(052) Math 131: Finite Mathematics.Quiz IV(Ch:8.4,8.5,8.6) May 13, 2006

Dr. Latif and Raja Latif and Muhammad Latif and Abdul Latif

Contents

Marks: 20; Time: 30 Minutes

NAME:.....................................

I.D.#:

SERIAL# SECTION #: (check one)

		3	6	7

NOTE: SHOW ALL STEPS OF THE SOLUTION.

NO CREDIT FOR ANSWERS WITHOUT COMPLETE SOLUTION.

The questions are not in any order of difficulty at all.

Only the nonprogramable calculators are allowed.

Write the simplified answer of each question at the at the end of each question.

Q.1. $(23TB422)$. $(Marks:2)$.

Examination score: A student answers each question on a 10-- question true-false examination in a random fashion.

If each question is worth 10 points,

what is the probability that the student scores 100 points.

Q.2. $(12TB434)$. $(Marks:8)$.

College Selection and Family Income: A survey of 175 students resulted in the data showed in the following table.

It shows the type of college the student attends and the **income level** of the student's family.

Suppose a student in the survey is randomly inserted.

CO	LL	EG	E
Income	Private	Public	Total
High	14	11	25
Middle	25	55	80
Low	10	60	70
Total	49	126	175

(a) Find the probability that the student attends a public-college, given that the student comes from a middle-income family.

(b) Find the probability that the student is from a high-income family, given that the student attends a private college.

(c) If the student comes from a high-income family, find the probability that the student attends a private college.

(d) Find the probability that the student attends a public college or comes from a low-income family.

Q.3. (36TB448). (Marks : 10).

Shooting Gallery: At a shooting gallery, suppose Bill, Jim and Linda each take one shot at a moving target.

The probability that Bill hits the shooting target is 0.5 , and for Jim and Linda, the probabilities are 0.4 and 0.7, respectively.

Assume independence and find each of the following.

(a) The probability that none of them hits the target.

(b) The probability that Linda is the only one of them that hits the target.

(c) The probability that only one of them hits the target.

(d) The probability that exactly two of them hit the target.

(e) The probability that all of them hit the target.

2