MOUNT CARMEL
(Deemed to be UNIVERSITY)
Estd. 1948 | A CSST Institution | Bengaluru | Karnataka | India

PhD ENTRANCE EXAM SYLLABUS

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: Pre-independence 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.