RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

Ph. D. Entrance Test

2020-2021

Syllabus for Section A : Research Methodology and General Aptitude

Common to all Faculty

Syllabus and Question Paper Pattern for Ph.D Entrance Test (PET)
Section A - Research Methodology and General Aptitude
(As prescribed by the Direction No. 6 of 2021 issued by the Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

Maximum Marks: 50 (50 Multiple Choice Questions carrying 1 Mark each)

Maximum Time: 90 Minutes

Research Methodology (40 questions of 1 Mark each)

1. **Meaning and Types of Research:** Meaning of Research, Objectives of Research, Motivation in Research, Types of Research, Research Approaches, Research and Scientific Method, Criteria of Good Research

2. **Principles of Review of Literature:** Meaning of Literature Review, Importance of Literature Review, Purposes of Literature Review, Sources of Literature Review, Steps in Literature Review, Essentials of a Good Literature Review

3. **Defining a Research Problem:** What is a Research Problem?, Selecting the Problem, Necessity of Defining a Problem, Problem Definition Process, Techniques involved in Defining a Problem

4. **Research Designs:** Meaning of Research Design, Need for Research Design, Features of a Good Research Design, Important Concepts relating to Research Designs, Types of Research Designs, Basic Principles of Experimental Design

5. **Preparing a Research Proposal:** Need for a Research Proposal, Contents of a Research Proposal, Research Proposal as a Planning Tool

6. **Sampling Techniques:** Census and Sample Survey, Implications of a Sample Design, Steps in Sample Designing, Features of a Good Sample Design, Types of Sampling Procedures, Criteria for selecting a Sampling Procedure

7. **Types of Data and Data Collection Techniques:** Significance of Data in Research, Types of Data – Primary and Secondary, Sources of Secondary Data, Methods for collecting Primary Data, Selection of Appropriate Method for Data Collection

8. **Data Analysis Tools:** Significance of Data Analysis, Statistical Tools for Data Analysis – Measures of Central Tendency, Measures of Dispersion, Measures of Relationship, Correlation and Regression Analysis, Other Tools

9. **Referencing Styles:** What is Referencing?, Difference between Referencing and Bibliography, What Needs to be Referenced?, Different Types of Referencing Styles - APA Style, Chicago Manual Style, MLA Style, Sources of References, Elements in a Reference List, Referencing Tools

General Aptitude (10 questions of 1 Mark each)

a. Analytical Reasoning
b. Numerical Ability
c. Data Interpretation
d. Computer Awareness
e. Language Competency