



## CENTRAL UNIVERSITY OF TAMILNADU

### 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-I      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-II      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-III**      **Comprehension**

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

### **Unit-IV**      **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-V**      **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-VI**      **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-VII**      **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-VIII      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-IX        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-X         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.



## CENTRAL UNIVERSITY OF TAMILNADU

### SUBJECT: MANAGEMENT

### SYLLABUS - PAPER-II

#### **Unit – I**

Management – Concept, Process, Theories and Approaches, Management Roles and Skills

Functions – Planning, Organizing, Staffing, Coordinating and Controlling.

Communication – Types, Process and Barriers.

Decision Making – Concept, Process, Techniques and Tools Organisation Structure and Design–Types, Authority, Responsibility, Centralisation, Decentralisation and Span of Control

Managerial Economics – Concept & Importance

Demand analysis – Utility Analysis, Indifference Curve, Elasticity & Forecasting

Market Structures – Market Classification & Price Determination

National Income – Concept, Types and Measurement

Inflation – Concept, Types and Measurement

Business Ethics & CSR

Ethical Issues & Dilemma

Corporate Governance

Value Based Organisation

#### **Unit – II**

Organisational Behaviour – Significance & Theories

Individual Behaviour – Personality, Perception, Values, Attitude, Learning and Motivation

Group Behaviour – Team Building, Leadership, Group Dynamics

Interpersonal Behaviour & Transactional Analysis

Organizational Culture & Climate

Work Force Diversity & Cross Culture Organisational Behaviour

Emotions and Stress Management

Organisational Justice and Whistle Blowing

Human Resource Management – Concept, Perspectives, Influences and Recent Trends

Human Resource Planning, Recruitment and Selection, Induction, Training and Development

Job Analysis, Job Evaluation and Compensation Management

### **Unit – III**

Strategic Role of Human Resource Management  
Competency Mapping & Balanced Scoreboard  
Career Planning and Development  
Performance Management and Appraisal  
Organization Development, Change & OD Interventions  
Talent Management & Skill Development  
Employee Engagement & Work Life Balance  
Industrial Relations: Disputes & Grievance Management, Labour Welfare and Social Security  
Trade Union & Collective Bargaining  
International Human Resource Management – HR Challenge of International Business  
Green HRM

### **Unit– IV**

Accounting Principles and Standards, Preparation of Financial Statements  
Financial Statement Analysis – Ratio Analysis, Funds Flow and Cash Flow Analysis, DuPont Analysis  
Preparation of Cost Sheet, Marginal Costing, Cost Volume Profit Analysis  
Standard Costing & Variance Analysis  
Financial Management, Concept & Functions  
Capital Structure – Theories, Cost of Capital, Sources and Finance  
Budgeting and Budgetary Control, Types and Process, Zero base Budgeting  
Leverages – Operating, Financial and Combined Leverages, EBIT–EPS Analysis, Financial Breakeven Point & Indifference Level.

### **Unit –V**

Value & Returns – Time Preference for Money, Valuation of Bonds and Shares, Risk and Returns;  
Capital Budgeting – Nature of Investment, Evaluation, Comparison of Methods;  
Risk and Uncertainly Analysis  
Dividend – Theories and Determination  
Mergers and Acquisition – Corporate Restructuring, Value Creation, Merger Negotiations, Leveraged Buyouts, Takeover  
Portfolio Management – CAPM, APT

Derivatives – Options, Option Payoffs, Option Pricing, Forward Contracts & Future Contracts

Working Capital Management – Determinants, Cash, Inventory, Receivables and Payables Management, Factoring

International Financial Management, Foreign exchange market

## **Unit - VI**

Strategic Management – Concept, Process, Decision & Types

Strategic Analysis – External Analysis, PEST, Porter’s Approach to industry analysis, Internal Analysis – Resource Based Approach, Value Chain Analysis

Strategy Formulation – SWOT Analysis, Corporate Strategy – Growth, Stability, Retrenchment, Integration and Diversification, Business Portfolio Analysis - BCG, GE Business Model, Ansoff’s Product Market Growth Matrix

Strategy Implementation – Challenges of Change, Developing Programs  
Mckinsey 7s Framework

Marketing – Concept, Orientation, Trends and Tasks, Customer Value and Satisfaction

Market Segmentation, Positioning and Targeting

Product and Pricing Decision – Product Mix, Product Life Cycle, New Product development, Pricing – Types and Strategies

Place and promotion decision – Marketing channels and value networks, VMS, IMC, Advertising and Sales promotion

## **Unit –VII**

Consumer and Industrial Buying Behaviour: Theories and Models of Consumer Behaviour

Brand Management – Role of Brands, Brand Equity, Equity Models, Developing a Branding Strategy; Brand Name Decisions, Brand Extensions and Loyalty

Logistics and Supply Chain Management, Drivers, Value creation, Supply Chain Design, Designing and Managing Sales Force, Personal Selling

Service Marketing – Managing Service Quality and Brands, Marketing Strategies of Service Firms

Customer Relationship Marketing – Relationship Building, Strategies, Values and Process

Retail Marketing – Recent Trends in India, Types of Retail Outlets.

Emerging Trends in Marketing – Concept of e-Marketing, Direct Marketing, Digital Marketing and Green Marketing

International Marketing – Entry Mode Decisions, Planning Marketing Mix for International Markets

## **Unit –VIII**

Statistics for Management: Concept, Measures Of Central Tendency and Dispersion, Probability Distribution – Binominal, Poison, Normal and Exponential  
Data Collection & Questionnaire Design  
Sampling – Concept, Process and Techniques  
Hypothesis Testing – Procedure; T, Z, F, Chi-square tests  
Correlation and Regression Analysis  
Operations Management – Role and Scope  
Facility Location and Layout – Site Selection and Analysis, Layout – Design and Process  
Enterprise Resource Planning – ERP Modules, ERP implementation  
Scheduling; Loading, Sequencing and Monitoring  
Quality Management and Statistical Quality Control, Quality Circles, Total Quality Management – KAIZEN, Benchmarking, Six Sigma; ISO 9000 Series Standards  
Operation Research – Transportation, Queuing Decision Theory, PERT / CPM

## **Unit –IX**

International Business – Managing Business in Globalization Era; Theories of International Trade; Balance of payment  
Foreign Direct Investment – Benefits and Costs  
Multilateral regulation of Trade and Investment under WTO  
International Trade Procedures and Documentation; EXIM Policies  
Role of International Financial Institutions – IMF and World Bank  
Information Technology – Use of Computers in Management Applications; MIS, DSS  
Artificial Intelligence and Big Data  
Data Warehousing, Data Mining and Knowledge Management – Concepts  
Managing Technological Change

## **Unit – X**

Entrepreneurship Development – Concept, Types, Theories and Process, Developing Entrepreneurial Competencies  
Intrapreneurship – Concept and Process  
Women Entrepreneurship and Rural Entrepreneurship  
Innovations in Business – Types of Innovations, Creating and Identifying Opportunities, Screening of Business Ideas  
Business Plan and Feasibility Analysis – Concept and Process of Technical, Market and Financial Analysis  
Micro and Small Scale Industries in India; Role of Government in Promoting SSI  
Sickness in Small Industries – Reasons and Rehabilitation  
Institutional Finance to Small Industries – Financial Institutions, Commercial Banks, Cooperative Banks, Micro Finance.