

**IK Gujral Punjab Technical University Jalandhar**

**PhD Entrance Test 2018**

**Syllabus of Research Methodology**

**Research:** Meaning, definition and scope,

**Steps in Research:** defining the research problem, review of literature, hypothesis formulation, panel study, data collection, presentation, analysis and interpretation of data and presentation of results.

**Research Design:** Meaning, Types – Descriptive, Diagnostic, Exploratory, and Experimental.

**Data Interpretation:** Sources, acquisition and interpretation of data; quantitative and qualitative data; graphical representation and mapping of data, classification, tabulation, depiction of data.

**Statistics in research :** Percentages, Frequency distribution, Averages, Measures of Central tendency, Arithmetic mean, Median, Mode, Geometric Mean, Harmonic Mean, Dispersion, Range, Mean Deviation, Standard deviation, Root mean square deviation, Variance, Moments.