

# RRB JE 2021: PDF Syllabus of Stage 1 and Stage 2

## RRB JE 2021: First Stage Syllabus

### Mathematics

• Algebra
• Polynomials
• Installments
• Factors and Simplification
• Arithmetic Simple and Compound Interest
• Ratio and Proportion
• Percentage
• Time and Distance
• Time and Work
• Profit and Loss
• Pipes and Cisterns
• Mensuration
• Problem on Ages
• Histogram
• Frequency Polygon
• Bar- Diagram
• Pie- chart
• Pictorial Graph

## General Awareness

<ul style="list-style-type: none"><li>• Rail Budget</li></ul>
<ul style="list-style-type: none"><li>• General Awareness on Railway</li></ul>
<ul style="list-style-type: none"><li>• Indian Politics</li></ul>
<ul style="list-style-type: none"><li>• Current Events</li></ul>
<ul style="list-style-type: none"><li>• Geography</li></ul>
<ul style="list-style-type: none"><li>• Economy</li></ul>
<ul style="list-style-type: none"><li>• Banking</li></ul>
<ul style="list-style-type: none"><li>• Sports</li></ul>
<ul style="list-style-type: none"><li>• Finance Marketing</li></ul>
<ul style="list-style-type: none"><li>• Indian History</li></ul>

## General Intelligence and Reasoning

<ul style="list-style-type: none"><li>• Number Series</li></ul>
<ul style="list-style-type: none"><li>• Input-Output</li></ul>
<ul style="list-style-type: none"><li>• Syllogism</li></ul>
<ul style="list-style-type: none"><li>• Coding-Decoding</li></ul>
<ul style="list-style-type: none"><li>• Word Building</li></ul>
<ul style="list-style-type: none"><li>• Clock</li></ul>
<ul style="list-style-type: none"><li>• Seating Arrangement</li></ul>
<ul style="list-style-type: none"><li>• Calendar</li></ul>
<ul style="list-style-type: none"><li>• Decision Making</li></ul>

• Direction Sense
• Visual Memory
• Blood Relations
• Figural Classification
• Arithmetical Reasoning
• Similarities and Differences
• Space Visualization of Space Orientation
• Analogy
• Non- Verbal Series
• Statement Conclusion

### General Science

• Basic CBSE high school level science – Physics	• Chemistry	• and Biology
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## RRB JE 2021: Second Stage Syllabus

### General Awareness

• Knowledge of Current Affairs
• Indian Geography
• Culture and history of India including freedom struggle
• Indian Politics and Indian Constitution

- Indian Economy

- Environmental issues concerning India and the world

- Sports

- General Scientific and Technological Developments

## **Physics and Chemistry**

- Up to 10th standard CBSE syllabus

## **Basics of Computer and Applications**

- Architecture of Computers

- Input and Output Devices

- Storage Devices

- Networking

- Operating System like Windows, Unix, Linux

- MS Office

- Data Representation

- Internet and Email

- Websites and Web Browsers

- Computer Virus

## **Basics of Environment and Pollution Control**

- Basics of Environment

<ul style="list-style-type: none"> <li>• Adverse Effect of Environmental Pollution and Control Strategies</li> </ul>
<ul style="list-style-type: none"> <li>• Air, Water, and Noise Pollution</li> </ul>
<ul style="list-style-type: none"> <li>• Their Effect and Control</li> </ul>
<ul style="list-style-type: none"> <li>• Waste Management</li> </ul>
<ul style="list-style-type: none"> <li>• Global Warming</li> </ul>
<ul style="list-style-type: none"> <li>• Acid Rain</li> </ul>
<ul style="list-style-type: none"> <li>• Ozone Level Depletion</li> </ul>

## Technical Abilities

- **Civil Engineering**

<ul style="list-style-type: none"> <li>• Estimating</li> </ul>
<ul style="list-style-type: none"> <li>• Costing</li> </ul>
<ul style="list-style-type: none"> <li>• General Civil Engineering</li> </ul>
<ul style="list-style-type: none"> <li>• Construction of Structure Engineering and Drawing</li> </ul>
<ul style="list-style-type: none"> <li>• Valuation</li> </ul>
<ul style="list-style-type: none"> <li>• Soil Mechanics</li> </ul>
<ul style="list-style-type: none"> <li>• Structural Analysis</li> </ul>
<ul style="list-style-type: none"> <li>• Building Materials</li> </ul>
<ul style="list-style-type: none"> <li>• Mechanics</li> </ul>
<ul style="list-style-type: none"> <li>• Concrete Structures</li> </ul>
<ul style="list-style-type: none"> <li>• Steel Structures</li> </ul>

• Construction
• Water Requirements
• Hydraulics
• Hydrology
• Highway Planning
• Traffic Engineering
• Projections
• Errors and Adjustments
• Environmental Engineering
• Surveying
• Curves
• Measurements of Distance and Directions
• Coordinate System

- **Electronics Engineering**

• Electronic Devices
• Wireless Communication
• Energy Bands
• Signal and Systems
• Carrier Transport in Silicon: Resistivity, Diffusion Current, Mobility, Drift Current
• Generation and recombination of carriers
• Tunnel

- Control System
- Junctions
- Diodes
- EMFT
- Analog and Digital Circuits
- Communication
- Basics of Signal and Systems

- **Electrical Engineering**

- Machines
- Electrical and Electronic Measurements
- Basics of Circuit and Power Electronics
- Analog and Digital Electronics
- Analog and Digital Electronics
- Signals and Systems
- Power and Control Systems
- Circuits and Measurement Systems

- **Computer Engineering**

- Languages
- Computer Networks
- Web Technology and Programming

- Network Communication

- Database

- Algorithms

- System Programming

- **Instrumentation and Measurement Engineering**

- Basics of Measurement Systems

- Mechanical Measurement

- Transducers

- Analog of Digital Electronics

- Circuits

- Industrial Instrumentation

- Process Instrumentation

- **Information Technology**

- MS Office

- Computer Fundamentals and Organization

- C, C++, and Java Language

- Information Systems

- DBMS

- System Programming

- SAD



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| <ul style="list-style-type: none"><li>• Software Engineering</li></ul>              |
| <ul style="list-style-type: none"><li>• UNIX</li></ul>                              |
| <ul style="list-style-type: none"><li>• Web Technology and Programming</li></ul>    |
| <ul style="list-style-type: none"><li>• Data and Network Communication</li></ul>    |
| <ul style="list-style-type: none"><li>• Operating Systems</li></ul>                 |
| <ul style="list-style-type: none"><li>• Environment and Pollution Control</li></ul> |

- **Mechanical Engineering**

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| <ul style="list-style-type: none"><li>• Strength of Materials</li></ul>                 |
| <ul style="list-style-type: none"><li>• Fluid Mechanics</li></ul>                       |
| <ul style="list-style-type: none"><li>• Heat Transfer</li></ul>                         |
| <ul style="list-style-type: none"><li>• Theory of Machines</li></ul>                    |
| <ul style="list-style-type: none"><li>• Kinematics of Machine</li></ul>                 |
| <ul style="list-style-type: none"><li>• Engineering Mechanics</li></ul>                 |
| <ul style="list-style-type: none"><li>• Machining and Machine Tool Operations</li></ul> |
| <ul style="list-style-type: none"><li>• Thermodynamics</li></ul>                        |
| <ul style="list-style-type: none"><li>• Power Engineering</li></ul>                     |
| <ul style="list-style-type: none"><li>• Casting</li></ul>                               |
| <ul style="list-style-type: none"><li>• Stream Tables</li></ul>                         |
| <ul style="list-style-type: none"><li>• Metrology and Inspection</li></ul>              |

- **Chemical Engineering**

<ul style="list-style-type: none"><li>• Applied Chemistry</li></ul>
<ul style="list-style-type: none"><li>• Thermodynamics</li></ul>
<ul style="list-style-type: none"><li>• Polymers</li></ul>
<ul style="list-style-type: none"><li>• Environment and Pollution Control</li></ul>
<ul style="list-style-type: none"><li>• Computers</li></ul>
<ul style="list-style-type: none"><li>• Instrumentation and Measurement</li></ul>
<ul style="list-style-type: none"><li>• Basic Concepts of Fuel</li></ul>