

## Statistics Worksheet-6

1. d) All of the mentioned

2. a) Discrete

3. a) pdf

4. c) mean

5. c) empirical mean

6. b) standard deviation

7. c) 0 and 1

8. b) bootstrap

9. a) frequency

10.

Sl no.	Boxplot	Histogram
1	It gives spread of the data.	It gives frequency distribution of data by grouping data into bins.
2	Measures like median, quantiles and IQR are explicitly represented in boxplots.	Measures like median, quantiles and IQR are not explicitly

		represented in histograms.
3	It is suitable to detect possible outliers with boxplot.	It is not a preferred method to detect outliers with histograms.

**11.** Metrics should be selected based on the problem statement and prioritizing the specific goals.

**12.** Statistical significance can be assessed by first defining the null and alternate hypothesis, and doing hypothetical tests of a particular problem. Also, the domain knowledge is required to interpret the statistical significance of the test.

**13.** Global life expectancy

**14.** For skewed data usually in presence of outliers, median is better measure than mean.

**15.** Likelihood basically means to increase the chances of a particular event to occur by varying the characteristics of the data distribution. In a probability density functions, it is the y-axis value corresponding to any random variable/data in x-axis. Mathematically, it is defined as likelihood of the distribution given data,

i.e.,  $L(\text{distribution} | \text{data})$ .