

EXAM 6 – CANADA, FALL 2015

16. (3.25 points)

The following information is available for a property and casualty insurance company as of December 31, 2015. All amounts are in thousands of dollars (\$000s).

East Canada PML500	50,000
West Canada PML500	200,000
East Canada PML 420	30,000
West Canada PML 420	120,000

The company has the financial resources of \$50,000 to support the insurer's earthquake risk.

a. (1.25 points)

Calculate Earthquake Reserves Component.

b. (1 point)

Identify the four financial resources to support the earthquake risk.

c. (1 point)

Identify and briefly describe two principles of earthquake risk management other than *Financial Resources and Contingency Plans*.

EXAM 6-CANADA SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION 16	
TOTAL POINT VALUE: 3.25	LEARNING OBJECTIVE: C1 & C2
SAMPLE ANSWERS	
Part a: 1.25 points	
<ul style="list-style-type: none"> • Sample 1: Country wide PML 500 = (east Canada PML 500 ^{1.5} + West Canada PM: 500 ^{1.5}) = 216,377 ERC = 216,377 – 50,000 = 166,377 • Sample 2: Country wide PML 500 = (east Canada PML 500 ^{1.5} + West Canada PM: 500 ^{1.5}) = 216,377 Country wide PML for 2015 = 216,377 * ((year-2014)/8) + MAX(East Canada PML 420, West Canada PML 420)*((2022-year)/8) = 132, 042 ERC = 132,042 – 50,000 = 82,042 	
Part b: 1 point	
<ul style="list-style-type: none"> • Capital and surplus • Earthquake premium reserve • Reinsurance coverage • Capital market financing 	
Part c: 1 point	
<p>Sample Example #1:</p> <p>PML estimate: A PML estimate should reflect the expected ultimate cost including data quality, non-modeled exposure, safety margin for the model uncertainty, multi are exposure. Earthquake exposures risk management: Should have a sound and comprehensive earthquake exposure risk management policies oversight by board and implement by management.</p> <p>Sample Example #2:</p> <p>Data quality & control: Ensure proper geocoding of risks and track construction type, age of home, etc. Validate and assess data regularly. Have internal controls to avoid taking on too much risk or concentration (Eg underwriting guidelines and controls)</p>	
EXAMINER'S REPORT	
The question did not specify that the company is phasing to PML 500. Thus, for part a), we accepted both the answer with and without phasing.	
Part a	
The candidates did fairly well on this question. Generally, candidates either knew the formula and got full credit or did not know the formula and received no credit. Some candidates forgot to subtract the financial resources and lost partial credit.	
Part b	
Candidates did extremely well on this question with the vast majority getting full marks. Some candidates lost credit by not providing 4 responses or providing duplicated responses.	

EXAM 6-CANADA SAMPLE ANSWERS AND EXAMINER'S REPORT

Part c

Candidates generally did very well on this question. Most of the candidates were able to identify the principles, but some lost credit due to insufficient description.
