

In-Depth Analysis - June 26 JEE Mains B.Tech Shift 2 (3:00 p.m to 6:00 p.m) (Memory-Based)

Disclaimer: Students had to answer only 75 Questions (300 marks) in the exam, But the Analysis below pertains to all the 90 Questions (360 marks)

JEE Mains B.Tech was held in online mode. It had 3 subjects which were divided into 6 sections which were Physics (Section - A & B), Chemistry (Section - A & B) and Mathematics (Section - A & B).

The 6 sections in this examination were divided in the following manner -

| Subject | Section | No. of questions asked | No. of questions to be attempted | Total Marks |
|--|----------|------------------------|----------------------------------|-------------|
| Physics (MCQ) | A (1) | 20 | 20 | 80 |
| Physics (Single Answer Type Questions) | B (2) | 10 | 5 | 40 |
| Chemistry (MCQ) | A (3) | 20 | 20 | 80 |
| Chemistry (Single Answer Type Questions) | B (4) | 10 | 5 | 40 |
| Mathematics (MCQ) | A (5) | 20 | 20 | 80 |
| Mathematics (Single Answer Type Questions) | B (6) | 10 | 5 | 40 |
| Total | 6 | 90 | 75 | 360 |

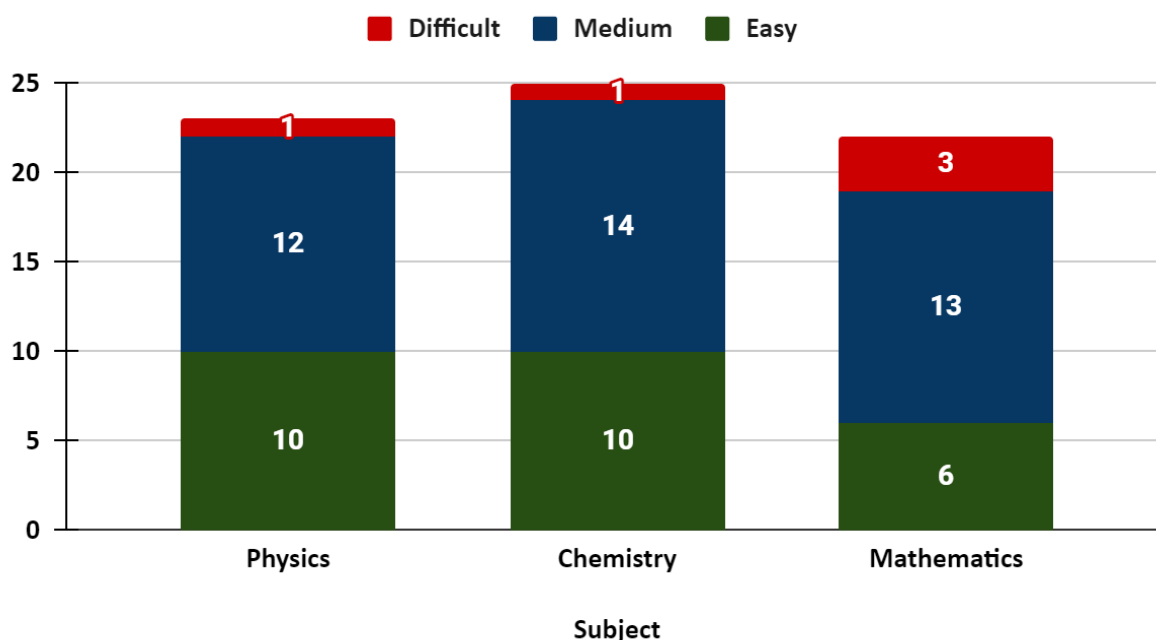
- Section A (1), A (3) & A (5) were MCQ (Multiple Choice Questions), each question had 4 marks, students will be awarded 4 marks for the correct answer and -1 mark will be awarded for the incorrect answer.
- Section B (2), B (4) & B (6) were single answer type questions, each question had 4 marks students will be awarded 4 marks for the correct answer and 0 marks will be awarded for the incorrect answer.

Subject Wise Analysis

Although it is the analysis of memory-based questions, our experts figured out **70** questions out of 90 questions i.e, **23** questions in Physics, **25** questions in Chemistry and **22** in Mathematics.

| Subject | Easy | | Medium | | Difficult | | Grand Total | |
|-------------|-----------------|-------------|-----------------|-------------|-----------------|-------------|-----------------|-------------|
| | No of Questions | Total Marks | No of Questions | Total Marks | No of Questions | Total Marks | No of Questions | Total Marks |
| Physics | 10 | 40 | 12 | 48 | 1 | 4 | 23 | 92 |
| Chemistry | 10 | 40 | 14 | 56 | 1 | 4 | 25 | 100 |
| Mathematics | 6 | 24 | 13 | 52 | 3 | 12 | 22 | 88 |
| Grand Total | 26 | 104 | 39 | 156 | 5 | 20 | 70 | 280 |

Subject Wise Difficulty Level



- Most of the Physics questions were either easy or of moderate difficulty.
- Most of the questions from Chemistry were easy to moderate & one was difficult.
- Most of the questions from Mathematics were easy to moderate level & few were difficult.

Physics (Section 1 & 2)

Physics was easy compared to Chemistry & Maths. Physics had 10 easy questions and 12 medium type questions & 1 question was difficult. Following is the question distribution table as per Class, Chapter, Topic & Difficulty -

| Question No | Class | Chapter Name | Topic Name | Difficulty Level |
|-------------|-------|---|---|------------------|
| 1 | 11th | Units and Measurements | Dimensional Analysis and Its Applications | Easy |
| 2 | 11th | System of Particles and Rotational Motion | Rolling Motion | Medium |
| 3 | 12th | Electromagnetic Waves | Important Characteristics and Nature of Electromagnetic Waves | Easy |
| 4 | 11th | Mechanical Properties of Fluids | Viscosity | Easy |
| 5 | 12th | Electrostatic Potential and Capacitance | Grouping of Capacitors | Medium |
| 6 | 11th | Motion In A Straight Line | Motion under gravity | Medium |
| 7 | 12th | Current Electricity | Combination of Resistors – Series and Parallel | Easy |
| 8 | 12th | Electrostatic Potential and Capacitance | Potential Due To A Continuous Charge Distribution | Difficult |
| 9 | 11th | Work, Energy and Power | Work Done By A Variable Force | Medium |
| 10 | 12th | Magnetism and Matter | Bar Magnet | Medium |
| 11 | 12th | Electromagnetic Induction | Grouping of Inductors | Easy |
| 12 | 11th | Gravitation | Acceleration Due To Gravity Upon The Earths Surface | Easy |
| 13 | 12th | Ray Optics and Optical Instruments | Total Internal Reflection | Medium |
| 14 | 12th | Electromagnetic Induction | Motional Electromotive Force | Easy |
| 15 | 12th | Wave Optics | The DopplerS Effect | Medium |
| 16 | 12th | Dual Nature of Radiation and Matter | Photoelectric Effect and Wave Theory of Light | Medium |
| 17 | 12th | Moving Charges and Magnetism | Magnetic Force On A Current Carrying Conductor | Easy |
| 18 | 11th | Laws of Motion | Conservation of Momentum | Medium |
| 19 | 11th | Laws of Motion | Connected Motion | Medium |
| 20 | 12th | Electrostatic Potential and Capacitance | Grouping of Capacitors | Easy |
| 21 | 12th | Dual Nature of Radiation and Matter | Photoelectric Effect | Easy |
| 22 | 11th | Waves | Beats | Medium |
| 23 | 12th | Communication Systems | Amplitude Modulation | Medium |

Chemistry (Section 3 & 4)

Chemistry had easy to moderate level of questions. Chemistry had 14 medium and 10 easy questions & 1 question was difficult. Following is the question distribution table as per Class, Chapter, Topic & Difficulty -

| Question No | Class | Chapter Name | Topic Name | Difficulty Level |
|-------------|-------|--|---|------------------|
| 31 | 12th | Biomolecules | Vitamins | Medium |
| 32 | 12th | Chemical Kinetics and Nuclear Chemistry | Nuclear Chemistry | Difficult |
| 33 | 12th | The P-Block Elements | Oxides of Nitrogen | Easy |
| 34 | 12th | The D and F-Block Elements | The Lanthanoids | Easy |
| 35 | 11th | The S-Block Elements | Flame test | Easy |
| 36 | 11th | Structure of Atom | Quantum Mechanical Model of The Atom | Easy |
| 37 | 12th | Aldehydes, Ketones and Carboxylic Acids | Methods of Preparation of Aldehydes and Ketones | Easy |
| 38 | 12th | Electrochemistry | Electrochemical Cell | Medium |
| 39 | 12th | The P-Block Elements | Metal and Non-Metal | Easy |
| 40 | 12th | Surface Chemistry | Catalysis | Medium |
| 41 | 12th | The Solid State | Close Packed Structures | Medium |
| 42 | 12th | Hydrocarbons | Alkenes | Medium |
| 43 | 12th | Hydrocarbons | Hard Water | Easy |
| 44 | 12th | Amines | Chemical Reaction | Medium |
| 45 | 11th | Environmental Chemistry | Water Pollution | Easy |
| 46 | 11th | Environmental Chemistry | Water Pollution | Easy |
| 47 | 12th | Amines | Reaction of diazonium salt | Medium |
| 48 | 12th | Chemistry In Everyday Life | Soap and Detergent | Easy |
| 49 | 12th | Aldehydes, Ketones and Carboxylic Acids | Chemical Reactions of Aldehydes and Ketones | Medium |
| 50 | 11th | Some Basic Concepts of Chemistry | Stoichiometry | Medium |
| 51 | 11th | Chemical Bonding and Molecular Structure | Hybridization | Medium |
| 52 | 12th | Coordination Compounds | Bonding In Coordination Compounds | Medium |
| 53 | 11th | Structure of Atom | Quantum Mechanical Model of The Atom | Medium |
| 54 | 12th | Solutions | Colligative Properties | Medium |
| 55 | 11th | Thermodynamics | Spontaneity-Second Law of Thermodynamics | Medium |

Mathematics (Section 5 & 6)

Mathematics was easy to moderate difficulty. Mathematics had 6 easy questions, 13 medium questions and 3 difficult questions. Following is the question distribution as per Class, Chapter, Topic & Difficulty -

| Question No | Class | Chapter Name | Topic Name | Difficulty Level |
|-------------|-------|----------------------------------|--|------------------|
| 61 | 12th | Inverse Trigonometric Functions | Principal Value and General Value | Easy |
| 62 | 12th | Limits and Derivatives | Trigonometric Limit | Easy |
| 63 | 12th | Application of Integrals | Area Under Curves | Easy |
| 64 | 11th | Trigonometric Functions | Angle | Easy |
| 65 | 12th | Differential Equations | Linear Differential Equations | Medium |
| 66 | 12th | Integrals | Indefinite Integral | Medium |
| 67 | 11th | Sequences and Series | Geometric Progression (G.P.) | Medium |
| 68 | 12th | Relations and Functions | Types of functions | Medium |
| 69 | 12th | Application of Derivatives | Rate of Change of Quantities | Difficult |
| 70 | 12th | Determinants | System of equation | Medium |
| 71 | 12th | Continuity and Differentiability | Continuity | Medium |
| 72 | 11th | Conic Sections | Ellipse | Easy |
| 73 | 12th | Integrals | Definite Integral | Medium |
| 74 | 11th | Sequences and Series | Geometric Progression (G.P.) | Medium |
| 75 | 11th | Conic Sections | Circles | Medium |
| 76 | 11th | Binomial Theorem | | Easy |
| 77 | 11th | Conic Sections | Hyperbola | Medium |
| 78 | 11th | Quadratic Equations | | Medium |
| 79 | 11th | Complex Number | Cube root of unity | Medium |
| 80 | 12th | Probability | Computation of Probability of Events Using Permutations and Combinations | Difficult |
| 81 | 11th | Statistics | | Medium |
| 82 | 11th | Permutations and Combinations | Divisors | Difficult |

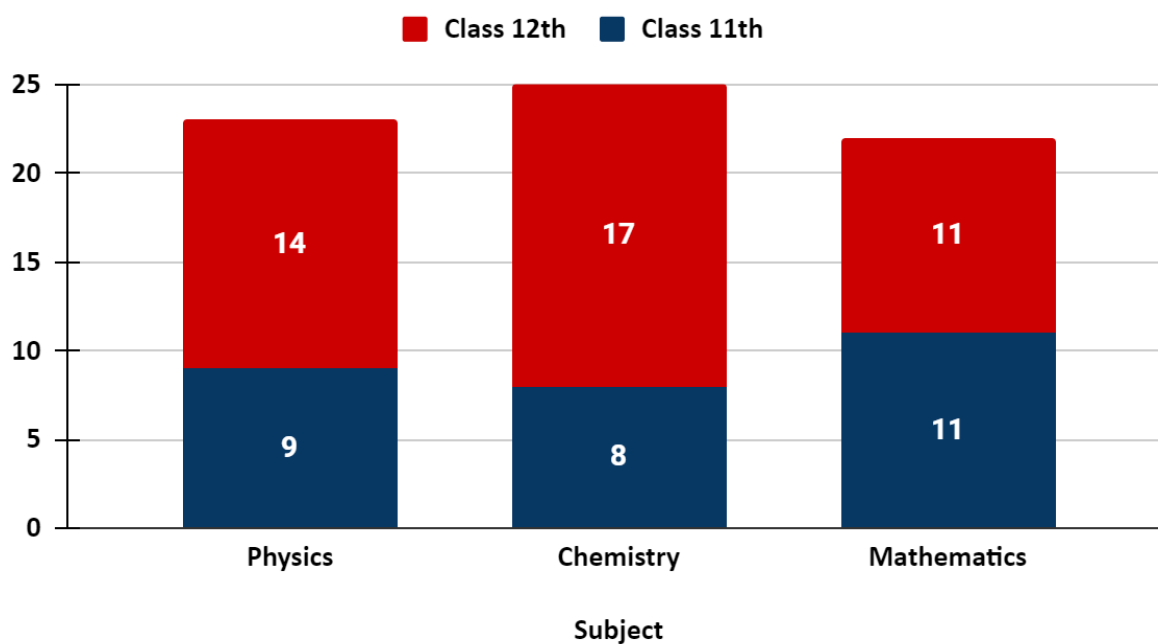
Note - As this is a memory-based analysis of question paper, our experts could figure out 70 out of 90 questions from the total paper.

Class Wise Question Distribution

As per our expert faculties, the questions from Class 12th syllabus dominated Class 11th syllabus. Below is the Class wise question distribution table -

| Subject | 11th | | 12th | | Total Percentage | |
|-------------|------------------|-------------|-----------------|-------------|------------------|----------|
| | No. of Questions | Total Marks | No of Questions | Total Marks | Class 11 | Class 12 |
| Physics | 9 | 36 | 14 | 56 | 30% | 47% |
| Chemistry | 8 | 32 | 17 | 68 | 27% | 57% |
| Mathematics | 11 | 44 | 11 | 44 | 37% | 37% |
| Grand Total | 28 | 112 | 42 | 168 | 31% | 47% |

Class Wise Question Distribution



Overall Difficulty Level Analysis

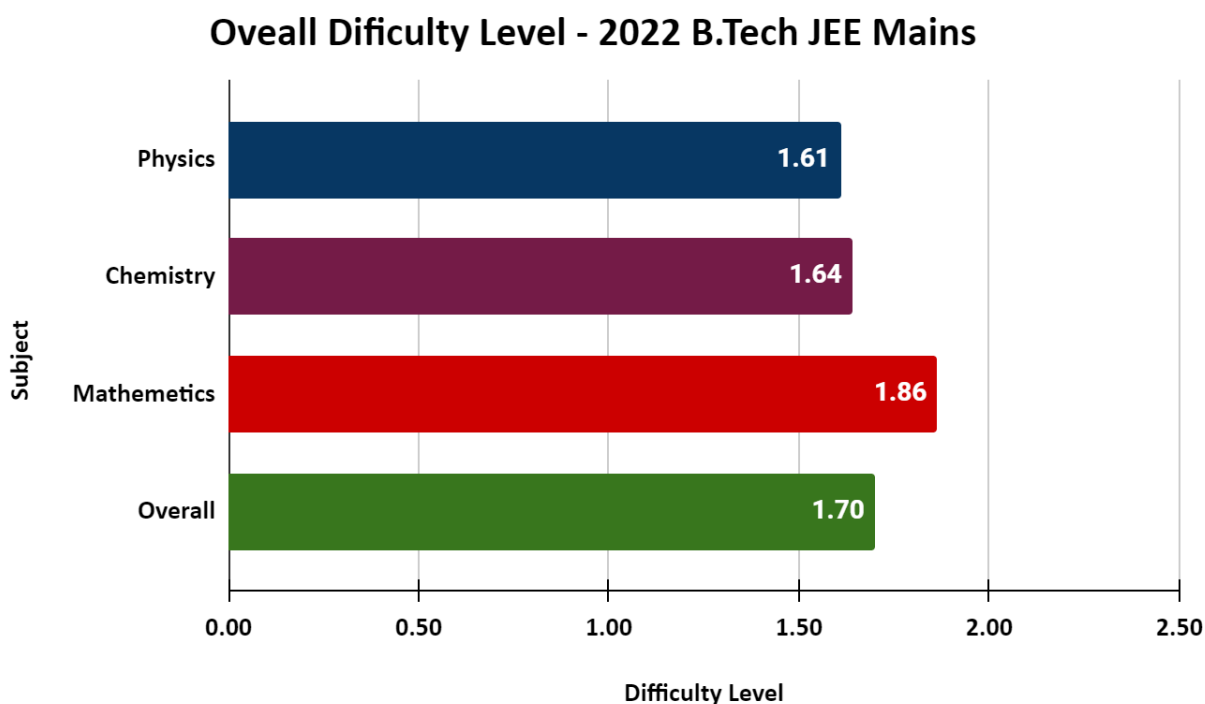
In this analysis, we have rated every question on a scale of 1 to 3. The ratings are done by our expert faculty. The individual ratings are then averaged to calculate the overall difficulty level.

Easy - 1

Medium - 2

Difficult - 3

| Subject | Difficulty Level |
|-------------|------------------|
| Physics | 1.61 |
| Chemistry | 1.64 |
| Mathematics | 1.86 |
| Overall | 1.70 |



As per our expert faculties, this year's June 26, JEE Main B.Tech Shift 2 was moderately more difficult than Shift 1. The Overall Difficulty rating for June 26, JEE Main Shift 1 was 1.66.