STAT 273   **Test 1**
Date: 31 March 2003   **Max. Marks: 25**
<u>**Instructors: Dr. M. Akkas, Dr. M. Ashqar, Dr. A. Alsiddiqi**</u>
Question 1:   [6 marks]
In a college, students were classified according to:
45% are freshmen of whom 10% own a car, 20% are sophomanes of whom 15% own a car and 35% are sensiors of whom 5% own car.

  i)   Find the probability that a student in the college owns a car.
  ii)   If a student does own a car, find the probability that the student is a senior.

Question 2: [8 marks]

Given the following distribution

5-9	10-14	15-19	20-24	25-29	30-34
4	10	10	10	8	8

i)   Find the median and the coefficient of variation of the above distribution.

Question 3:   [8 marks]

a)   Two events A and B such that $P(A) = 0.2$, $P(A' \cap B) = 0.22$ and $P(A \cap B) = 0.06$
          Find $P(A \cap B')$, $P(A \cup B)$ and $P(B|A)$.

b)   Two fair dice were rolled. What is the probability that the number showing on one will be twice the number appearing on the other?