

## **PART A**

### **RESEARCH METHODOLOGY**

**(COMMON TO ALL PROGRAMS - Except Medical Science)**

#### **I. Research:**

Meaning, Objectives and Characteristics of Research, Types of Research, Research Process, Problem Statement, Literature Survey, Importance, Sources, Identifying Gap Areas, Development of Working Hypothesis.

#### **II. Hypothesis:**

Variables, Development of Working Hypothesis, Deriving Objectives of Research, Sampling, Material and Methods, Data Analysis, Results and Discussion: Discussion, Purpose and Function of Discussion.

#### **III. Research Design:**

Basic Principles; Features of Good Design, Methods; Developing a Research Plan, Determining Experimental and Sample Designs, Summary and Conclusions, Abstract-Key Words; References; Citation Styles.

#### **IV. Report and Article Writing:**

Structure and Components; Types of Report; Technical Reports and Thesis; Significance; Preparation; Layout, Structure and Language of Typical Reports; Presentation; Effective Communication. **Scientific Article Writing:** Title Preparation; List of Authors and Addresses, Abstracts; Economy of Words.

#### **V. Research Proposal Fundamentals:**

Grant Proposal, Proposal Parts; Research Ethics, Relationship in Research Groups; Hazards to Good Scientific Practice; Scientific Misconduct, Intellectual Property Rights, Patents, Copyrights, Trademarks.