



सीएसआईआर-भारतीय पेट्रोलियम संस्थान

वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्

हरिद्वार योड़, मोहकमपुर,

देहरादून - 248 005, उत्तराखण्ड, भारत

CSIR-Indian Institute Of Petroleum

(Council of Scientific & Industrial Research)

Haridwar Road, Mohkampur

Dehradun - 248 005, Uttarakhand India



F. No. Rectt/Grade III & II/2025-Pers

Dated: 19.01.2026

Advt. No. 07/2025: NOTIFICATION

Sub: Notification of Syllabus for Written and Trade Test for the Posts of Technical Assistants- reg.

It is notified for information of the candidates who have been shortlisted for the Trade Test notified vide CSIR-IIP Notification No. Rectt/Grade III & II/2025-Pers dated 15.01.2026 that the Trade Test for the following positions of Technical Assistants will be held shortly. Therefore, the syllabus for the conduct of Trade Test & Written Examination (Paper III) is being notified as follows:

| Sr. No. | Name of the Area | Page No. |
|---------|--|------------|
| 1. | Business Development | 2 & 3 |
| 2. | Chemical Science | 4 & 5 |
| 3. | Guest House Manager (Hotel Management) | 6, 7 & 8 |
| 4. | SCDD (Mass Communication) | 9, 10 & 11 |
| 5. | KRC (Library) | 12 & 13 |

The syllabus for Trade Test & Paper III for the Posts of Technical Assistants in the Area of Science Communication & Dissemination Directorate (SCDD) and Information Technology (IT) shall be notified separately.

Therefore, in view of the above, all the candidates are advised to prepare for the Trade Test as well as for Objective Type Multiple Choice Question Examination i.e. Paper I, Paper II and Paper III.

All candidates are informed that this Institute has already notified that Paper I will be on General Mental Ability and Paper II shall be on General Awareness and English Language. Paper III shall be on Subject Paper which will vary according to the Posts as mentioned above. Therefore, the syllabus for different subjects of Paper III is being notified along with this notification for the benefit of the candidates so that they can prepare accordingly.


(Anjum Sharma)
Sr. Controller of Administration

Enclosure- As Above

Copy to:

1. Head IT for uploading on Official Website of CSIR-IIP
2. All Notice Boards

Syllabus for Paper III, Post Code BD-1, Area- Business Development Post- Technical Assistant

- Foundations of Management: Management – Concept and basic features, Functions of Management – Planning, Organizing, Staffing Directing & Controlling, Organization Structure, Basic Theories of Management
- Research Methodology and Statistics: Scientific Research – Definition, Problems, Types of variables, Measures of Central Tendency and Dispersion, Probability, Sampling and Randomness, Statistics – Purpose, Approach and Method: Binomial Statistic: The normal probability; Correlation & Regression.
- HRM: Meaning of Industrial Relations, Worker's Participation in Management, Training and Development, Motivation, Leadership, Job Satisfaction, Organizational Communication, Human Resource Development, Recruitment and Selection, Performance Appraisal.
- Quantitative Techniques: Role of quantitative techniques in managerial decision making, Operations Research, MIS – Concept and general form
- Operations Management: Concept & Measurement of Productivity, Work Study Techniques and efficiency improvement, Inventory Management – ABC Analysis and EOQ model, Demand forecasting, Concept of Quality, Application of Quality Control Techniques in Improving Product Quality.
- Finance and economics: Concept and Basic Understanding on: Financial Statement Analysis, Long term & Short-term financing, working capital management Capital budgeting decisions, Capital Markets and Financial Institutions. Concepts of cost, Demand and Supply Function – Elasticity of Demand, market equilibrium, Pricing under Monopoly & Oligopoly
- Marketing Management: Concept of Marketing and its evolution, Current Trends and Practices, Issues in Consumer Behaviour, marketing Mix, Marketing Research: Methods & Practices, International Marketing, Brand Management, PR, Sales, Advertising, Market Segmentation and targeting, Product Life cycle , Services marketing, Strategic management process

Trade Test Syllabus for Post Code BD-1, Area, Business Development, Technical Assistant

Fundamentals of Management: Management – Concept and Basic Features, Functions of Management – Planning, Organizing, Staffing Directing & Controlling, Organization Structure, Basic Theories of Management.

Principles of Management: Planning, Organizing, Staffing, Directing, Controlling and Foundational Theories, Emphasizing Henri Fayol's 14 Principles and Taylor's Scientific Management. Key topics include Organizational Structure, Leadership, Decision-Making, and Motivation.

Management Functions & Concepts: Planning, Organizing, Staffing, Directing, and Controlling, Scientific Management Theory Evolution of management thoughts, decision-making, organizational structure, and designs.

Strategic Management: SWOT Analysis, Porter's Five Forces, BCG Matrix, and Corporate Governance. Strategic Tools- McKinsey's 7S, Value Chain Analysis, Portfolio Analysis.

Marketing Management: Foundational Concepts, Strategy & Planning, Consumer & Brand Focus, Tools & Tactics and Application & Ethics.

Consumer behavior: Consumer Decision Making Process, Market segmentation, Product life cycle, and Digital marketing.

IP Portfolio: IP and Strategy, Different Types of IP, Patents- Types, Applications, Legal, Market, Strategic and Business Advantages

Syllabus for Paper III for the Post of Technical Assistant, Area- Chemical Science, CHEM-1

Inorganic Chemistry: Atomic Structure, Periodicity of elements, Chemical Bonding, Oxidation-Reduction, General Principle of Metallurgy, Acids and Bases, Chemistry of S, p & d Block elements, Noble gases, Inorganic polymers, Coordination Chemistry, Transition elements, Environmental Chemistry.

Physical Chemistry: Gaseous State, Liquid State, Solid State, Ionic Equilibria, Chemical Thermodynamics, System of Variable Composition, Chemical Equilibrium, Solution and Colligative Properties, Phase Equilibria, Chemical Kinetics. Catalysis, Surface Chemistry, Conductance, Electrochemistry, Quantum Chemistry, Fundamentals of Spectroscopy.

Organic Chemistry: Basic Organic Chemistry, Stereochemistry, geometrical isomerism, Electrophilic addition to the alkenes. Nucleophilic substitution at saturated carbons; Chemistry of aliphatic and aromatic compound, Cycloalkanes and conformational analysis, Chemistry of aliphatic and aromatic compound, Cycloalkanes and conformational analysis, Chemistry of halogenated hydrocarbons, alcohols, phenols, ethers and epoxide, carbonyl compounds, carboxylic acid and their derivatives, Nitrogen Containing Functional groups, oils and Fats.

Analytical Chemistry: Advance chromatography and spectroscopic techniques, quality control and quality assurance, Instrumental methods of analysis.

Trade Test Syllabus for Chemical Science- Technical Assistant (Chem-1)

1. Reaction mechanism of common organic reactions.
2. Spectroscopic data interpretation of molecular structure.
3. Transition metals and their properties.
4. Transition metal complexes, coordination and stoichiometry.
5. Name reactions of organic compounds.
6. Titration and volumetric analysis.
7. Separation Techniques.
8. Identification of Glass/ Laboratory wares.
9. Laboratory Safety Practices.
10. Solution Types and Identification.

Syllabus for Paper III for the Post of Guest House Manager, Area -
Hotel Management, Post Code: GH-1, Technical Assistant

1. Food Production, Nutrition & Catering Science –

- a. Menu planning & Balance diet, Knowledge of food additives,
- b. Personal Hygiene
- c. Food Risk Analysis - Contamination, HACCP, Food Microbiology
- d. Food Safety & Hygiene - Food handling laws & regulations, Food Hazards & Types,
- e. Domain-specific knowledge, etc.

2. Front Office Operations –

- a. Front Office computer Applications
- b. Room Tariffs & Reservations
- c. Communication - Telephone Etiquettes & Guest complaints handling, etc.
- d. Domain-specific knowledge, etc.

3. Accommodations Operations –

- a. Contract Cleaning
- b. Pest Control
- c. Textiles
- d. Laundry Management
- e. Housekeeping, Cost Control, etc.
- f. Domain-specific knowledge, etc.

4. Hotel Accountancy –

- a. Accounting
- b. Journal & Ledger
- c. Cashbook
- d. Guest Billing
- e. Company final accounts, etc.

5. Food & Beverage – Management & controls

- a. Inventory management
- b. Food cost control
- c. Food control cycle
- d. Realtime Food pilferage monitoring
- e. Domain-specific knowledge, etc.

6. General Management

- a. Leadership best practices
- b. Planning & Decision-making
- c. Effective communication skills
- d. Job Evaluation & staff performance management
- e. Employee counselling - Motivation & productivity

7. Human Resource Management

- a. Resource planning
- b. Labour management – Wage, salary, discipline
- c. Employee grievance handling
- d. Technology Basics – MS Word, PowerPoint presentation, Excel sheet

Trade Test Syllabus for Guest House Manager (Hotel Management)

(Food Production / Catering)

I. FRENCH CLASSICAL MENU — SEQUENCE

Definition and importance, Complete sequence of French Classical Menu, Examples for each course, Balance of menu — colour, texture, flavour, nutrition, cost, Application in modern menu planning

II. PLANNING A MEAL FOR VIP VISITS

Study of guest profile and occasion, Principles of menu planning, Selection of dishes as per season, culture, religion and availability, Service style — buffet / plated / silver service, Hygiene and sanitation, Time scheduling and coordination, Portion size, presentation and garnish, VIP checklist and service standards

III. INDENTING OF INGREDIENTS

Meaning and purpose of indenting, Standard recipes and standard yields, Calculation of quantities as per number of portions, Coordination with stores and purchase, FIFO and stock control, Control of wastage and pilferage

IV. COSTING OF DISHES (As per prevailing market rates)

Concept of food cost, Recipe costing sheet, Portion costing, Gross Profit and Selling Price, Market price updates, Cost-control practices

V. FAMILIARIZATION WITH RECIPES

A. SOUPS

Tomato Soup, Chicken Clear Soup, Sweet Corn Vegetable Soup, Vegetable Shorba, Vegetarian Mulligatawny Soup, Chicken Shorba, Hot & Sour Vegetable Soup

Emphasis: stocks, thickening, seasoning, garnish, serving temperature.

B. MAIN COURSE

Chicken Curry, Paneer Pasanda, Shahi Paneer, Vegetable Jalfrezi, Dal Tadka, Mix Raita, Tomato Rice, Tamarind Rice, Kashmiri Pulao, Hyderabadi Biryani, Chicken Biryani, Vegetable Biryani, Kacchi Biryani, Missi Roti, Garlic Naan, Assorted Indian Breads

Emphasis: mise-en-place, cooking sequence, marination, spice usage, presentation, portioning.

C. DESSERTS

Pal Payasam, Puran Poli, Caramel Custard, Chocolate Soufflé, Shahi Tukda, Phirni, Fruit Trifle Pudding

Emphasis: milk and egg cookery, baking/steaming, setting, sweetness balance, plating.

Syllabus of Written Test (Paper III) for the Post of Technical Assistant, Area- Science Communication and Dissemination Directorate

A. Mass Communication

1. Concept, nature, and scope of Mass Communication
2. Types of communication: interpersonal, group, mass
3. Media and society relationship
4. Media convergence
5. Media dependency theory
6. Public opinion formation
7. Media ethics and social responsibility
8. Media globalisation
9. Digital communication basics
10. Major Digital Communication Platforms
11. Components of Digital Communication
12. Major Forms of Digital Communication

B. Science Communication

1. Meaning and importance of Science Communication
2. Formats of Digital Science Communication
3. Role of media in science awareness
4. Science journalism vs science communication
5. Science communication models
6. Ethical issues in science reporting
7. Public understanding of science
8. Science communication through print media
9. Broadcast media and science programs
10. Digital platforms for science outreach
11. Role of CSIR in science communication
12. Future trends in science communication

C. Journalism

1. Definition and functions of journalism
2. History of Indian journalism
3. News: meaning and types
4. News values
5. Principles of reporting
6. Interpretative journalism
7. News sources and attribution
8. Media ethics and codes
9. Online journalism
10. News agencies (PTI, UNI, Reuters)
11. Headlines and sub-headlines
12. Fake news and verification

D. Advertising

1. Meaning and objectives of advertising
2. Types of advertising
3. Advertising vs publicity
4. Advertising agencies: structure and functions
5. Copywriting basics
6. Creative strategy
7. Advertising ethics
8. Advertising regulation in India (ASCI)
9. Digital advertising
10. Social media advertising
11. Advertising campaign planning
12. Audio-visual advertising

Trade Test Syllabus for the Post of Technical Assistant, Area- Science Communication and Dissemination Directorate (SCDD)- Mass Communication

Mass Communication

- Concept, nature, and scope of Mass Communication
- Functions and types of communication
- Media convergence and digital communication
- Role of mass media in society
- Major Forms of Digital Communication

Science Communication

- Meaning and importance of Science Communication
- Science popularization methods
- Role of media in health, environment, and climate communication
- Formats of Digital Science Communication
- Broadcast media and science programs

Journalism

- News values and types of reporting
- Interview techniques and newsroom ethics
- Press laws and freedom of press
- Interpretative journalism

Advertising

- Advertising types and objectives
- Copywriting basics and creative strategies
- Digital advertising and IMC

Syllabus of Written Test (Paper III) for the Post of Technical Assistant, Area- Knowledge Resource Centre (Library)

Foundations of Library and Information Science

- a) Library concept objectives and functions
- b) Types of libraries academic public special national
- c) Five laws of library science
- d) Library profession ethics and LIS education in India
- e) Role of libraries in society

Library Organization and Management

- a) Principles of management
- b) Library planning budgeting and staffing
- c) Library rules routines and reporting
- d) Leadership motivation and communication
- e) Library committees and administration

Knowledge Organization Classification

- a) Need purpose and principles of classification
- b) DDC detailed scheme
- c) Colon Classification basic concepts
- d) Notation tables and common isolates
- e) Call number construction and shelf arrangement

Knowledge Organization Cataloguing

- a) Objectives and functions of cataloguing
- b) Cataloguing codes CCC AACR 2 RDA basics
- c) Types of catalogues
- d) Subject headings
- e) Main entry and added entries practical

Reference and Information Sources

- a) Reference service types and methods
- b) Ready reference sources
- c) Dictionaries encyclopedias bibliographies
- d) Government and statistical sources
- e) User studies

Information Technology and Digital Libraries

- a) Computer fundamentals
- b) Library automation
- c) OPAC and databases
- d) Digital libraries and institutional repositories
- e) Internet and networking basics

Trade Test Syllabus for the Post of Technical Assistant, Area- KRC
(Library)

1. Library Cataloging AACR2
2. Library Classification UDC, DDC
3. Management and Modern technologies for libraries
4. Library Automation/Digitization
5. Reference and information sources
6. Computer skills