understand how to describe plan provisions typically offered under:
   a. Group and individual medical, dental and pharmacy plans
   b. Group and individual long-term disability plans
   c. Group short-term disability plans
   d. Supplementary plans, like Medicare Supplement
   e. Group and Individual Long Term Care Insurance

Learning Outcomes:

(1a) Describe typical organizations offering these coverages including the historical context.

Sources:

SOA Pharmacy Study Note pp3-4, Bluhm Ch.9 pp139-140, Pricing examples in SOA study note.

Commentary on Question:

Candidates generally did well on parts C and D (calculation components of the question). Generally candidates did not do as well when explaining/defining the concepts of AWP and WAC. Candidates also did a solid job of describing the PBM responsibilities/tasks required in part B of the question.

Solution:

(a) Describe Wholesale Acquisition Cost (WAC) and Average Wholesale Price (AWP) and explain how each is used to set drug prices.

- AWP is based on data from manufacturers, distributors, and other suppliers, but not an average or based on any actual price.
- WAC required to be 80% of MAC in the US

(b) Describe typical tasks that a PBM performs for an insurance company.

a) Handle administrative and clerical tasks related to adjudication and management
b) Pricing negotiations,
c) provide mail order services
d) Plan design (formulary development)
e) Rebates

15. Continued

(c) Calculate the WAC for this prescription. Show your work.

Member pays $80 = 20% of drug cost
Drug cost = $400 = Ingredient Cost + Disp Fee (2 pts)
Ingredient Cost = $400 - $0.80 = $399.2 (2 pts)
AWP = Ingredient Cost / [1-discount] = $399.2 / [.86] = $464.19 (2 pts)
WAC = 80% Ingredient Cost = 80% * $464.19 = $371.35 (2 pts)

(d)

(i) Determine THE's total drug cost for pharmacy benefits in 2013. Show your work.

(ii) Determine whether the new proposal results in a lower expected drug cost than the current PBM arrangement, based on 2013 utilization data. Show your work.

(i) Brand Cost = $350*40,000*(1-.14) + 0.8*40,000
= 12,040,000 + 32,000 = $12,072,000
Generic Cost = $100*90,000*(1-.75) + 90,000*0.8
=2,250,000 + 72,000 = $2,322,000
Total cost = $14,394,000

(ii) Brand Cost = $350*40,000*(1-.16) + 0.1*40,000
= 11,760,000 + 4,000 = $11,764,000
Generic Cost = $100*90,000*(1-.76) + 90,000*2.5
=2,160,000 + 225,000 = $2,385,000
Total cost = $14,149,000

16. Learning Objectives:

2. The candidate will understand and recommend a manual rate for each of the coverages described in Learning Objective 1.

Learning Outcomes:

(2c) Calculate and recommend assumptions.

Sources:

Group Insurance 6th Edition, Chapter 38

Commentary on Question:

In general candidates did well on the first section of the question and had mixed results for the second section of the question. Please see section specific comments.

Solution:

(a)

(i) Describe components of medical trend which you can influence to offset the 7% provider contracting increase.

(ii) Describe other components that you cannot influence which could impact medical trend.

Commentary on Question:

The majority of candidates did well on this question. To receive full credit supporting statement(s) were required around how the component listed impacted trend.

(i)

- Utilization management (such as disease management programs to monitor and coach members with certain conditions)
- Benefit design (such as increased cost shares to impact member utilization)

(ii)

- General macro-economic conditions (such as inflation, population wealth)
- Random fluctuations (such as a high flu season)
- Legislation (mandated benefits)

(b)

(i) Explain issues with this approach.

(ii) Propose three alternate strategies assuming NNG would consider taking on additional risk. Justify your response.

16. Continued

Commentary on Question:
(i) Candidate performance varied on this part of the question with many candidates not providing enough issues and explanations for full credit.

(ii) Candidate performance varied on this part of the question with many candidates not providing enough rationale for their recommended strategy for full credit. Some candidates confused the perspective of the question and answered on behalf of NNG rather than the insurance company.

(i)

- Network viability – hospital may leave network
- Code creep/utilizing more services to make up for lost revenue
- Different population – maternity and pediatric reimbursement

(ii)

- Capitation – the hospital receives a flat fee and assumes utilization risk
- Bonus with withhold - hospital paid a lower reimbursement up front and is given a bonus tied to quality incentives
- DRG – fixed charge per admission based on severity of condition, hospital at risk for higher costs associated with the course of care for the admission

17. Learning Objectives:

1. The candidate will understand how to describe plan provisions typically offered under:
   a. Group and individual medical, dental and pharmacy plans
   b. Group and individual long-term disability plans
   c. Group short-term disability plans
   d. Supplementary plans, like Medicare Supplement
   e. Group and Individual Long Term Care Insurance

Learning Outcomes:

(1c) Describe each of the coverages listed above.

(1d) Evaluate the potential financial, legal and moral risks associated with each coverage.

Sources:

Group Insurance, 6th edition, Chapter 10

Commentary on Question:

This question is list and describe question that is testing the candidates' knowledge of basic group long term care insurance plans, their provisions and risks associated with them. In general, candidates did well on understanding the plan types and inflationary protection, but did not appropriately recall the selection risks associated with this type of insurance product.

Solution:

(a) Describe the types of GLTCI plans that are available for purchase.

Commentary on Question:

Most candidates got full credit for this question, as it was very straight forward. Candidates who only named the items, but did not include a description were given partial credit

1.) Service Reimbursement (reimburse after benefit trigger and waiting period are satisfied)
2.) Service Indemnity model – fixed benefit payment made for any day or week that services are received once benefit trigger and waiting period are satisfied.
3.) Disability or cash model: fixed benefit payment made for any day or week that benefit trigger and waiting period are satisfied

(b) List ways to limit anti-selection in the enrollment for GLTCI plans.

17. Continued

Commentary on Question:
Generally speaking, candidates did not score well on this question. Often basic underwriting methodologies for reducing anti-selection were listed, but candidates were not given credit for items that were not specific to GLTI.

1. Actively at work on full time basis
   a. Underwrite any other class of employee and/or dependent
2. Limit enrollment period to a set time each year
3. If want to enroll outside of open enrollment, submit evidence of insurability
4. If not full time actively at work, lengthy health questionnaire
   a. Get health-related information directly from physician

(c) Explain the features the Giant Group can use to provide the current policyholders with inflation protection.

Commentary on Question:
Generally, candidates did very well on this question, providing both the feature and a description of the feature.

a. Periodic Increase offers – periodic offering to employees for increases in coverage on a guaranteed issue basis
b. Automatic Inflation Protection – plan provision that provides automatic increases in benefits without employee interjection. This can be done via two methods:
   1.) Simple inflation protection – benefit payments are increased using simple interest.
   2.) Compound inflation protection – benefit payments are increased using compound interest.

18. Learning Objectives:

2. Calculate and recommend a manual rate for each of the coverages described in Learning Objective 1

Learning Outcomes:

(2a) Identify and evaluate sources of data needed for pricing, including the quality, appropriateness and limitations of each data source

Sources:

Bluhm, Chapter 31

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Outline the advantages and disadvantages of using internal vs. external sources of data when considering data for how to charge expenses for a given policy.

Commentary on Question:

Most candidates were successful in identifying the impact of credibility and accuracy, or lack thereof, of using external vs. internal data. Advantages specific to the use of internal functional cost studies and external market drivers were frequently overlooked.

- Internal data shows what is needed to cover the company operating costs.
- Internal data is specific to actual company experience and often driven by expense treatment in the financial statement or tax calculations; provides a better definition of what is required.
- Internal data allows for the use of functional cost studies to measure resources required for each function.
- Internal data allows for the use of functional cost studies to measure resources required for each category (group size, coverage, line of business).
- External data shows what the market demands.
- External data could include studies from industry associations, surveys, competitive feedback (primarily based on quotes or state rate filings); caution in comparing as data may not be defined the same way.
- Caution in comparing internal data with other companies as there may be distortions because of differences in how companies define and account for expenses.
- External data may not be accurate.
- External data may provide more credibility than internal data based on volume and appropriateness to the line of business.

18. Continued

(b) Your company's strategy is to increase the small group block of business. You have agreed to the approach of realigning the commission structure to achieve this strategy. Explain the items that need to be considered.

Commentary on Question:
Most candidates were successful in identifying various commission distribution methods, profitability impact and market drivers. Other items to consider for realigning the commission structure were frequently overlooked.

- Distribution Channel: usually agents or brokers are compensated via a commission, some are salaried or a combination of salaried and commissions.
- May have commission overrides
- Commissions should reflect the services being performed; the value depends on
  - Complexity of services
  - General payment practices among other companies' brokers
  - Client 's willingness to pay
- Competitive Environment
- Compensation to distribution channel:
  - Percent of premiums
  - Based on group size
  - Based on sliding premium scale
  - Flat dollar amount per member, here, commissions do not vary directly with premiums.
- Composition of the commission: first year incentives, and renewal bonuses
- Special bonuses are given as incentives if salaried representatives or brokers; bonuses can be based on persistency, volume, types of groups sold, other measures aligning with company's goals.
- Expenses other than sales expenses, i-e advertising and promotional either directly attributed to the product or attributable to the promotion of the company in general
- Rules to ensure that brokers and agents do not re-issue policies and 'switch' clients to gain high first year commissions
- Overall profitability impact

(c) Identify the common state and federal taxes/fees that must be accounted for when a policy is priced.

Commentary on Question:
Most candidates were successful in identifying premium and income tax as well as the ACA tax. Candidates frequently overlooked the high risk pool surcharge.

18. Continued

- ACA tax
  i. (Federal assessment tax), allocated through products and customers of the company
  ii. (Federal): comparative effectiveness research assessment, supports the non-profit Patient-Centered Outcomes research Institute (PCORI) and is used to identify and conduct research to compare the clinical effectiveness of medical treatments.
- Premium tax (state): in pricing, either based on average premium tax charges over the states or reflecting each state's exact premium tax rate
- Federal and State income tax; common percentage of premiums across all products, or allocations based on pre-tax operating results of each product or product segment.
- High risk pool surcharge (state): provides insurance to those who were denied from all other sources. Partially subsidized by certain product lines, assessments are in line with the volume across the carriers doing business in the state.