



Dr. Vishwanath Karad
**MIT WORLD PEACE
UNIVERSITY** | PUNE
TECHNOLOGY, RESEARCH, SOCIAL INNOVATION & PARTNERSHIPS



Ph.D. entrance examination schedule, pattern and syllabus etc.

The Ph.D. entrance examination will be conducted at Dr. Vishwanath Karad MIT-WPU, Kothrud, Paud Road, Pune- 411038. There will be two papers:

Paper - I: Research Methodology.

Paper- II: Subject specific.

Each paper will be of 50 marks and based on multiple choice questions. The qualifying criteria will be 50% marks in written examination. No negative marking system. The schedule of written examination and personal interview of candidates qualified in written examination will be as follows:

Sr.No.	Date	Agenda	Time
1.	01-09-2017	Paper-I: Research Methodology	09.30 am -11.00 am
2.	01-09-2017	Paper-II: Subject Specific	11.30 am - 01.00 pm
3	01-09-2017	Declaration of Results	Evening (05.00 pm)
4.	02-09-2017	Personal Interview	10.00 am onwards

Note:

- (i) SET/NET/GATE qualified candidates are exempted from written examination. They may attend personal interview as per above schedule subject to confirmation of their eligibility.
- (ii) Candidates applied online and found eligible will be intimated separately.
- (i) Candidates are advised to report MIT-WPU one hour before the start of examination to verify their required documents and provide Government issued valid photo ID like passport/driving licence/Aadhar/Voter's card etc. towards proof for authenticity.



Syllabus for Engineering

Paper I: Research Methodology:

Introduction to Research:

Meaning of Research, nature and scope of research, Prerequisites of research, Types of research: Fundamental or Pure research, applied research, Qualitative and Quantitative research. Criterion of good research, research process

Problem Identification:

Research Problem, Meaning of research problem, Sources of research problem, Characteristics of a good research problem, Selecting the problem, Necessity of defining the problem, Techniques involved in defining problem, Importance of literature review, sources of literature, journal, monographs, patents, web, identifying related literature, organizing related literature, identifying gaps from literature.

Research design and data collection methods:

Importance of research design, need of research design, feature of good research design. Observation, laws, theories, development of models. Developing a research plan, exploration, diagnosis and experimentation. Sampling and population techniques of sampling. Selection Characteristics of a good sample, types of data. Methods of data collection, tools for data collection

Applied Statistics:

Tabulation and graphical representation of quantitative data. Data analysis, Measures of Mean, Median, Mode, Range, Quartile Deviation, Standard Deviation, and Coefficient of variation. Normal Probability Distribution, Skewness and Kurtosis, Regression analysis, Principal component analysis.

Interpretation and report writing:

Interpretation and paper writing, impact factor of journals, Plagiarism and ethical issues related to publication. Types of report, body of report, structure and language of the report.

Paper II: Subject specific:

Syllabus for Paper-II will be based on GATE of respective branches/subjects.



Syllabus for Management and Commerce

Paper-I: Research Methodology:

Foundations of Research:

Research: Definition, Objectives of Business Research, Characteristics of good research, and Research applications in functional areas of Business, Formulation of Research Problem, Research Question, and Investigation Question. Steps in Research Process. Research Proposal: Elements of a Research Proposal, Drafting a Research Proposal, Evaluating a research proposal.

Research Design:

Concept, Features of a good research design. Qualitative research and Quantitative research approaches, Comparison of both approaches. Exploratory Research Design- Concept and types, Descriptive Research Designs: Concept, types, Experimental Design, Hypothesis: Qualities of a good hypothesis, types of hypotheses, framing Null Hypothesis & Alternative Hypothesis. Concept of Hypothesis Testing.

Measurement & Data:

Concept of Measurement: Problems in measurement in research - Validity and Reliability. Levels of measurement - Nominal, Ordinal, Interval, Ratio. Attitude Scaling Techniques: Concept of Scale, Rating Scales: Likert Scales, Semantic Differential Scales, Constant Sum Scales, Graphic Rating Scales. Ranking Scales: Paired Comparison & Forced Ranking. **Types of Data** - Secondary Data: Definition, Sources, Characteristics, Issues to be considered for secondary data, sufficiency, adequacy, reliability, consistency; Data mining, Big data.

Types of Data - Primary Data:

Definition, advantages and disadvantages over secondary data, Data collection Methods: Questionnaire, Schedule, Personal Interviews, Telephonic survey, Email/Internet survey, Focus group study.

Sampling:

Basic Concepts: Defining the Universe, Concepts of Statistical Population, Sample, Characteristics of a good sample. Sampling Frame, Sampling errors, Non Sampling errors, Methods to reduce the errors. Probability Sample: Simple Random Sample, Systematic Sample, Stratified Random Sample, Area Sampling & Cluster Sampling. Non Probability Sample: Judgment Sampling, Convenience Sampling, Purposive Sampling, Quota Sampling & Snowballing Sampling methods. Determining size of the sample - considerations in sampling and sample size



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Data Analysis and Interpretation:

Data Analysis : Editing, Coding, Univariate analysis – Tabular representation of data, frequency tables, Construction of frequency distributions and their analysis in the form of measures of central tendency ,Mean, Median and Mode; their relative merits and demerits. Graphical Representation of Data: Appropriate Usage of Bar charts, Pie charts, Histogram, Leaf and stem, Candle stick, Box plots.

Paper-II Subject Specific Syllabus:

General Management and OB:

Functions of Management, Concept and significance of organizational behavior, Theories of organizational behavior. Organizational Structure. Individual behavior - Personality- Perception-Values-Attitudes; Group Behavior-Group dynamics, Teamwork. Motivation-Types and Theories of Motivation. Leadership – Types and Theories. Learning – Types and Barriers. Conflict Management – Types. Change Management. Communication - Types and Barriers. Organizational Development – Theories, Intervention and Models.

Human Resource Management:

Concepts and Perspectives in HRM- Human Resource Planning- Objectives, Process and Techniques. Job analysis-Job Description- Job Evaluation. Recruitment and Selection and Exit Policy. Training and Development- Types, Training Need Analysis and methods. Performance Appraisal and Evaluation Types and Methods. Compensation Management and Wage Determination. Industrial Relations and Trade Unions. Dispute Resolution and Grievance Management. Labour Welfare.

Financial Management:

Nature and Scope. Long Term and Short Term financing instruments. Time Value of Money and cost of Capital. Capital Structure. Capital Budgeting and Risk analysis. Working Capital Management. Dividend policy, determinants. Financial analysis, Ratio analysis and Cash flow statements.

Marketing Management:

Marketing Orientation, Core Concepts in Marketing-Value, Satisfaction, and Marketing Mix. Marketing Environment and Environment Scanning; Marketing Information Systems and Marketing Research; Understanding Consumer and Industrial Markets; Demand Measurement and Forecasting; Market Segmentation-Targeting and Positioning; Product Decisions, Product mix. Product Life Cycle; New Product Development; Branding and Packaging; Pricing Methods and Strategies. Promotion Decisions-Promotion mix; Advertising; Personal Selling; Channel Management; Vertical Marketing Systems; Evaluation and Control of Marketing Effort; Marketing of Services; Customer Relation Management Digital Marketing, e-commerce-B2B, B2C.



Production Operations Management:

Role and Scope of Production Management; Faculty Location; Layout Planning and Analysis; Production Planning and Control-Production Process Analysis; Demand Forecasting for Operations; Determinants of Product mix; Production Scheduling; Work measurement; Time and Motion Study; Statistical Quality Control. Role and Scope of Operations Research; Linear Programming; Transportation Model; Inventory Control; PERT/CPM. Concept of Supply Chains, Responsive and Efficient Supply Chains, Retail Supply Chain, Industrial Supply Chain and Digital Supply Chain Management, Services Supply Chain.

Computer/IT Management:

Use of Computers in Managerial applications; Technology issues and Data processing in organizations; Information systems; MIS and Decision making; System analysis and design; Internet and Internet-based applications.

Banking and finance:

Banking system in India, Banking Regulation Act, Reserve Bank of India and functions, Electronic banking: An Introduction, Basle-I, Basle-II.



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Syllabus for Social Sciences

Paper – I: Research Methodology will be same as Management.

Paper-II: Subject Specific

Fundamentals of Public Policy:

- a) Nature, Scope and Importance of Public Policy
- b) Evolution of Public Policy and Policy Sciences
- c) Public Policy and Public Administration

Approaches to Public Policy Analysis:

- a) The Process Approach
- b) The Logical Positivist Approach
- c) The Phenomenological Approach
- d) The Participatory Approach and Normative Approach

Theories and Process of Public Policy Making:

- a) Theories and Models of Policy Making
- b) Perspectives of Policy Making Process
- c) Institutions of Policy Making

Policy Implementation and Evaluation:

- a) Concept of Policy Implementation
- b) Techniques of Policy Implementation
- c) Concept of Policy Evaluation d) Constraints of Public Policy Evaluation

Globalization and Public Policy:

- a) Global Policy Process
- b) Transnational Actors: Impact on Public Policy Making
- c) Impact of Globalization on Policy Making

Nature and scope of Experimental Psychology:

Basic concept of Experimental including characteristics – gains and limitations. Types of variable and the control methods of the experiment. Motivation – Definitional problems – Role

of Motivation in learning Experimental – Operations in learning Experimental – Operations influencing motivation m- Ego involvement.

Frustration:

Methods used produce frustration – Major responses of frustration – methods of response and Analysis Stimulus variable influencing responses to frustration. Instrumental adverse conditioning (D AMATO) comparison of positive & negative reinforcement – Escape conditioning – punishment – Teaching – AVO guidance conditioning – two factor theory of avoidance conditioning.

Operant conditioning:

Schedules of reinforcement – simple and others schedules of reinforcement (fixed Ration variable, interval) Free operant Avoidance schedule compound schedule, sequential, chained, mixed, multiple, simultaneous, Alternative, conductive and concurrent schedules.

Classification of Experimental Designs:

Simple classification of designs – method counter balanced Design-Random groups and systematic randomization of conditions.

What is Developmental Social Psychology? Two key concepts:

Social and Socialization. Theoretical background of Developmental Social Psychology.

Cognitive Developmental Theory. Social learning theory. Evolutionary Theory. An Ecological theory of Human Development – Anthropological – Psychodynamic approaches.

The child in school / Non parental care:

The nature of the settings, Developmental effects. Parenting styles; Development of Social behaviour (Social life) human beings animals and others; models of socialization processes, child in disturbed families. Media Influence on child: new paper-Radio-TV and Advertisement.

Peer Relationships: Nature and Function:

Relationship difficulties, peer co-operation; Interface of peers and family relationships. Changing context in Late Childhood-characteristics Developmental Tasks– Psychological Growth – skills of late childhood – speech Improvement. Initiation: Types of imitation; Social implication of imitation.