

# Get Ready to Crack CSIR-JRF Through GATE (Detailed) Syllabus

## CSIR JRF Through GATE Syllabus

### CSIR JRF Through GATE: Syllabus for Biotechnology

Candidates can check the syllabus for Biotechnology here.

Section	Topics
Section 1	Engineering Mathematics <ul style="list-style-type: none"><li>• Linear Algebra</li><li>• Calculus</li><li>• Differential Equations</li><li>• Probability and Statistics</li><li>• Numerical Methods</li></ul>
Section 2	General Biotechnology <ul style="list-style-type: none"><li>• Biochemistry</li><li>• Microbiology</li><li>• Immunology</li></ul>
Section 3	Genetics, Cellular, and Molecular Biology
Section 4	Fundamentals of Biological Engineering
Section 5	Bioprocess Engineering and Process Biotechnology

## CSIR JRF Through GATE: Syllabus for Chemical Science

Candidates can check the syllabus for Chemical Science here.

Section	Topics
Section 1	<b>Physical Chemistry</b> <ul style="list-style-type: none"><li>• Structure</li><li>• Equilibrium</li><li>• Kinetics</li><li>• Surfaces and Interfaces</li></ul>
Section 2	<b>Inorganic Chemistry</b> <ul style="list-style-type: none"><li>• Main Group Elements</li><li>• Transition Elements</li><li>• Lanthanides and Actinides</li><li>• Organometallics</li><li>• Radioactivity</li><li>• Bioinorganic Chemistry</li><li>• Solids</li><li>• Instrumental Methods of Analysis</li></ul>
Section 3	<b>Organic Chemistry</b> <ul style="list-style-type: none"><li>• Stereochemistry</li><li>• Reaction Mechanisms</li><li>• Organic Synthesis</li><li>• Pericyclic Reactions and Photochemistry</li><li>• Heterocyclic Compounds</li><li>• Biomolecules</li><li>• Spectroscopy</li></ul>

## CSIR JRF Through GATE: Syllabus for Physical Science

Candidates can check the syllabus for Physical Science here.

Section	Topics
Section 1	<b>Mathematical Physics</b> <ul style="list-style-type: none"><li>• Vector Calculus</li></ul>
Section 2	<b>Classical Mechanics</b> <ul style="list-style-type: none"><li>• Lagrangian formulation</li><li>• The special theory of relativity</li></ul>
Section 3	Electromagnetic Theory
Section 4	Quantum Mechanics
Section 5	Thermodynamics and Statistical Physics
Section 6	Atomic and Molecular Physics
Section 7	Solid State Physics
Section 8	Electronics
Section 9	Nuclear and Particle Physics

## CSIR JRF Through GATE: Syllabus for Computer Science

Candidates can check the syllabus for Computer Science here.

Section	Topics
Section 1	<b>Engineering Mathematics</b> <ul style="list-style-type: none"><li>• Discrete Mathematics</li><li>• Linear Algebra</li><li>• Calculus</li><li>• Probability</li></ul>
Section 2	Digital Logic
Section 3	Computer Organization and Architecture
Section 4	Programming and Data Structures
Section 5	Algorithms
Section 6	Theory of Computation
Section 7	Compiler Design
Section 8	Operating System
Section 9	Databases
Section 10	Computer Networks