

King Fahd University of Petroleum & Minerals
Department of Mathematics & Statistics
STAT-319-Term162-I

Quiz #1

Name:

ID:

Serial:

Q1: Provide a reasonable description of the sample space for each of the following.

- a. The following two questions appear on an employee survey questionnaire. Each question is chosen from five – point scale 1 (never), 2, 3, 4, 5 (always).
1. Is the corporation willing to listen to and fairly evaluate new ideas?
 2. How often are my coworkers important in my overall job performance?
- b. The time until a service transmutation is requested if a computer to the nearest millisecond.

Q2: Suppose that $P(A \cap \bar{B}) = 0.3$, $P(\overline{A \cup B}) = 0.2$ and $P(A \cap B) = 0.1$, find $P(A|B)$

Q2: A manufacturer of front lights for automobiles tests lamps under a high-humidity, high-temperature environment using intensity and useful life as the responses of interest. The following table shows the performance of 170 lamps:

<i>Intensity</i>	<i>Useful life</i>	
	Satisfactory	Unsatisfactory
Satisfactory	143	8
Unsatisfactory	88	82

a. Find the probability that a randomly selected lamp will yield unsatisfactory results under any criteria.

b. The customers for these lamps demand 95% satisfactory results. Can the lamp manufacturer meet this demand?