**PROBABILITY and STATISTICS**

**Prof. Dr. Faisal Bukhari**

**ASSIGNMENT-3**

**Data Science Fall-21 Score:100**

**QUESTION#1**

A shot-put player records the following scores, 16.8 m, 16.9 m, 17.1 m, 17.2 m, 17.8 m, 17.9 m, 18.2 m, 18.3 m, 18.3 m, 18.5 m. Find the 10% trimmed mean.

**QUESTION# 2**

Find the variance and standard deviation of the following scores on an exam: 92, 95, 85, 80, 75, 50

**QUESTION#3**

Difference between Overestimate vs. Underestimate with example .

**QUESTION#4**

**We noted that some passengers died when a water taxi**

**sank in Baltimore’s Inner Harbor. Men are typically**

**heaver than women and children, so when loading a**

**water taxi, let’s assume a worst-case scenario in which**

**all passengers are men. Based on data from the**

**National Health and Nutrition Examination Survey,**

**assume that weights of men are normally distributed**

**with a mean of 172 lb and a standard deviation of 29**

**lb.**

1. Find the probability that if an individual man is randomly selected, his weight will be greater than 175 lb.
2. Find the probability that 20 randomly selected men will have a mean that is greater than 175 lb (so that their total weight exceeds the safe capacity of 3500 lb).