

**NATIONAL INSTITUTE OF
TECHNICAL TEACHERS TRAINING AND RESEARCH
CHENNAI - 600 113**

**Syllabus for the Entrance test (Written test) for admission to
Full-Time/Part Time Ph.D. in Engineering Education**

1. Engineering Education and its distinguishing features from general education on the one hand and from other types of professional education - Growth of Polytechnics and Engineering Colleges in India and the problems associated with their development.
2. Philosophy of Research in Social Sciences - Nature and Characteristics of problems - Research worthiness of problems - parameters affecting educational problems. Typical research problems in Engineering Education.
3. Approaches to Research problems: Historical, Descriptive, Survey, Experimental, Case Study, Correlational, Longitudinal and Cross - cultural studies. Stages of research, Identification of problems, Research proposal development, Review of related studies, sampling, research tools, data collection, analysis and interpretation and reporting.
4. Statistical applications - Central tendencies (Mean, Mode, Median and Standard Deviation) - Normal probability - Product Moment and Rank correlation - Correlation Coefficients - Computer Software and their use in educational research.
5. A problem in the area of interest to the prospective researcher and his or her own approach to analyse, organise, synthesize, infer and apply the results in education - R & D in Education - Innovations and their diffusion.



Reference Books:

1. Best, J.W. & Kahn J.V. (1997) "Research in Education" New Delhi: Prentice – Hall of India.
2. Blaxter, L., Hughes, C & Tight, M. (1999) "How to Research?" New Delhi: Viva.
3. Gupta, S (1999) "Research Methodology & Statistical Techniques" New Delhi: Deep & Deep.
4. Kothari, C.R. (2000) "Research Methodology" New Delhi: Wishwa Prakashan.
5. Nagarajan, K & Srinivasan, R (1994) "Research Methodology in Education". Chennai: Ram.
6. Sharma, N.K. & Sharma, S (1996) "Research Methodology" Jaipur: RBSA.
7. Publications of the following organisations on topics related to Engineering Education.
 - (i) All India Council for Technical Education (AICTE), New Delhi.
 - (ii) All India Management Association, New Delhi.
 - (iii) Indian Society for Technical Education (ISTE), New Delhi.
 - (iv) Indian Society for Training and Development (ISTD), New Delhi.
 - (v) Institute of Applied Manpower Research, New Delhi.
 - (vi) Ministry of Human Resource Development (MHRD), Govt. of India, New Delhi.
 - (vii) National Assessment and Accreditation Council (NAAC), Bangalore.
 - (viii) National Board of Accreditation (NBA), A.I.C.T.E., New Delhi.
 - (ix) Planning Commission, Govt. of India, New Delhi.
 - (x) Technical Teachers' Training Institute, (TTTI), Chennai.

