Uva Wellassa University

Faculty of Management

Bachelor of Business Management in Entrepreneurship and Management

SECOND YEAR SECOND SEMESTER EXAMINATION –SEPTEMBER/ OCTOBER, 2013

EMG 242 - 3 Statistics for Management

Part C – Essay Questions

Answer Two (02) questions only.

Marks Allocation for Part C: 50 marks

1. A bank branch has 10 assistants. The number of assistants absent on any given day has binomial distribution with the p= 0.11.
   a. What is the expected number of assistants absent on any particular day? **(7 marks)**
   b. What is the probability none of assistants from the branch would be absent? **(7 marks)**
   c. What is the probability more than two assistants will be absent on given day? **(11 marks)**

(Total 25 marks)

2. Suppose a company hires both MBAs and non- MBAs for the same kind of managerial task. After a period of employment some of each category is promoted and some are not. Table 01 gives the proportion of company's managers among the said classes.

Table 01: Academic Qualifications and promotional status

Promotional Status	**Academic Qualification**	
	MBA (A)	**Non- MBA (A')**
Promoted (B)	0.42	0.18
Not Promoted (B')	0.28	0.12

Calculate the probability of;

a. selecting a MBA manager [P (A)]. **(6 marks)**

b. finding promoted person [P (B)]. **(6 marks)**

c. finding a promoted MBA manager[P(A and B)]. **(6 marks)**

d. finding a promoted person, given that he is a MBA manager [P (B | A)]. **(7 marks)**

e.

3. A firm wants to investigate the number of minor accidents in a particular area of its manufacturing plant. Historical data of the company indicates that on an average 2 accidents per month took place in this particular area of the plant. The number of accidents is passion distributed. Find the probability;

   a. Exactly 2 accidents in any month. **(6 marks)**

   b. At least one accident in any month **(7 marks)**

   c. More than 4 accidents in six- month period **(12 marks)**

(Total 25 marks)

4. A financial institution is interested in the life of its regular savings accounts opened at its branch. The information is of interest as it can be used as an indicator of funds available for automobile loans. An analysis of past data indicates that the life of a regular savings account, maintained at its branch, averages 17 months, with standard deviation of 5.7 months. The distribution of this past data was found to be approximately normal.

   a. What is the probability that there will still be money in that account in 20 months?

(15 marks)

   b. What is the probability that the account will have been closed within 2 years (24 months)?

(10 marks)

(Total 25 marks)