

In-Depth Analysis - June 26 JEE Mains B.Tech Shift 1 (9:00 a.m to 12:00 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

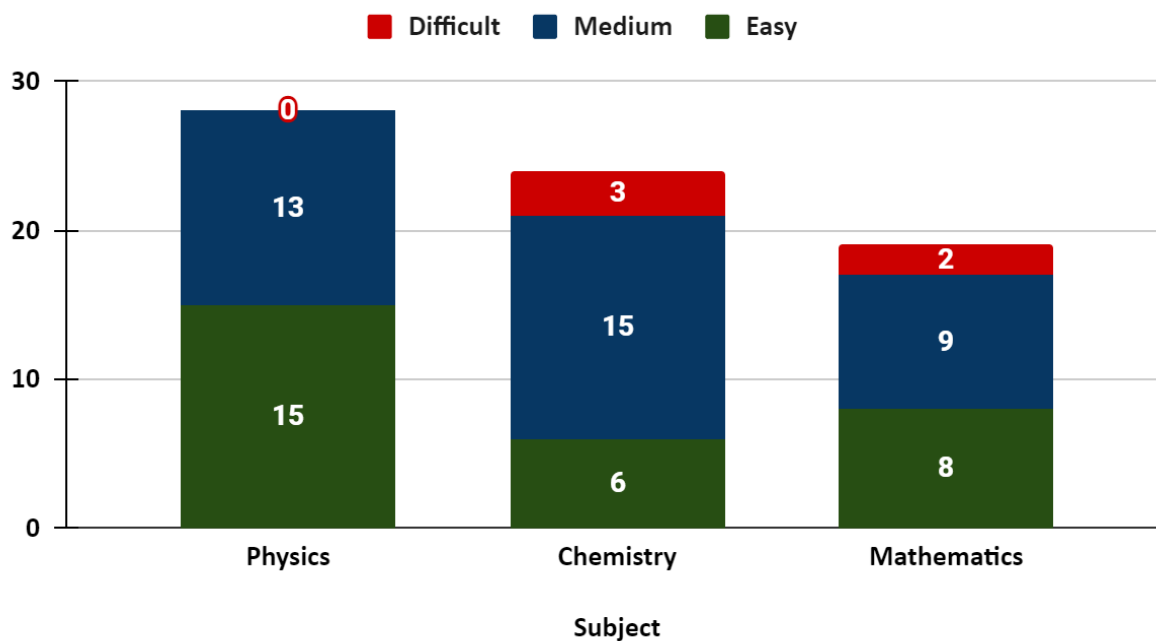
- Section A (1), A (3) & A (5) were MCQ (Multiple Choice Questions), each question had 4 marks, students will be awarded 4 marks for the correct answer and -1 mark will be awarded for the incorrect answer.
- Section B (2), B (4) & B (6) were single answer type questions, each question had 4 marks students 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 **71** questions out of 90 questions i.e, **28** questions in Physics, **24** questions in Chemistry and **19** 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	15	60	13	52	0	0	28	112
Chemistry	6	24	15	60	3	12	24	96
Mathematics	8	32	9	36	2	8	19	76
Grand Total	29	116	37	148	5	20	71	284

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 & few were difficult.
- Most of the questions from Mathematics were easy to moderate level.

Physics (Section 1 & 2)

Physics was easy compared to Chemistry & Maths. Physics had 15 easy questions and 13 medium type questions. Following is the question distribution table as per Class, Chapter, Topic & Difficulty -

Question No	Class	Chapter Name	Topic Name	Difficulty Level
1	11th	Oscillations	Some Systems Executing Simple Harmonic Motion	Easy
2	11th	Motion In A Straight Line	Motion under gravity	Easy
3	12th	Semiconductor Electronics : Materials, Devices and Simple Circuits	P-N Junction	Easy
4	11th	Gravitation	Weightlessness	Easy
5	11th	System of Particles and Rotational Motion	Angular Momentum	Medium
6	11th	Mechanical Properties of Solids	Stress-Strain Curve	Easy
7	11th	Motion In A Plane	Motion In two dimension	Easy
8	11th	Units and Measurements	Dimensional Analysis and Its Applications	Medium
9	11th	Motion In A Straight Line	Motion under gravity	Medium
10	12th	Current Electricity	Variation of resistance	Easy
11	11th	Thermodynamics	Heat Engines	Easy
12	12th	Nuclei	Nuclear Reaction	Medium
13	12th	Dual Nature of Radiation and Matter	Particle Nature of Light : The Photon	Medium
14	12th	Moving Charges and Magnetism	Motion of A Charged Particle In A Magnetic Field	Easy
15	12th	Electromagnetic Induction	Induced current	Medium
16	11th	Gravitation	Acceleration Due To Gravity Upon The Earth's Surface	Easy
17	12th	Atoms	Bohr's Atomic Model	Easy
18	12th	Ray Optics and Optical Instruments	Reflection of Light	Medium
19	11th	Gravitation	Acceleration Due To Gravity Upon The Earth's Surface	Easy
20	12th	Electrostatic Potential and Capacitance	Sharing of Charge and Common Potential	Medium
21	12th	Electromagnetic Induction	L-R Circuit	Medium
22	12th	Alternating Current	Ac Voltage Applied To A Series Lcr Circuit	Medium
23	11th	Work, Energy and Power	Circular Motion	Medium
24	12th	Semiconductor Electronics : Materials, Devices and Simple Circuits	Semiconductor Diode	Medium
25	12th	Communication Systems	Modulation and Its Necessity	Easy
26	11th	Kinetic Theory	Specific Heat Capacity	Medium
27	12th	Wave Optics	Diffraction	Easy

28	12th	Electromagnetic Waves	Important Characteristics and Nature of Electromagnetic Waves	Easy
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Chemistry (Section 3 & 4)

Chemistry had easy to moderate level of questions. Chemistry had the most number of difficult questions i.e, 3. This made Chemistry more difficult than Physics & Mathematics. Chemistry had 15 medium and 6 easy questions. Following is the question distribution table as per Class, Chapter, Topic & Difficulty -

Question No	Class	Chapter Name	Topic Name	Difficulty Level
31	11th	Organic Chemistry Some Basic Principles and Techniques	Isomerism	Easy
32	12th	Aldehydes, Ketones and Carboxylic Acids	Chemical Reactions of Aldehydes and Ketones	Medium
33	11th	Organic Chemistry Some Basic Principles and Techniques	Reaction Intermediates	Medium
34	12th	The P-Block Elements	Group 16 Elements	Easy
35	12th	The P-Block Elements	Allotropes of Phosphorus	Easy
36	12th	Chemistry In Everyday Life	Therapeutic Action of Different Classes of Drugs	Medium
37	12th	Polymers	Classification of Polymers	Medium
38	11th	Organic Chemistry Some Basic Principles and Techniques	Quantitative Analysis	Easy
39	12th	The P-Block Elements	Group 16 Elements	Medium
40	11th	Chemical Bonding and Molecular Structure	Molecular Orbital Theory (Mot)	Medium
41	11th	Structure of Atom	Bohr's Model For Hydrogen Atom	Medium
42	12th	General Principles and Processes of Isolation of Elements	Thermodynamical Principles of Metallurgy	Medium
43	12th	The P-Block Elements	Group 15 Elements	Medium
44	12th	The D and F-Block Elements	Magnetic Moment	Medium
45	11th	The P-Block Elements	Group-13 oxidation state	Easy
46	11th	The S-Block Elements	Group-2 Elements : Alkaline Earth Metals	Difficult
47	12th	Solutions	Concentration	Medium
48	11th	Some Basic Concepts of Chemistry	Conformational Isomers	Medium
49	11th	Hydrocarbons	Combustion of Hydrocarbon	Medium
50	11th	Environmental Chemistry	Atmospheric Pollution	Medium
51	12th	Alcohols, Phenols and Ethers	Preparation of Phenols	Difficult
52	12th	Biomolecules	Nucleic Acid	Difficult
53	12th	Solutions	Colligative Properties	Medium
54	12th	Alcohols, Phenols and Ethers	Phenols	Easy

Mathematics (Section 5 & 6)

Mathematics was easy to moderate difficulty. Mathematics had 8 easy questions, 9 medium questions and 2 difficult questions. Following is the question distribution as per Class, Chapter, Topic & Difficulty -

Question No	Class	Chapter Name	Topic Name	Difficulty Level
61	12th	Probability	Total Probability	Easy
62	11th	Straight Lines	Distance	Easy
63	12th	Application of Integrals	Area	Medium
64	12th	Limits and Derivatives	Trigonometric Limit	Medium
65	12th	Application of Derivatives	Maxima and Minima	Medium
66	12th	Application of Derivatives	Tangent and Normals	Easy
67	12th	Relations and Functions	Functions	Difficult
68	12th	Differential Equations	General and Particular Solution	Medium
69	11th	Trigonometric Functions	Trigonometric Ratios of Multiple Angles	Medium
70	12th	Conic Sections	Parabola	Medium
71	11th	Permutations and Combinations	Number of Permutations Under Certain Restrictions	Easy
72	11th	Binomial Theorem	Remainder	Easy
73	11th	Sequences and Series	Double Sigma	Difficult
74	11th	Sets	Operations On Sets	Easy
75	12th	Integrals	Definite Integral	Medium
76	11th	Statistics	Mean	Easy
77	12th	Vector Algebra	Scalar and Vector Triple Products and Their Geometrical Interpretation	Medium
78	12th	Matrices	Properties of Adjoint	Easy
79	12th	Integrals	Definite Integral	Medium

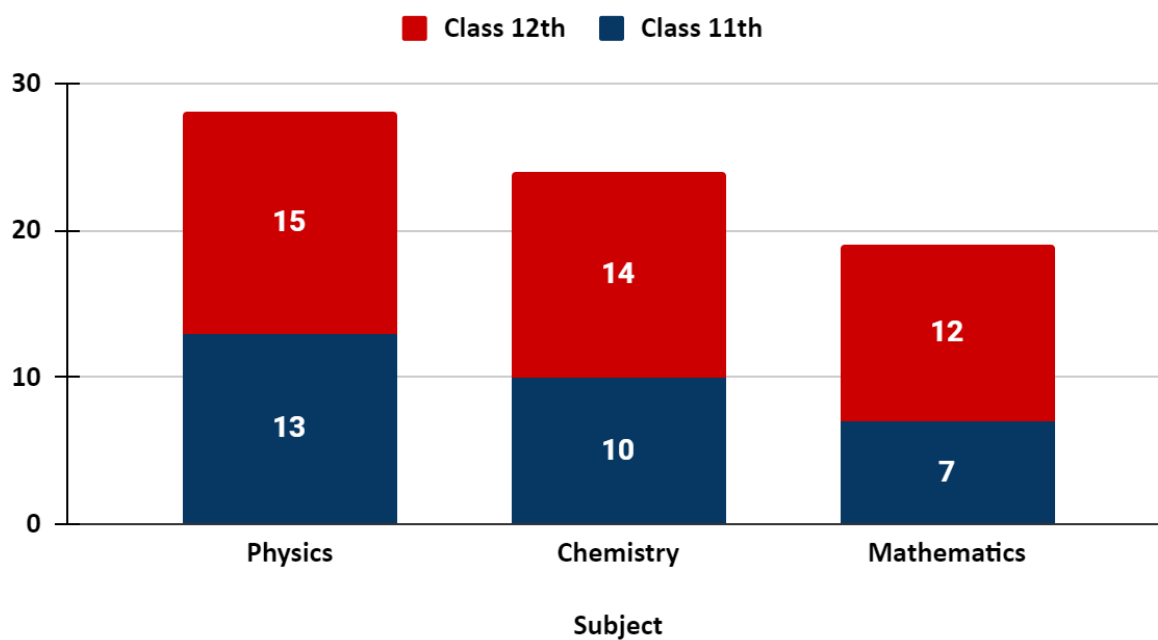
Note - As this is a memory-based analysis of question paper, our experts could figure out 71 out of 90 questions from the total paper.

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	13	52	15	60	43%	50%
Chemistry	10	40	14	56	33%	47%
Mathematics	7	28	12	48	23%	40%
Grand Total	30	120	41	164	33%	46%

Class Wise Question Distribution



Overall Difficulty Level Analysis

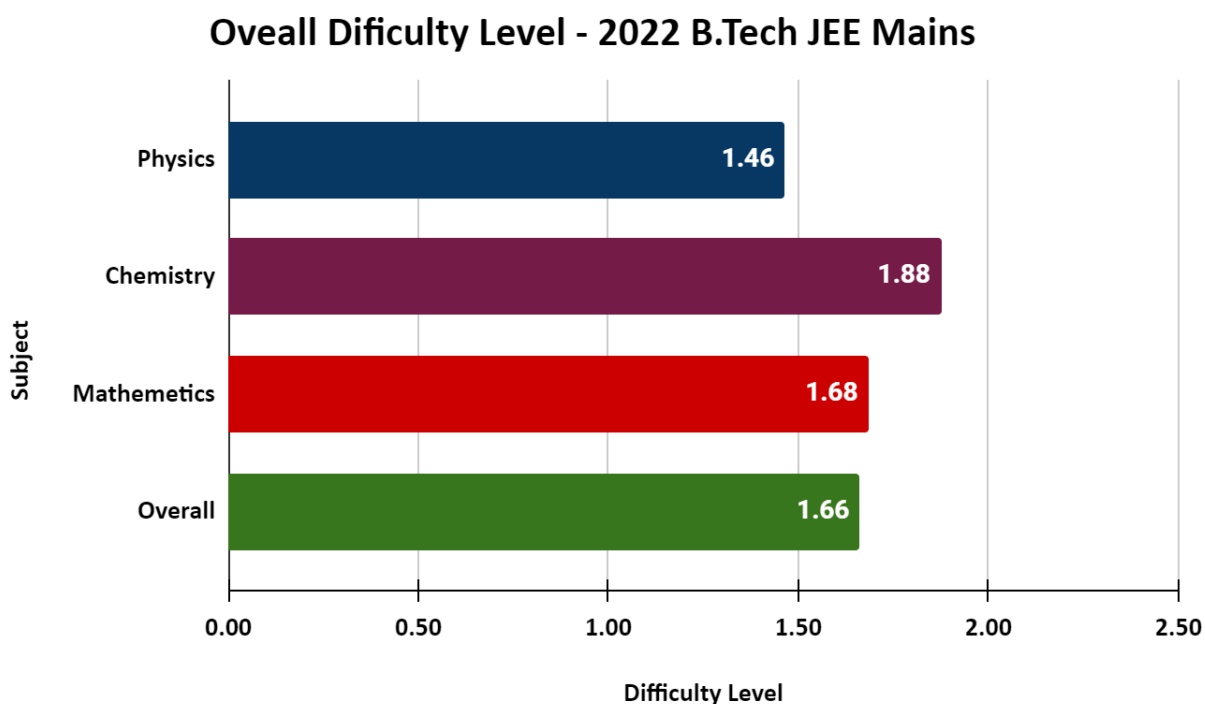
In this analysis, we have rated every question on a scale of 1 to 3. The ratings are done by our expert faculty. The individual ratings are then averaged to calculate the overall difficulty level.

Easy - 1

Medium - 2

Difficult - 3

Subject	Difficulty Level
Physics	1.46
Chemistry	1.88
Mathematics	1.68
Overall	1.66



As per our expert faculties, this year's June 26, JEE Main B.Tech Shift 1 was quite easier than that of the previous year. The Overall Difficulty rating for 2021 was 1.77 (moderately difficult)