National University of Computer & Emerging Sciences
MT-2005 Probability and Statistics
Spring 2024

Course Content for Mid-Term 1 Exam

Contents/Topics	Question set
Statistics and its types. **Descriptive statistics:** Basic definitions, Variables and their types. Organizing and graphing qualitative data, Organizing and graphing quantitative data, Frequency distribution of grouped and ungrouped data, Bar graph, Pie Chart, Dot plot, Stem-leaf plots, Histograms, Ogive, Frequency Curve and Box plot, Shapes of distribution and Skewness	**Book: Introductory Statistics by Neil A. Weiss** Chapter 2 Q No. 2.18-2.29, 2.52-2.64, 2.66-2.67, 2.69, 2.72, 2.81, 2.85, 2.86, 2.101, 2.109 **Book: Probability and Statistics for engineers and scientist** Chapter 1 Q No 1.1-1.31 Chapter 2 Q No 2.1, 2.3-2.5, 2.9, 2.10, 2.14, 2.15, 2.20-2.49, 2.51-2.72
Measures of center of ungrouped and grouped data: Mean, median, mode and trimmed mean **Measure of Dispersion of ungrouped and grouped data:** Range, Variance, Standard Deviation and Coefficient of Variation **Measure of position:** Quartiles and Interquartile Range, Percentiles and Percentile Rank	
Experiment, Outcome, Sample space, Set theory ,Venn diagram **Counting techniques:** Tree diagram, Multiplication rule, Combination, and Permutation. **Calculating Probability** Probability of an event, Additive rules	