

School of Engineering and Technology

Syllabus of Research Methodology' for Ph.D. Entrance Examination

(Paper-1)

Unit-I

Statistics Definition, Measurement of central tendency like Mean, Median and Mode. Geometric Mean, Arithmetic Mean, Harmonic Mean and Weighted Mean. Range, Standard Deviation and Coefficient of Variation.

Unit-II

Probability, Laws of Probability, Sample problems on Probability, Conditional Probability, Independent events, Total Probability and Baye's Theorem.

Unit-III

Research and its Types; Motivation for Research; Criteria for Good Research; Defining and formulating a Problem; Selecting a Problem; Necessity of Defining a Problem; Importance of Literature Review; Case Study; Experimental Studies, Explanatory Studies and Hypothesis; Qualitative and Quantitative Research; Random sampling and random variable.

Unit-IV

Environmental Impact of Research; Ethical Issues and Ethical Committees; Copyright, royalty and IPR; Patent Laws; Plagiarism; Citation and Acknowledgement. Reproducibility and Accountability.