



Uva Wellassa University
Faculty of Management



Degree of Bachelor of Business Management in Entrepreneurship and Management
THIRD YEAR SECOND SEMESTER EXAMINATION – SEPTEMBER/OCTOBER 2013

EMG 336-3 Actuarial Statistics -II

Part C- Essay Questions

Marks Allocation for Part C: 45 marks

1. Records of previous years give that the standard deviation of claim size for a certain class of policy is Rs. 850. The distribution of claim size is to be modeled as a normal random variable. Determine the minimum sample size required to estimate the mean claim size such that a 99% confidence interval is of width ± 200 .

(6 marks)

2. The following amounts are the sizes of claims (Rs.) on house insurance policies for a certain type of repair.

1980 2210 2150 2090 2240 2100 2230 2150 2030 2100 2200 2000 2080 2120
2160

Using the method of percentile, determine the lower quartile, median, upper quartile.

(12 marks)

3. An insurance organization sampled its field sales staff in four provinces concerning their preference for compensation method (fixed salary plus year-end bonus) and proposed new method (straight commission).

The response of the randomly sampled field sales staff are summarized in the following table 2.

Compensation plan	Province			
	A	B	C	D
Present payment plan	62	140	47	80
New payment plan	38	45	23	30

Test whether there is any difference across the four provinces in the proportion of field sales staff that prefer the present compensation method?

(12 marks)