

**SAURASHTRA UNIVERSITY**  
**RAJKOT**



**FACULTY OF ARTS**

**PSYCHOLOGY**

**Ph.D. Entrance Test— 2022**

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# **RESEARCH METHODOLOGY**

# Ph.D. Entrance Test - SYLLABUS - .2021

## Psychology

### Part: 1

#### (Research Methodology)

##### **UNIT-1 Research and Psychology.**

Meaning of research – objectives of Research – Types of Research – Significance of Research – Research Methods V/s. Methodology – Importance of knowing how Research is Done – Research Process – Criteria of Good Research – Problems encountered by Researchers in India. Methods of Psychological research: Experimental, quasi experimental, case studies, field studies and cross cultural studies.

##### **UNIT-2 : Selecting the Research Problem :**

What is Research Problems – Selecting the problem – Necessity of defining the problem – Technique involved in defining problem –Meaning and types of variables –meaning and types of Hypotheses –characteristics of a good hypothesis, Suggestions for hypothesis construction.

##### **UNIT-3 : Research Design :**

Meaning of Research Design - Need for Research Design – Features of a Good Design – Important concepts relating to Research Design – Different types research design and testing causal hypothesis.

##### **UNIT: 4 Sampling**

Meaning and types of Sampling- Probability and non- Probability Sampling Methods, Need of Sampling- Random Sampling- simple and stratified random sampling- other types of sampling

##### **UNIT-5: Tools of Research:**

Questionnaire – Interview – Observation- Survey Method – Rating Scales – other tools : Check list – Socio-metry – Q sort technique – the Semantic Differential technique and Psychological Testing, Characteristics of a good Psychological Test-Types of Reliability and Validity of Psychological Test.

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**SUBJECT: PSYCHOLOGY**

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## 1. Emergence of Psychology

Psychological thought in some major Eastern Systems: Bhagavad Gita, Buddhism, Sufism and Integral Yoga. Academic psychology in India: Preindependence era; post-independence era; 1970s: The move to addressing social issues; 1980s: Indigenization; 1990s: Paradigmatic concerns, disciplinary identity crisis; 2000s: Emergence of Indian psychology in academia. Issues: The colonial encounter; Post colonialism and psychology; Lack of distinct disciplinary identity.

Western: Greek heritage, medieval period and modern period. Structuralism, Functionalism, Psychoanalytical, Gestalt, Behaviorism, Humanistic/Existential, Transpersonal, Cognitive revolution, Multiculturalism. Four founding paths of academic psychology - Wundt, Freud, James, Dilthey. Issues: Crisis in psychology due to strict adherence to experimental/analytical paradigm (logical empiricism). Indic influences on modern psychology.

Essential aspects of knowledge paradigms: Ontology, epistemology, and methodology. Paradigms of Western Psychology: Positivism, Post-Positivism, Critical perspective, Social Constructionism, Existential Phenomenology, and Co-operative Enquiry. Paradigmatic Controversies. Significant Indian paradigms on psychological knowledge: Yoga, Bhagavad Gita, Buddhism, Sufism, and Integral Yoga. Science and spirituality (*avidya* and *vidya*). The primacy of self-knowledge in Indian psychology.

## 2. Research Methodology and Statistics

Research: Meaning, Purpose, and Dimensions.

Research problems, Variables and Operational Definitions, Hypothesis, Sampling.

Ethics in conducting and reporting research

Paradigms of research: Quantitative, Qualitative, Mixed methods approach  
Methods of research: Observation, Survey [Interview, Questionnaires], Experimental, Quasi-experimental, Field studies, Cross-Cultural Studies, Phenomenology, Grounded theory, Focus groups, Narratives, Case studies, Ethnography

Statistics in Psychology: Measures of Central Tendency and Dispersion. Normal Probability Curve. Parametric [t-test] and Non-parametric tests [Sign Test, Wilcoxon Signed rank test, Mann-Whitney test, Kruskal-Wallis test, Friedman]. Power analysis. Effect size.

Correlational Analysis: Correlation [Product Moment, Rank Order], Partial correlation, multiple correlation.

Special Correlation Methods: Biserial, Point biserial, tetrachoric, phi coefficient.

Regression: Simple linear regression, Multiple regression.

Factor analysis: Assumptions, Methods, Rotation and Interpretation.

Experimental Designs: ANOVA [One-way, Factorial], Randomized Block Designs, Repeated Measures Design, Latin Square, Cohort studies, Time series, MANOVA, ANCOVA. Single-subject designs.

### **3. Psychological testing**

Types of tests

Test construction: Item writing, item analysis

Test standardization: Reliability, validity and Norms

Areas of testing: Intelligence, creativity, neuropsychological tests, aptitude, Personality assessment, interest inventories

Attitude scales – Semantic differential, Staples, Likert scale.

Computer-based psychological testing

Applications of psychological testing in various settings: Clinical, Organizational and business, Education, Counseling, Military. Career guidance.

### **4. Biological basis of behavior**

Sensory systems: General and specific sensations, receptors and processes

Neurons: Structure, functions, types, neural impulse, synaptic transmission. Neurotransmitters.

The Central and Peripheral Nervous Systems – Structure and functions. Neuroplasticity.

Methods of Physiological Psychology: Invasive methods – Anatomical methods, degeneration techniques, lesion techniques, chemical methods, microelectrode studies. Non-invasive methods – EEG, Scanning methods.

Muscular and Glandular system: Types and functions

Biological basis of Motivation: Hunger, Thirst, Sleep and Sex.

Biological basis of emotion: The Limbic system, Hormonal regulation of behavior.

Genetics and behavior: Chromosomal anomalies; Nature-Nurture controversy [Twin studies and adoption studies]

### **5. Attention, Perception, Learning, Memory and Forgetting**

Attention: Forms of attention, Models of attention

Perception:

Approaches to the Study of Perception: Gestalt and physiological approaches

Perceptual Organization: Gestalt, Figure and Ground, Law of Organization  
Perceptual Constancy: Size, Shape, and Color; Illusions  
Perception of Form, Depth and Movement  
Role of motivation and learning in perception

Signal detection theory: Assumptions and applications  
Subliminal perception and related factors, information processing approach to perception, culture and perception, perceptual styles, Pattern recognition, Ecological perspective on perception.

Learning Process:

Fundamental theories: Thorndike, Guthrie, Hull  
Classical Conditioning: Procedure, phenomena and related issues  
Instrumental learning: Phenomena, Paradigms and theoretical issues;  
Reinforcement: Basic variables and schedules; Behaviour modification and its applications  
Cognitive approaches in learning: Latent learning, observational learning.  
Verbal learning and Discrimination learning  
Recent trends in learning: Neurophysiology of learning

Memory and Forgetting

Memory processes: Encoding, Storage, Retrieval  
Stages of memory: Sensory memory, Short-term memory (Working memory), Long-term Memory (Declarative – Episodic and Semantic; Procedural)  
Theories of Forgetting: Interference, Retrieval Failure, Decay, Motivated forgetting

## **6. Thinking, Intelligence and Creativity**

Theoretical perspectives on thought processes: Associationism, Gestalt, Information processing, Feature integration model  
Concept formation: Rules, Types, and Strategies; Role of concepts in thinking  
Types of Reasoning  
Language and thought

Problem solving: Type, Strategies, and Obstacles

Decision-making: Types and models

Metacognition: Metacognitive knowledge and Metacognitive regulation

Intelligence: Spearman; Thurstone; Jensen; Cattell; Gardner; Stenberg; Goleman; Das, Kar & Parrila

Creativity: Torrance, Getzels & Jackson, Guilford, Wallach & Kogan  
Relationship between Intelligence and Creativity

## **7. Personality, Motivation, emotion, stress and coping**

Determinants of personality: Biological and socio-cultural

Approaches to the study of personality: Psychoanalytical, Neo-Freudian, Social learning, Trait and Type, Cognitive, Humanistic, Existential, Transpersonal psychology.

Other theories: Rotter's Locus of Control, Seligman's Explanatory styles, Kohlberg's theory of Moral development.

Basic motivational concepts: Instincts, Needs, Drives, Arousal, Incentives, Motivational Cycle.

Approaches to the study of motivation: Psychoanalytical, Ethological, S-R Cognitive, Humanistic

Exploratory behavior and curiosity

Zuckerman's Sensation seeking

Achievement, Affiliation and Power

Motivational Competence

Self-regulation

Flow

Emotions: Physiological correlates

Theories of emotions: James-Lange, Canon-Bard, Schachter and Singer, Lazarus, Lindsley.

Emotion regulation

Conflicts: Sources and types

Stress and Coping: Concept, Models, Type A, B, C, D behaviors, Stress management strategies [Biofeedback, Music therapy, Breathing exercises, Progressive Muscular Relaxation, Guided Imagery, Mindfulness, Meditation, Yogasana, Stress Inoculation Training].

## **8. Social Psychology**

Nature, scope and history of social psychology

Traditional theoretical perspectives: Field theory, Cognitive Dissonance, Sociobiology, Psychodynamic Approaches, Social Cognition.

Social perception [Communication, Attributions]; attitude and its change within cultural context; prosocial behavior

Group and Social influence [Social Facilitation; Social loafing]; Social influence [Conformity, Peer Pressure, Persuasion, Compliance, Obedience, Social Power, Reactance]. Aggression. Group dynamics, leadership style and effectiveness. Theories of intergroup relations [Minimal Group Experiment and Social Identity Theory, Relative Deprivation Theory, Realistic Conflict Theory, Balance Theories, Equity Theory, Social Exchange Theory]

Applied social psychology: Health, Environment and Law; Personal space, crowding, and territoriality.



## **9. Human Development and Interventions**

Developmental processes: Nature, Principles, Factors in development, Stages of Development. Successful aging.

Theories of development: Psychoanalytical, Behavioristic, and Cognitive  
Various aspects of development: Sensory-motor, cognitive, language, emotional, social and moral.

Psychopathology: Concept, Mental Status Examination, Classification, Causes

Psychotherapies: Psychoanalysis, Person-centered, Gestalt, Existential, Acceptance Commitment Therapy, Behavior therapy, REBT, CBT, MBCT, Play therapy, Positive psychotherapy, Transactional Analysis, Dialectic behavior therapy, Art therapy, Performing Art Therapy, Family therapy.

Applications of theories of motivation and learning in School

Factors in educational achievement

Teacher effectiveness

Guidance in schools: Needs, organizational set up and techniques

Counselling: Process, skills, and techniques

## **10. Emerging Areas**

Issues of Gender, Poverty, Disability, and Migration: Cultural bias and discrimination. Stigma, Marginalization, and Social Suffering; Child Abuse and Domestic violence.

Peace psychology: Violence, non-violence, conflict resolution at macro level, role of media in conflict resolution.

Wellbeing and self-growth: Types of wellbeing [Hedonic and Eudemonic], Character strengths, Resilience and Post-Traumatic Growth.

Health: Health promoting and health compromising behaviors, Life style and Chronic diseases [Diabetes, Hypertension, Coronary Heart Disease], Psychoneuroimmunology [Cancer, HIV/AIDS]

Psychology and technology interface: Digital learning; Digital etiquette: Cyber bullying; Cyber pornography: Consumption, implications; Parental mediation of Digital Usage.

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