

## **Ph.D. Entrance Exam 2025-26**

Computer Science

Research Methodology (Section I)

(50% Part of Entrance Examination for M. Phil. & Ph.D. Admission)

### **Unit 1: Fundamentals of Research**

Aims and objectives of research, Types of research – basic, novel and applied research.

Tools for searching research topic – books, journals, internet, discussions etc.

Research hypothesis, Steps in research design.

### **Unit 2: Research Aptitude**

Qualities of a researcher, Logical reasoning, Test for intelligence, Basic mathematics.

Ethics in research – plagiarism

### **UNIT 3: Research Methods**

Data pre-processing, Design and Analysis of algorithm, Algorithm optimization, Design patterns

### **UNIT 4: Research tools & Techniques**

Cloud Computing, Big Data, Machine Learning, Open Source Software (Weka and R)

### **Reference Book:**

Research Methodology Methods and Techniques, C. R. Kothari, IInd revised edition,

New Age International Publishers Pvt Ltd, New Delhi, 2004.

2. Syllabus for SET Examination Part I