**Module B.2: Basic Statistical Concepts**

**Quiz 2**

**True and False:**

1. The probability of the intersection of two events A and B, is equal to the sum of the probabilities of the two events minus the probability of union of A and B.
2. If two events are mutually exclusive, i.e., they cannot occur simultaneously ever, it is the same as the events being independent.
3. The number of heads that turn up in 5 simultaneous coin tosses is a discrete random variable.
4. Since the CDF is a cumulative sum of PDF, the value of CDF can exceed 1.
5. In the Normal Distribution, the mean is the most recurring value of the random variable.
6. According to the Central Limit theorem, if we add large number of independent observations that obey the exponential distribution, the sample mean approaches the exponential distribution.
7. Using an average value to represent data may be misleading.
8. Generally, the alternate hypothesis is to be accepted by default unless there is evidence against it.
9. Type II errors are when the null is false but we do not reject the null hypothesis.