EXAM 7U
Sample Essay Solutions
Spring 2000

71.

1. There was a legal duty of care owed by the defendant to the plaintiff.

2. The defendant failed to conform to a reasonable standard of care.

3. The defendant's actions were the direct cause of the plaintiff's injuries.

4. There was an actual loss or damage to the plaintiff.

72.

1. Disallowing unconscionable advantage: Judges and juries take into account in their decisions that insurers have much more knowledge, understanding, and bargaining power than the insured regarding the insurance product.

2. Honoring reasonable expectations: Judges and juries take into account in their decisions what the insured could reasonably expect when they entered into a contract with the insurer, despite the specific language in the contract.

3. Detrimental reliance: Judges and juries take into account in their decisions that the insured relied on the insurer and/or the producer to provide the coverage and service that was represented to them true estoppel.

73.

1. Routine Personal Injury (ex. – auto)
   Characterized by large volume, well defined case law, slow growth, increased use of alternative dispute resolution (ADR), little potential for deterrence, modest dollar amounts, routinized claims handling.

2. High Stakes Personal Injury (ex. – med mal, products liability)
   Characterized by lower volume, increasingly specialized trial attorneys, little potential for ADR, faster growth in frequency, claims and outcomes, deterrence is becoming more of a factor, large potential dollar amounts for each case.

3. Mass Latent Injury (ex. – asbestos)
   Characterized by a high concentration in time and place of suits, highly specialized attorneys, enormous possible dollar amounts, problematic law, uncertainty of frequency and amounts growth.

74.

a.

- May lose market share to competitors charging lower rates.
- Increasing rates will increase reinsurance rates.
- Put pressure on the financial ratings of publicly traded companies since both reinsurance and rating agencies use these models, regardless of whether they are used in pricing or not.

b.

- Require a legal affidavit attesting that the user has not manipulated the models/assumptions.
- Require a formal opinion from the modeler on the proper use and execution of the model by the user.
- Have modelers provide regulations with a range of results by building type, zip code, deductible…

  The regulation can compare their ranges with those provided by the insurer.

75.

a. The EPA furnishes information to the SEC about the NPC site and the various PRP's. The SEC then used this information to determine if the PRP's were disclosing their potential environmental clean-up costs. In many cases the PRP's were not disclosing information on the grounds that their insurance would pay the costs but the insurer's were also not disclosing the information.

b. It requires recognition

- It is likely that an asset has been impaired or a liability has been incurred.
- The amount can be reasonably estimated.

Many companies will claim that it cannot be reasonably estimated and thus will not recognize a liability.

Alternatively, they may claim it is not likely that a liability has been incurred.

c. SHB 92 requires that if a range of estimates is available then the "best" estimate should be used ("best" being more likely than any other estimate). If every estimate is equally likely, then the low point of the range should be used.

Full disclosure might not result because some may claim a "range of reasonable estimates" cannot be determined or because companies are booking the low end claiming that a "best" estimate does not exist.

76. Criticisms of unemployment insurance

1. It is inequitable state to state. Since it is controlled at the state level, benefits are not uniform.

2. Experience rating plan used encourages temporary layoffs. Since companies operating in the most unstable industries are usually already being charged the highest amount, there is no additional penalty for temporary layoffs.

3. Benefits are too high and as a result there is no incentive to return to work quickly.

4. Those that need protection most are probably not covered because their employers are exempt from participating (small companies, certain classes of employment, etc.)

77.

> 2,400 = (4 * $600)
1997 earnings ≅ 4,800 ➔ 4 quarters
1998 earnings ≅ 3,600 ➔ 4 quarters

25 years old at 01/01/2000

a. Need min (6, (age – 21) or 40) ➔need 6
   Yes, fully insured.

b. 6 of last 13
   last 13 includes '99, '98, '97
   Yes, currently insured.

c.
- At least 6
- 2 for each year over 21.
- If >= 31, fully insured if 20 of last 40.
- Thus 25 year old needs 8.
  Yes, disability insured.

78.

a.
For
- Higher long-run return on investment.
- Younger workers receive higher internal rate of return.

Against
- Federal government would have too much control of private enterprise and economy.
- Greater risk when SS suppose to be safe.

b.

- Taxpayers' income taxed to pay benefits under SS plus taxed to pay interest on loans federal government received from trust funds.
- General tax not used to pay benefits just to pay interest on loan that federal government would have to get elsewhere anyway even if didn't borrow from trust fund.

79.

1. Force insurers to maintain more accurate financial statements, particularly loss reserves.

2. Impose more realistic and accurate capital requirements, especially those engaging in more risky lines.

3. Reduce lag time in approval of rates.

80.

1. Insurance companies may become more conservative in their pricing because they cannot underwrite the risks.

2. Insurance companies may implement a more complicated rating structure, using variables previously used in underwriting.

81.

Cannot use sex, age, or martial status unless it can be actuarially justified that these are acceptable rating factors contributing to difference in comprehension loss costs. Socially unacceptable.

Reason is that without justification according to New York insurance law, these are not acceptable characteristics that contribute to the difference in comprehensive losses, comprehensive losses are usually not in the control of the insured (e.g. hitting a deer, having your car stolen). Socially unacceptable.

82.

The policyholder has to request this in writing and explain why it is requested.

The commission has to approve it.

83.

a. 4 circumstances in which rates should reflect premium reductions

1. Differential between experienced and non-experienced operators.
2. No-fault rates should reflect Medicare benefits.
3. Premium should be lower for insureds who complete an accident-prevention course.
4. If insured has an anti-theft device.

b.
1. Collision
2. No-fault liability
3. Collision
4. Comprehensive

84.

1. Encourages insured to practice loss mitigation behavior when leading on driving/type of vehicle/level of care in driving.

2. Provides incentives for insurers to settle claims efficiently when they are in charge of and responsible for payments.

3. It encourages competitively determined prices, avoiding cross-subsidy and improving product innovation.

85.

a. He used Standard and Poor data to calculate the annual ROR of other industries, and standard deviations (S) of these returns and average annual growth rate of sales (G). Fit a regression curve which explain the reasonable ROR as a factor of SD and G

   $R = a_0 + a_1S + a_2G$

   Using data from New York insurance department, he calculates G to be 7.9%. Using the P-L industry wide total results. Substituting New York auto U/W results for industry wide U/W results. He calculates the S, plugs the values of S and G. He calculates R, which is the reasonable ROR.

b. When calculating S, he used rate of return on net worth, which is unadjusted for prepaid expenses. But the profit he used in the numerator is adjusted for prepaid expenses. So ROR is overstated.

86.

a. Electronic Data Processing Equipment (EDPE)

b.
- Rare purchase
- Large cost
- Do not want large fluctuations in earnings and surplus because of this.

87.

Details

If L/R < 55%, agent = 2% DWP

If DWP > $5M, bonus of $25,000

Earned is paid as follows: 60% @ 12/31/99
40% @ 6/15/00

DWP = $7,500,000 so he gets the $25,000 x .60 = 15,000 12/31/99
x .40 = 10,000 6/15/00

L/R = 50% so he gets .02(7.5M) = $150,000 x .60 = 90,000 12/31/99
x .40 = 60,000 6/15/00

total = 175,000 x .60 = 105,000 @ 12/31/99
x .40 = 70,000 @ 6/15/00

<u>For 1999 Ann Stat</u>

Line 3: Cont Comm = 60,000 [the portion that's % prem]

Line 4: Other Exp = 10,000 [the flat portion]

Line 5: T, L, F = 0

Since the $105,000 is paid on 12/31/99, it's not a liability. Only liability is the $70,000 left.

88.

1. Pigeon Hall method

NAIC stipulates what kinds and percentages of different types of assets company can invest in.

2. Prudent Person method

Investments are evaluated based upon the guidelines and standards of the company and how well these guidelines maintain and enhance policyholder surplus.

89.

Insurance company must input rent on itself (this amount is included in investment income and added to expenses) so a comparison between owning and renting can be made.

90.

Change in surplus

Net income	100	
Unrealized capital gains	(20)	
Change in nonadmitted assets	5	(50-45)
Change in provision for reinsurance	2	(36-34)
Change in treasury stock	<u>(1)</u>	(1-2)
Change in Surplus	86	

91.

If an ordinary deduction in prior years is being wasted on sheltering capital gains, then it may be advantageous to carry back the capital loss deduction to shelter the capital gain instead. This then frees up the ordinary loss deduction, which can be carried forward to shelter other forms of income.

92.

Taxable Income

a. Earned Premium	900	= WP + ΔUEPR = 1,000 + 500 - 600
b. Inc LAE and Loss	500	= Pd LLAE +ΔRes = 400 + 1,000 - 900
a. U/W Expense	300	
b. Taxable Tax Inc	200	
c. Stat Inc a – b – c + d	300	
d. Revenue Offset	20	= ΔUEPR * 20% = (600 – 500) * 20%
e. Change in Discount	-100	= (1,000 – 900) – (900 – 700)
f. Req Tax Inc	220	
e + f + g		

93.

a.

- Amortized values for bonds in good standing (categories 1, 2)
- Lower if market or Amertized values for bonds not in good standing (categories 3, 4, 5, 6)
- Market values are promulgated by NAIC SVD.

b.

- Held-to-maturity bonds: company has intent and ability to hold bonds to maturity. Use Amertized value.
- Trading securities: company flows to trade bonds. Use actuarial values with unrealized change flowing to income.
- Other than 1 and 2: use market values with unrealized changes impacting surplus, not income.

94.

Canadian companies carry all assets at book value. Should the aggregate market value of assets fall below booked value, an investment valuation reserve is established for the difference. This applies only to assets classified as long term.

95.

Occupied: net book value – encumbrances
Not Occupied: lower (net book value, market value) – encumbrances
Net book value = cost + appreciation – depreciation

➔Occupied: (100,000 + 0 – 20,000) – 40,000 = 40,000
➔Not Occupied: lower (200,000 + 0 – 90,000,100,000) – 30,000 = 70,000
Total: 110,000

96.

a. Slow paying = $\dfrac{\text{Amounts > 90 days overdue}}{\text{Recoverable on Paid loss \& LAE} + \text{Amounts received within 90 days}}$

$= \dfrac{20 + 40}{(125 + 35) + 45} = 29.3\%$

Since the slow-paying ratio is greater than 20%, yes, they are slow paying.

b. Provision for reinsurance
= max [20% unsecured, 20% amounts > 90 days overdue]

unsecured = [(recoverables on paid loss & LAE, known case & LAE reserves, IBNR loss & LAE reserves, UEPR & commissions) – secured
= (125 + 35 + 30 + 50 + 70 + 25 + 75 + 3) – 250
= 413 – 250
= 163
20% = 163 * 0.2 = 32.6

amounts > 90 days overdue = 20 + 40 = 60
20% of amounts overdue = 60 * 0.2 = 12

Provision for reinsurance = max [32.6, 12] = 32.6

97.

		96	97	98	
a.	Earned premium	1,100	1,500	1,750	
b.	Loss reserves	1,500	2,000	3,000	
c.	Rein on Pay Pd losses	200	300	300	
d.	LAE Reserves	1,000	1,500	1,700	
e.	Adverse development	1,500	600	N/A	
f.	Adj reserves B + C + D + E	4,200	4,400	5,000	
g.	Ratio F/A	3.818	2.933		
h.	Ave (g_{96}, g_{97})				3,376
i.	Indicated reserves a * h				5,908
j.	Carried reserves line f				5,000
k.	Difference I – j				908
l.	Policy holder surplus				10,000
m.	Ratio k/l				9.08%

Since 9.08% < 25%, insurer passes test.

98.

a. "Revenue offset" is 20% of the change in Unearned Premium Reserve is added into taxable income. The reason for this is difference in the timing of recognition of acquisition expenses and premium.

b. DRD is to partially offset the triple taxation that occurs when a corporation received dividend income. The deduction is 70% of dividends received subject to:
   - DRD is limited 70% of taxable income before the deduction.
   - The limitation does not apply if taxable income before the deduction is less than the unlimited DRD deduction.

99.

Adjusted assets = balance sheet assets
+ deferred federal income tax
+ market value over book value of assets
- deferred acquisition costs
- investment valuation reserve
- non-admitted assets

Adjusted assets = 70,000,000
+ 1,000,000
+ 0 (since market value < book value)
- 5,000,000
- 500,000
- 2,000,000
63,500,000

100.

Investment gain ratio = 10%
Allocated surplus WC = 420

a. prepaid acquisition expenses = commission & brokerage + tL&f + other acq + ½ general expense

   = 55 + 15 + 10 + ½ (40)
   = 100

b. investment gains on funds attributable to insurance transactions

   $$\text{IGR} * \left(\text{mean loss \& LAE reserves} + \text{mean UEPR} * \left(1 - \frac{\text{prepaid acq expenses}}{\text{WP}}\right) - \text{mean agents balances}\right)$$

   $$= 10\% * \left[\frac{(1{,}700 + 1{,}400)}{2} + \frac{(125 + 75)}{2} * \left(1 - \frac{100}{500}\right) - \frac{(45 + 35)}{2}\right]$$
   $$= 10\% * (1{,}550 + 100 * (0.8) - 40)$$
   $$= 10\% * 1{,}590$$
   $$= 159$$

c. invest gain on funds attributable to capital & surplus

= total investment gain – (b)
= 10% * (mean loss & LAE reserves + mean UEPR – mean agents balances + allocated PH surplus) – 159
= 10% (1,550 + 100 – 40 + 420) – 159
= 10%(2,030) – 159
= 203 – 159
= 44

101.

a. The increase in no-fault benefits is not offset by a decrease in tort liability benefit payouts.

b. Premiums must go up to cover the additional benefits.

c. Restrict tort liability lawsuits by thresholds of when people could sue (monetary or descriptive thresholds).

102.

1. Ignorance of consumer. They do not know about price differences.

2. Strict underwriting guidelines of the direct writers.

3. Opposition from agency system
- They own renewal
- Difficult for insurer to rollout direct writing by state because of agency opposition.

103.

1. Reinsurance Facility – The insured applies for coverage and the insurer must provide coverage. The insurer has the option of retaining the risk in their voluntary market or ceding the risk to the reinsurance facility. This transaction is completely invisible to the insured. The insurer services the policy regardless of if the risk is ceded. Operating results of the facility are shared by all insurers in the state based on market share.

2. Assigned Risk – The insured applies for coverage under the assigned risk plan and the insured is assigned to an insurer in the state based on market share. The insurer is responsible for all profits and loss associated with that risk, although rates charged are generally higher.

3. Maryland Automobile State Plan – An insured may apply to the Plan for coverage after his policy has been cancelled by an insurer, and he has been rejected by 2 other insurers. The Plan services the policy and is responsible for all profits and losses.

104.

1. Reduce, suspend, or limit all new issues and renewals.

2. Increase the capital or surplus.

3. Suspend or limit all stockholder or policyholder dividends.

4. Increase the level of reinsurance.

5. Document the adequacy of rates.

6. Reduce or eliminate certain types of investments.

105.

1. Assets for life insurer are much larger than that of P/C companies. Feldblum cited life insurer has asset 10 times of surplus, so a 5% change to asset ➔ 50% change to surplus.
   P/C has asset 2/3 times of surplus so much less impact.

2. Asset management is much more important for life insurers because their product has both investment and insurance features. If return is not good, policyholder will surrender or take out loan. Asset management is less important for P/C insurer because there are not many options for their products.

106.

a.
   1. Decrease in reserves increases surplus.
   2. Lower reserves on reported case lowers the reserving risk charge.
   3. Lower reserves on reported cases decreases adverse loss development and therefore the reserving risk charge.

b. Base test upon indicated reserves using independent base – modified form of B – F.

c.
   1. Accuracy of method is suspect.
   2. Not the job of RBC to monitor adequacy of reserves.
   3. Any artificial lowering of reserves will show up as future adverse loss development.

107.

a. In both cases, the RBC formulas are using undiscounted values from the AS. Reserving uses undiscounted reserves, while premium uses undiscounted loss ratios. This adds extra margin for adverse conditions, so to determine RBC requirements, we need to account for this built in margin from investment income so we don't add an RBC margin on top of the built in investment income margin.

b. The adjustment for reserves considers the payout pattern after the end of the first year, while the premium payout pattern considers payment in the first year. So, if a large portion of total payments are made during the calendar year, the policy is in effect following by a long payout of the remaining reserves in the following calendar years, the discount for reserves will be greater than the discount for premiums.

108.

1. Two Year Overall Operating Ratio
   = Combined (trade) Ratio – Investment Income Ratio (<100% usual range)

2. Change in Surplus = $\dfrac{\text{Change in Adjusted Surplus}}{\text{Prior Year's Adjusted Surplus}}$

   -10%< usual range <50%

3. Investment Yield = $\dfrac{\text{Net Investment Gain}}{\text{Average Investable Assets}}$

   4.5< usual range <10%

109.

a.
- Sherman act still applies for boycott, coersion, and intimidation.
- Federal anti-trust laws still apply to the extent state does not regulate.
- Federal laws specifically covering the business of insurance pre-empt state laws.

b.
- Involves risk spreading and underwriting.
- There exists a direct contractual relationship between insurer and insured.
- Activity must be unique to insurance.

c.
- Risk Retention Acts.
- National Flood Insurance Program.

d.
- SEC requirements.
- Employee relations through Nation Labor Relations Act, Fair Labor Standards Act, and Merchant Marine Act.

110. Advantages to elected commissioner

1. Likely to stay in office the whole term service can't be terminated by an appointer.

2. More likely to know the public interest since tied to public concerns through campaigning (appointed not as tied to public).

3. More likely to change insurance department stance on issues when needed whereas appointed more likely to stay with status quo.

4. Not indebted to any individual or group whereas appointed is indebted to appointer.

111.

1. The Ceding Company shall recognize a gain in the Other Income category of income statement.

2. Reserves not reduced but a controllability for the transferred reserve is set up on the balance sheet and like gain is restricted as "special surplus" on the balance sheet.

3. These reserves taken down as soon as the amounts recovered are higher than the consideration paid in the contract.

112.

a. Initial premium to surplus ratio

$$= \frac{1{,}000}{500 - (30\%)(1{,}000)}$$

$= 5.0$

b. Resulting premium surplus ratio

$$= \frac{(1{,}000)(60\%)}{500 - 300 + (400)(10\%)}$$

$= 2.5$

c. Commission equity

= (UP)(Commission Rate)

= (400)(10%)

= 40

d. The purpose of this disclosure is to show the effect if the reinsurer cancels the reinsurance. The reinsured would need to return the unearned commission back to the reinsurer, thus increasing the premium-to-surplus ratio.

113.

a. NW income = Ep – inc loss/LAE – other U/W exp

Ep = 2000 At end of year
Cy inc loss = 1,000
Other UWE = 400
UW income = 2,000 – 1,000 – 400 = 600

Inv income = 0
Other income = 0

Net income = 600

b.

Assets =	Cash	1,000		
	WP	2,000		
	-Exp	-400		
	-Paid loss	-200		
	-Agent bal od	<u>-500</u>		
		1,900		Assets = 1,900
Liab =	Loss/LAE res	800	(1,000 – 200)	
	SCW P penalty	200	(60% * 2,000 – 1,000)	
				Liab = 1,000
PHS = Assets – Liab		900		PHS = 900

c. PHS at beginning of year = assets at beg – liab at beg
= 1,000 – 0
= 1,000

ΔPHS = 900 – 1,000 = -100

d.

- Sch P penalty (excess of statutory over statement reserves)
  Which shows up on page 3
  Sch P penalty = 200

- Agents balances (premium in process of collection) greater than 90 days overdue are nonadmitted assets and shown on page 2, line10.
  AB, nonadmitted = 500

-	Net income	= 600	
	Δ Sch P	= -200	Increased liab (thus subtracted here)
	Δ Nonad assets	= <u>-500</u>	More nonadmitted assets
		-100	

114.

a. Produce reports quickly.

b. Be used to manage the company.

115.

Policy reserves > Stat invested assets

➔Discount Rate = min (average net portfolio yield – 1.5%,Treasury yield)
= min (5.0% - 1.5%, 4.8%)
= 3.5%