

Syllabus for the Ph.D. Entrance Examination 2021-22: Civil Engineering Department

A. Research Methodology (50%)

Research Methodology – Meaning of research; Objective of research; Motivation of research; Types of research – Descriptive, Analytical, Applied, Fundamental, Quantitative, Qualitative, Conceptual, Empirical, Diagnostic, Historical, Exploratory etc.; Research approaches - quantitative and the qualitative; Significance of Research; Differences between research methods and research methodology; Research and scientific method; Importance of knowing how research is done; Procedural guideline for the research process; Criteria of good research; Challenges encountered by researchers in India.

Research Problem; Selection of research problem; Necessity of defining the research problem; Techniques for formulating research problem- statement of the problem, understanding the nature of the problem, literature survey, developing the ideas through discussions and rephrasing the research problem into a working proposition.

Reference Books:

1. Research Methodology: Methods and Techniques (Second Edition) (New Age Publication) by C. R. Kothari.
2. Research Methodology: a step by step guide for beginners (Third Edition) (SAGE Publication) by Ranjit Kumar.
3. Research Methodology: Methods Tools And Techniques (Sixth Edition) (Kalyani Publication) by Shashi K. Gupta , PraneetRangi.

B. Subject Specific Portion (50%)

Topics of subject specific domains.