

**BARC Stipendiary Trainee Syllabus - Check BARC Stipendiary Trainee
(Category-I, II) Exam Pattern @ www.barc.gov.in**

BARC Stipendiary Trainee Exam Pattern

Stipendiary Trainee Category-I (Group B)

S.No	Subjects	No of Questions	Time Duration
1	Questions Related to Subjects in Diploma/B.Sc.	40	1 Hrs

Stipendiary Trainee Category-II (Group C)

Stage-I: Preliminary Test

S.No	Exam Type	Subjects	No of Questions	Time Duration
1	Screening Test	Mathematics	20	1 Hrs
2		Science	20	
3		General Awareness	10	
Total			50	

Stage-II: Advanced Test

S.No	Exam Type	Subjects	No of Questions	Time Duration
1	Screening Test	Questions belong to their Respective Trade	50	2 Hrs
Total			50	

BARC Stipendiary Trainee Syllabus

Mathematics

- Permutation and Combination.

- Problems on H.C.F and L.C.M.
- Height and Distance.
- Ratio and Proportion.
- Simplification.
- Banker's Discount.
- Decimal Fraction.
- Average.
- Compound Interest.
- Area.
- Square Root and Cube Root.
- Problems on Ages.
- Simple Interest.
- Boats and Streams.
- Volume and Surface Area.
- Numbers.
- Time and Work.
- Races and Games.
- Time and Distance.
- Pipes and Cistern.
- Allegation or Mixture.
- Probability.
- Chain Rule.
- Surds and Indices.
- Partnership.
- Logarithm.
- Stocks and Share.

General Awareness

- Artists.
- Indian History.
- Inventions and Discoveries.
- Rivers, Lakes and, Seas.
- Indian Politics.
- Heritage.
- Tourism.
- Current Affairs.
- Famous Books & Authors.
- Biology.
- Famous Days & Dates.
- General Science.
- Environmental Issues.
- Geography.

- Countries and Capitals.
- Literature.
- Sports.
- Civics.
- Indian Parliament.
- Famous Places in India.
- Indian Economy.

Science:

- Material
- Scientific Reasons
- Differences
- Abbreviations
- Units
- Discoveries & Inventions
- Measuring Tools
- Making Decisions perspective to Science

Physics

- Thermodynamics
- Statistical Mechanics
- Nuclear and Particle Physics
- Quantum Theory and its Applications
- Electromagnetic Theory
- Electronics
- Experimental Physics
- Mathematical Methods
- Classical Mechanics
- Relativity
- Atomic
- Molecular Physics
- Condensed Matter Physics

Chemistry

- Redox Reactions
- Chemical Kinetics
- States of Matter
- Equilibrium
- Thermodynamics
- Processes of Isolation of Elements
- Coordination Compounds

- P, D, F Block Elements
- Hydrogen
- D Block Elements
- Alkali and Alkaline earth metals (S Block)
- Haloarenes
- Alcohols
- Haloalkanes
- Aldehydes
- Phenols
- Ketones
- Ethers
- General Organic Chemistry
- Carboxylic Acids
- Biomolecules
- Hydrocarbons
- Environmental Chemistry
- Amines
- Chemistry in Everyday Life
- General Chemistry
- Structure of Atom
- Electrochemistry
- Periodicity
- Solid State
- Solutions
- Classification of Elements
- Molecular Structure
- Chemical Bonding
- Surface Chemistry

Civil Engineering

- Building Planning
- Valuation
- Hydraulic Structure
- Professional practice
- Transportation Engineer 1 & 2 (Road)
- Quantity Estimation
- Building Code
- Town Planning
- GIS
- Structural Analysis
- Soil Mechanics

Mechanical Engineering

- Fluid Mechanics
- Theory of Machines
- Operations Research
- Machine Design
- Industry Safety
- Inventory Control
- Machining and Machine Tool Operations
- Metal Casting
- Production Planning and Control
- Computer Integrated Manufacturing Design
- Inventory Control
- Engineering Mechanics
- Energy conservation
- Engineering Materials
- The Strength of Materials
- Management Information System
- Machining and Machine Tool Operations
- Thermodynamics
- Meteorology and Inspection
- Product Design and Development
- Fluid Machines
- Heat Transfer
- Control systems.

Electrical:

- Analytical instrumentation.
- Power Systems.
- Digital Signal Processing.
- Computer Control of Processes, Networks.
- Measurements, Instrumentation, and Transducers.
- Power Electronics and Drives.
- Electrical machines.
- Electrical Circuits and Fields.
- Industrial Instrumentation.
- Digital Electronics.
- Communication Engineering.

Instrumentation Engineering

- Analog Electronics.
- Optical Instrumentation.

- Analytical Instrumentation
- Electrical and Electronics Measurements.
- Biomedical Instrumentation.
- Basics of Circuits and Measurement Systems.
- Transducers
- Digital Electronics.
- Signals.
- Control Systems and Process Control.
- Systems and Communications.
- Industrial Instrumentation.
- Mechanical Measurement.