

POWER ENGG

This is to inform you that the BOS of Power Engineering Department deliberated on the above subject in its meeting held on 20th December, 2017. The decision taken regarding the syllabus is as under.

PART –I : Research Methodology (50 marks) [Syllabus as under was already communicated]

1. **Measurement:** Concept of measurement. Scales of measurement - Nominal, Ordinal, Interval, Ratio. Error in measurement; Design of experiment, concept of independent & dependent variables; Data preparation and analysis (frequency tables, bar charts, pie charts, percentages), Error analysis. Concepts of accuracy, precision and resolution. Sensitivity analysis. Sample problems in measurement in research. (40%)

2. **Mathematical Review:** Concepts of set theory and probability, Linear algebraic equations. Differential equations – linear ODEs and PDEs. Complex numbers, Statistical methods, Concept of central tendencies, measurement of dispersion. Curve fitting, correlation and regression. Concept of different numerical methods. (40%)

Background of Basic Physical Science for Research: Concept of units and dimensions, Basics of Solid mechanics, thermodynamics, hydraulics, and electrodynamics. (20%)

PART-II : The candidates have to answer either Group A or Group B (50 marks)

Group A: Syllabus as in Mechanical Engineering, GATE, 2017

Group B: Syllabus as in Electrical Engineering, GATE 2017