PhD in Educational Technology

Entrance Test

Candidates will be required to appear for an Entrance Test. The Entrance test will consist of 2 papers:

1. Research Aptitude Test (100 marks) and
2. Subject Specific Test (100 marks).

The results of the Entrance Test will be displayed in all the Campuses of the University and also in the University website. Those who clear the test (with minimum of 50% marks in the Research Aptitude Test and Subject Specific Test combined) will be invited for interview.

Research Aptitude test

The research aptitude test will include:
- Reasoning ability (15% weightage)
- Analytical ability (15% weightage)
- Critical thinking (20% weightage)
- Language comprehension (25% weightage)
- Elementary mathematics ability (20% weightage)
- Perseverance (5% weightage)

The Test will be prepared by an Inter-Disciplinary Expert Committee Consisting of experts from all faculties.

Subject Specific test

The Subject Specific Test will include:
- Objective questions (30 marks)
- Short answer questions [approx 250 words per answer] (30 marks)
- Long answer questions (40 marks)

The subject test will be prepared by the department. Each test will be of 3 hours of duration and will be held on one day only. The date of the test will be announced by the University. The test will be held at Mumbai and Pune in June and December and admissions in January and July.

Interview

Interview will be conducted by the concerned University Department consisting of:
(i) Head of the Department
(ii) One senior faculty member who is a Ph.D. guide and
(iii) One external expert

Entrance Test Course Contents

100 marks

Course Contents
(Based on MET-CA and Educational Technology elective of MEd)

1 Educational Technology and Instructional Technology

Concept of Educational Technology:

- Meaning, Definition, and Approaches to ET

Systems Approach to Education:

- Concept and characteristics.
- Stages of Development of a System
- Application of Systems Approach to Education

Process of Communication:

- Concept and Characteristics
- Models of Communication:
- Models of Communication:
  Simple, Osgood and Schram, Shanon-Weaver, Gerbner, Westley and MacLean
- Concepts of Noise and Distortion

Instructional Strategies and Instructional Media for ILT:

Instructional Material

- Media for Classroom teaching
- Print-based material (Text book, ODL material)
- Manual, Student Workbook, Handouts

2 Learner and the Process of Learning

Learner Characteristics

- Process of Learning
- Individual Differences in learning
  - Intelligence
  - Multiple Intelligences
  - Emotional Intelligence
  - Creativity

Processes and Factors Associated with Learning

- Attention
- Perception
- Memory
- Learning styles

Theories of Learning

Behaviourism

- Learning as Conditioning (Pavlov)
- Operant Conditioning (Skinner)

Cognitivism

- Information Processing Model
- Bruner's theory

Constructivism

- Principles of Constructivism
- Piaget

Humanism

Need Hierarch: Maslow
Carl Rogers
Erickson

3 Instructional Design for Instructor Led Training (ILT)

Instructional Design:
Concept and Characteristics

ADDIE Approach for ILT
Steps in the ADDIE and their relationship with each other

Goal Analysis and Objectives
Goals, Educational Objectives, Instructional Objectives,
Taxonomies

Evaluation Strategies
Formative and Summative evaluation strategies

Overview of Theories and Models of ISD
Dick and Carrey, Gagne, Kirk and Guftason

Preparation and Implementation of session Plan

4 Computer in Education

Information Technology:
Application Software: Office
Internet and web-based Tools

Computer Assisted Instruction
CAI/CBT: Concept, Characteristics and Modes
CAI: Process of development

Online Learning
Nature of Online Course Environment
Synchronous and Asynchronous Tools of Communication
Building Online Courses: planning and building interactivity

5 Research in Education

Research Methodology
Types of Research (Pure, Applied, Evaluation, Action Research)
Steps in conducting research

Methodology of Research
Methods of Research
Sampling

Tools of Data Collection
Techniques of data collection
Tools of data Collection
Administration of tools for data collection
Procedure for data collection
Scoring Procedure

Statistical Tools for Data Analysis