

## **SYLLABUS**

### **General Paper on Teaching & Research Aptitude**

**Note :**

**There are two Papers for each of the subject. Paper - I on Teaching and Research aptitude, Paper - II based on the Syllabus of concerned subjects. Details are furnished below:**

#### **PAPER - I**

#### **Subject : General Paper on Teaching & Research Aptitude**

The Test is intended to assess the teaching / research aptitude of the candidate. They are supposed to possess and exhibit cognitive abilities like comprehension, analysis, evaluation, understanding the structure of arguments, evaluating and distinguishing deductive and inductive reasoning, weighing the evidence with special reference to analogical arguments and inductive generalization, evaluating, classification and definition, avoiding logical inconsistency arising out of failure to see logical relevance due to ambiguity and vagueness in language. The candidates are also supposed to have a general acquaintance with the nature of a concept, meaning and criteria of truth, and the source of knowledge.

There will be 50 questions for Paper- I. There is a prescribed syllabus for Paper-I.

1. The Test will be conducted in objective mode. The Test will consist of two Papers. All the two Papers will consists of only objective type questions and will be held on the day of Test in two separate sessions as under:

<b>Session</b>	<b>Paper</b>	<b>Number of Questions</b>	<b>Marks</b>	<b>Duration</b>
First	I	50 questions	$50 \times 2 = 100$	1 Hour
Second	II	100 questions	$100 \times 2 = 200$	2 Hours

2. Candidates who appear in two Papers and secure at least 40% aggregate marks for candidates belonging to General category and atleast 35% aggregate marks for candidates belonging to reserved categories will be declared qualifies for Eligibility for Assistant Professor by following the reservation policy of the State Government.
3. The Syllabus of Paper-1 and paper - II will remain the same.

**SLET Commission, Assam  
(N.E. Region)**

**Subject : General Paper on Teaching & Research  
Aptitude**

**SYLLABUS**

**PAPER-I**

The main objective is to assess the teaching and research capabilities of the candidates. The test aims at assessing the teaching and research aptitude as well. Candidates are expected to possess and exhibit cognitive abilities, which include comprehension, analysis, evaluation, understanding the structure of arguments, deductive and inductive reasoning. The candidates are also expected to have a general awareness about teaching and learning processes in higher education system. Further, they should be aware of interaction between people, environment, natural resources and their impact on the quality of life.

The details of syllabi are as follows:

**Unit – 1: Teaching Aptitude**

- **Teaching: Concept, Objectives, Levels of teaching (Memory, Understanding and Reflective), Characteristics and basic requirements.**
- **Learner's characteristics: Characteristics of adolescent and adult learners (Academic, Social, Emotional and Cognitive), Individual differences.**
- **Factors affecting teaching related to: Teacher, Learner, Support material, Instructional facilities, Learning environment and Institution.**
- **Methods of teaching in Institutions of higher learning: Teacher centred vs. Learner centred methods; Off-line vs. on-line methods (Swayam, Swayamprabha, MOOCs etc).**

- Teaching Support System: Traditional, Modern and ICT based.
- Evaluation Systems: Elements and Types of evaluation, Evaluation in Choice Based Credit System in Higher Education, Computer based testing, Innovations in evaluation systems.

### **Unit - 2 : Research Aptitude**

- Research: Meaning, Types and Characteristics, Positivism and Post-positivistic approach to research.
- Methods of Research: Experimental, Descriptive, Historical, Qualitative and Quantitative methods.
- Steps of Research
- Thesis and Article writing: Format and styles of referencing.
- Application of ICT in research.
- Research ethics.

### **Unit - 3 : Comprehension**

- A passage of text be given. Questions be asked from the passage to be answered.

### **Unit - 4 : Communication**

- Communication: Meaning, types and Characteristics of communication.
- Effective communication: Verbal and Non-verbal, Inter-Cultural and group communications, Classroom communication.
- Barriers to effective communication.
- Mass-Media and Society.

### **Unit - 5 : Mathematical Reasoning and Aptitude**

- Types of reasoning.
- Number series, Letter series, Codes and Relationships.
- Mathematical Aptitude (Fraction, Time & Distance, Ratio, Proportion and Percentage, Profit and Loss, Interest and Discounting, Averages etc.).

**Unit - 6 : Logical Reasoning**

- Understanding the structure of arguments: argument forms, structure of categorical propositions, Mood and Figure, Formal and Informal fallacies, Uses of language, Connotations and denotations of terms, Classical square of opposition.
- Evaluating and distinguishing deductive and inductive reasoning.
- Analogies.
- Venn diagram: Simple and multiple use for establishing validity of arguments.
- Indian Logic: Means of knowledge.
- Pramanas : Pratyaksha ( Perception), Anumana (Inference), Upamana (Comparison), Shabda (Verbal testimony), Arthapatti (Implication) and Anupalabddhi (Non-apprehension).
- Structure and kinds of Anumana (inference), Vyapti (invariable relation), Hetvabhasas (fallacies of inference).

**Unit - 7 : Data Interpretation**

- Sources, acquisition and classification of Data.
- Quantitative and Qualitative Data.
- Graphical representation (Bar-chart, Histograms, pie-chart, Table-Chart and Line-Chart) and mapping of Data.
- Data Interpretation.
- Data and Governance.

**Unit - 8 : Information and Communication Technology (ICT)**

- ICT: General abbreviations and terminology.
- Basics of Internet, Intranet, E-mail, Audio and Video-conferencing.
- Digital initiatives in higher education.
- ICT and Governance.

**Unit - 9 : People, Development and Environment**

- Development and environment: Millennium development and Sustainable development goals.
- Human and environment interaction: Anthropogenic activities and their impacts on environment.
- Environmental issues: Local, Regional and Global; Air pollution, Water pollution, Soil pollution, Noise pollution, Waste (solid, liquid, biomedical, hazardous, electronic), Climate change and its Socio-Economic and Political dimensions.
- Impacts of pollutants on human health.
- Natural and energy resources: Solar, Wind, Soil, Hydro, Geothermal, Biomass, Nuclear and Forests.
- Natural hazards and disasters: Mitigation strategies.
- Environmental Protection Act (1986), National Action Plan on Climate Change, International Agreements/ efforts – Montreal Protocol, Rio-Summit. Convention on Biodiversity, Kyoto Protocol, Paris Agreement, International Solar Alliance.

**Unit - 10 : Higher Education System**

- Institutions of higher learning and education in ancient India.
- Evolution of higher learning and research in Post Independence India.
- Oriental, Conventional and Non-Conventional learning programmes in India.
- Professional, Technical and Skill Based education.
- Value education and environmental education.
- Policies, Governance and Administration.

NOTE: (i) Five questions each carrying 2 marks are to be set from each Module.

(ii) Whenever graphical / pictorial question (s) are set for sighted candidates, a passage followed by equal number of questions and weightage be set for visually impaired candidates.

**SLET Commission, Assam  
(N. E. Region)**

**SYLLABUS**

**Subject: PSYCHOLOGY**

**Code No. : 20**

**Unit – 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.

**Unit – 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.

### **Unit- 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.

### **Unit – 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]

### **Unit – 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

## **Unit: 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

### **Unit- 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].

### **Unit – 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.

### **Unit- 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

### **Unit- 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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