

# **MCKV INSTITUTE OF ENGINEERING**

## **Pre-Ph.D course work**

Course Name : Research Methodology & Computer Applications

Faculties : S.K. Saha, Prof. Bijon Sarkar, Prasenjit Das, Prabir Naskar, Sumit Majumdar

### 1. Research Method:

1. Introduction to research : Definition & Types
2. Topic selection
3. Analysis & statement of the problem
4. Literature review
5. Formulation of research objective
6. Research methodologies
7. Work plan & writing thesis report

### 2. Quantitative methods:

1. Statistics & probability, sampling, hypothesis testing, data collection & processing
2. Experiment design – Orthogonal array, ANOVA, Signal to noise ratio, replication

### 3. Computer applications:

1. Spreadsheet tools – Excel or other advanced tools
2. Presentation tools – Power point, (animation), other open office tools
3. Web search
4. Thesis writing & editing tools, Latex etc.