

HRRL Syllabus|| Check HPCL HRRL Rajasthan Refinery Exam Pattern

HRRL Exam Pattern for Various Posts | Test Structure

Sl.No	Name of the Subject
	General Aptitude
Part I	(Intellectual Potential test, testing Logical Reasoning & Data Interpretation, Quantitative Aptitude test, Test of English Language)
Part II	(Technical/ Professional Knowledge comprising of questions related to Qualifying degree / Educational background/work experience required for the position applied for)

hrri.in Syllabus

Part I

Reasoning

- Data Sufficiency
- Alpha-Numeric Sequence Puzzle
- Verification of truth of the Statement
- Blood Relations
- Mirror Images
- Figure Matrix
- Spotting embedded figures
- Coding-Decoding
- Situation Reaction Test
- Analogy
- Series Completion
- Direction Sense Test
- Classification

- Arithmetical Reasoning
- Word Sequence
- Missing Characters
- Operations of Mathematics
- Dot Situation
- Identical figure groupings
- Puzzle Test
- Assertion and Reasoning
- Directions
- Test on Alphabets
- Construction of Squares and Triangles
- Paper Folding
- Water Images
- Completion Incomplete Pattern
- Venn Diagrams
- Sequential Output training
- Series
- Analytical Reasoning
- Eligibility Test
- Forming figures and analysis
- Paper Cutting
- Cubes and Dice
- Classification
- Rules Detection

Data Interpretation

- Tabular Form
- Bar Graph
- Line Chart
- Pie Chart
- Missing Data Interpretation
- Caselet Form
- Radar/Web

English Language

- Synonyms
- Antonyms
- Fill in the blanks
- Sentence Arrangement
- Idioms and Phrases
- Sentence Improvement
- Prepositions
- Substitution
- Transformation

- Para Completion
- Spelling Test
- Error Correction (Underlined Part)
- Joining Sentences
- Error Correction (Phrase in Bold)
- Sentence
- Passage Completion
- Spotting Errors
- Active and Passive Voice
- Completion

Quantitative Aptitude

- Boats and Streams
- Simple Interest
- Time and Work Partnership
- Areas
- Permutations and Combinations
- Ratio and Proportion
- Percentages
- Simple Equations
- Time and Distance
- Compound Interest
- Quadratic Equations
- Probability
- Problems on Trains
- Numbers and Ages
- Mixtures and Allegations
- Problems on L.C.M and H.C.F
- Averages
- Indices and Surds
- Profit and Loss
- Simplification and Approximation
- Races and Games
- Mensuration
- Pipes and Cisterns
- Volumes
- Odd Man Out
- Problems on Numbers

Part II

Civil Engineering

- Hydraulic Machines and Hydropower
- The flow of Fluids, Hydraulic Machines and Hydro Power

- Water Supply Engineering
- Building Materials
- Fluid Mechanics, Open Channel Flow, Pipe Flow
- Waste Water Engineering
- Structural Analysis
- Design of Steel Structures
- Planning and Management
- Tunneling
- Railways Systems
- Surveying and Geology
- Solid Waste Management
- Harbors
- Transportation Engineering
- Solid Mechanics
- Design of Concrete and Masonry structures
- Construction Practice
- Hydrology and Water Resources Engineering
- Environmental Engineering
- Highways
- Airports
- Air, Noise pollution, and Ecology
- Geotechnical Engineering and Foundation Engineering

Mechanical Engineering

- Mechanisms and Machines
- Fluid Mechanics
- IC Engines, Refrigeration and Air conditioning
- Engineering Mechanics
- Mechatronics and Robotics
- Design of Machine Elements
- Manufacturing
- Thermodynamics and Heat transfer
- Power Plant Engineering
- Engineering Materials
- Turbo Machinery
- Renewable Sources of Energy
- Industrial and Maintenance Engineering

Electrical Engineering

- Control Systems
- Electrical Machines
- Analog and Digital Electronics
- Systems and Signal Processing
- Power Systems

- Electric Circuits and Fields
- Computer Fundamentals
- Electrical and Electronic Measurements
- Power Electronics and Drives
- Engineering Mathematics
- Basic Electronics Engineering
- Electrical Materials

Chemical Engineering

- Electrochemistry.
- Atoms and Molecules.
- Transition Metal Chemistry.
- Spectroscopic Techniques.
- Organic Reactions.
- Reaction Dynamics.
- Stereochemistry.
- Photochemistry.

Instrumentation Engineering

- Electronics Instruments
- Analog Electronics
- Electronics Circuits
- Signals & Systems
- Microprocessors and Micro Computers
- Control Systems
- Fundamentals
- Analytical, Optical & Bio-Medical Instrumentation
- Instrumentation
- Digital Electronic Circuits
- Electrical Measurements