

McCLENAHAN: PAST CAS EXAMINATION QUESTIONS

A. Basic Terminology

A1. You are given the following facts:

- i) Rate levels are currently adequate for the upcoming policy period.
- ii) Current loss and expense provisions are the following:

Commissions	20.0%	General & other acquisition	8.0%
Taxes	3.0%	Profit	5.0%
Loss & loss adjustment	64.0%		

- iii) General expense and other acquisition expense dollars will remain fixed at their current level for the upcoming policy period.

If the existing rate level is X, what should the rate level be if commissions were reduced to 12.0%? (78-6-50-3)

A2. a. Given the following expense information, what discount is indicated on a renewal policy?

	<u>New</u>	<u>Renewal</u>		<u>New</u>	<u>Renewal</u>
Commissions	15%	8%	General expenses	7%	4%
Taxes	3%	3%	Profit	5%	5%

Assume that the manual rates contemplate expenses for new policies and that the pure premium including loss adjustment expense is identical for new and renewal policies.

- b. Assume that, in addition to the expense savings on renewal policies, there is also a 10% savings on the pure premium (including loss adjustment expense) on a renewal policy. What discount would now be indicated? (83-6-59-1ea.)

A3. ABC Insurance Company currently sells annual private passenger automobile insurance policies using a six-month premium payment installment plan. Effective January 1, 1986, all new and renewal policies will be written for six-month terms (rather than annual terms). ABC reports its experience using the ISO Automobile Statistical Plan. Assuming no change in volume or rate level, which of the following are expected?

- 1. Written premium reported in 1986 will be less than that reported in 1985.
- 2. Earned premium calculated for 1986 will be less than earned premium calculated for 1985.

A. 1 B. 2 C. 1,2 D. Neither 1 nor 2 is true. (85-6-10-1)

A4. Assume a significant shift occurs toward the purchase of higher deductibles for automobile insurance. What effects will this have on frequency and severity?

- A. Frequency will decrease and severity will decrease.
- B. Frequency will increase and severity will increase.
- C. Frequency will decrease and severity will increase.
- D. Frequency will increase and severity will decrease.
- E. There would be no impact on frequency or severity. (89-6-5-1)

A5. According to McClenahan's chapter on ratemaking, the description of the goal of the ratemaking process includes consideration of generating a reasonable return on funds provided by investors. (90-6-4-MC)

A6. According to McClenahan's chapter on ratemaking, regulatory review generally requires that rates shall not be inadequate, excessive or unfairly discriminatory between risks of like kind and quality. (90-6-4-MC)

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A1. $R = \frac{P + F}{1 - V - Q} = \frac{.64X + .08X}{1 - (.12 + .03) - .05} = .9X$, p. 83.

A2. a. $R = \frac{P}{1 - V} = \frac{1 - .15 - .03 - .07 - .05}{1 - .08 - .03 - .04 - .05} = .875$ or a discount of 12.5%, p. 88.

b. Reducing the pure premium by 10% gives us $(1 - .10)(.875) = .7875$ or a discount of 21.25%, p. 83.

- A3. 1. T, pp. 76, 84 – Policies previously written for 12 months would be written for 6 months.
2. F, pp. 76, 84 – Earned premium reflects coverage provided during a period and is unaffected by the length of the policy term.

Answer: A

A4. Fewer losses will constitute claims and thus frequency will decrease. Severity equals total losses less deductible divided by total claims. Although losses are removed from the numerator, claims are also removed from the denominator and given the predominance of smaller claims, the resulting ratio increases, pp. 78, 91.

Answer: C

A5. T, pp. 84–85.

A6. T, p. 85.