

In-Depth Analysis - JEE Mains S2 B.E/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	20	20	80
Physics (Single Answer Type Questions)	B	10	5	20
Chemistry (MCQ)	A	20	20	80
Chemistry (Single Answer Type Questions)	B	10	5	20
Mathematics (MCQ)	A	20	20	80
Mathematics (Single Answer Type Questions)	B	10	5	20
Total	6	90	75	300

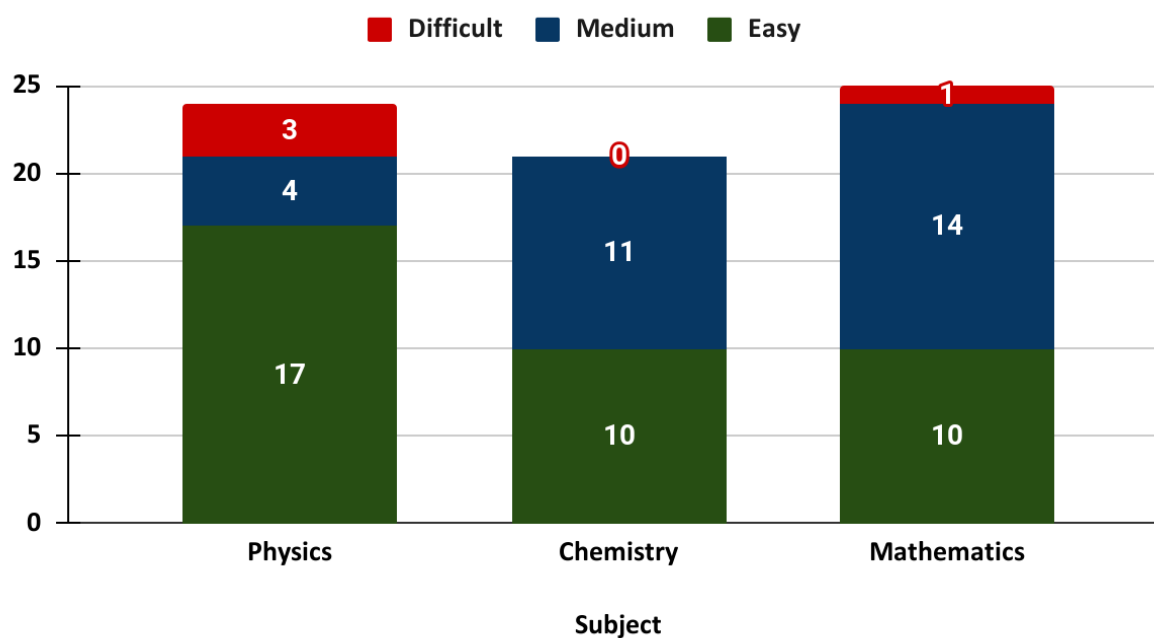
- Section A consists of 20 questions in each subject (Question Numbers – 01 to 20, 31 to 50 and 61 to 80). All questions are compulsory.
- Section B consisted of 10 questions in each subject (Question Nos – 21 to 30, 51 to 60 and 81 to 90). In Section B, a candidate needs to attempt any 5 questions out of 10 in each subject.

Subject Wise Analysis

Although it is the analysis of memory-based questions, our experts figured out 70 questions out of 90 questions i.e, **24** questions in Physics, **21** questions in Chemistry and **25** 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	17	68	4	16	3	12	24	96
Chemistry	10	40	11	44	0	0	21	84
Mathematics	10	40	14	56	1	4	25	100
Grand Total	37	148	29	116	4	16	70	280

Subject Wise Difficulty Level



- Most of the questions from Physics were either easy or of moderate difficulty.
- Most of the questions from Chemistry were easy to moderate.
- Most of the questions from Mathematics were easy to moderate and few were difficult.

Physics (Section 1 & 2)

Physics was easy to attempt. Physics had 17 easy questions, 4 medium-type questions & 3 difficult questions. Following is the question distribution table as per Class, Chapter, Topic & Difficulty -

Class	Question No	Chapter Name	Topic Name	Difficulty Level
11th	1	Motion In A Straight Line	Kinematic Equations For Uniformly Accelerated Motion	Easy
11th	2	Work, Energy and Power	Kinetic Energy	Easy
12th	3	Thermal Properties of Matter	Heat Transfer	Medium
11th	4	Motion In A Plane	Projectile Motion	Easy
12th	5	Experimental Physics	Vernier Caliper	Easy
11th	6	Oscillations	Simple Harmonic Motion	Medium
11th	7	Mechanical Properties of Solids	Young Moduli	Easy
12th	8	Atoms	BohrS Atomic Model	Easy
11th	9	Kinetic Theory	Specific Heat Capacity	Easy
11th	10	Mechanical Properties of Fluids	Surface Tension	Easy
12th	11	Electric Charges and Fields	GaussS Law	Difficult
12th	12	Electrostatic Potential and Capacitance	Electrostatics of Conductors	Easy
11th	13	System of Particles and Rotational Motion	Centre of Mass	Easy
12th	14	Electromagnetic Induction	L-R Circuit	Difficult
12th	18	Alternating Current	Alternating Current and EMF	Easy
11th	19	Motion In A Plane	Projectile Motion	Difficult
12th	20	Communication Systems	Amplitude Modulation	Easy
11th	21	Kinetic Theory	Concept For Mixture of Gases	Easy
12th	22	Current Electricity	Combination of Resistors – Series and Parallel	Easy
12th	23	Moving Charges and Magnetism	Current Loop As A Magnetic Dipole	Medium
12th	24	Semiconductor Electronics : Materials, Devices and Simple Circuits	P-N Junction	Easy
11th	25	Gravitation	Acceleration Due To Gravity Upon The Earths Surface	Easy
12th	26	Wave Optics	Superposition of The Waves	Easy
11th	27	Thermodynamics	Thermodynamic Processes	Medium

Note - As this being a memory-based analysis our experts could figure out 24 out of 30 questions from Section - A (17 questions) and Section - B (7 questions)

Chemistry (Section 3 & 4)

Chemistry was also easy to attempt. Chemistry had 10 medium & 11 easy questions. Following is the question distribution table as per Class, Chapter, Topic, & Difficulty -

Class	Question No	Chapter Name	Topic Name	Difficulty Level
12th	31	The D and F-Block Elements	General Properties of The Transition Elements (D-Block)	Easy
12th	32	Amines	Chemical Properties	Medium
12th	33	The D and F-Block Elements	General Properties of The Transition Elements (D-Block)	Medium
11th	34	Some Basic Concepts of Chemistry	Stoichiometry and Stoichiometric Calculations	Medium
11th	35	Hydrocarbons	Alkanes	Medium
12th	36	Alcohols, Phenols and Ethers	Reaction of Phenols	Medium
12th	37	Haloalkanes and Haloarenes	Chemical Properties	Medium
12th	38	Chemistry In Everyday Life	Drugs and Their Classification	Easy
11th	39	Chemical Bonding and Molecular Structure	Kössel - Lewis Approach To Chemical Bonding	Easy
11th	40	The S-Block Elements	Anomalous Properties of Lithium	Medium
11th	41	Chemical Bonding and Molecular Structure	Hybridization	Easy
11th	42	Environmental Chemistry	Soil Pollution	Easy
12th	43	Surface Chemistry	Colloids	Easy
11th	44	Structure of Atom	BohrS Model For Hydrogen Atom	Medium
11th	45	Classification of Elements and Periodicity In Properties	Periodic Trends In Physical Properties	Easy
12th	46	Aldehydes, Ketones and Carboxylic Acids	Chemical Reactions of Aldehydes and Ketones	Medium
12th	47	General Principles and Processes of Isolation of Elements	Some Terms	Easy
12th	51	The Solid State	Close Packed Structures	Medium
12th	52	Coordination Compounds	Bonding In Coordination Compounds	Medium
12th	53	The D and F-Block Elements	Preparation and Properties of The Compounds of D-Block Elements	Easy
11th	54	Equilibrium	Solubility Equilibria of Sparingly Soluble Salts	Easy

Note - As this being a memory-based analysis our experts could figure out 21 out of 30 questions from Section - A (17 questions) and Section - B (4 questions)

Mathematics (Section 5 & 6)

Mathematics was easy to moderate difficulty. Mathematics was comparatively the most difficult section to attempt. Mathematics had 10 easy questions, 14 medium questions and 1 difficult questions. Following is the question distribution as per Class, Chapter, Topic & Difficulty -

Class	Question No	Chapter Name	Topic Name	Difficulty Level
12th	61	Definite Integration	Substitution	Easy
11th	62	Complex Number	Conjugate of A Complex Number	Easy
12th	63	Vector Algebra	Vector Triple Products	Easy
11th	64	Limits	Series or L.Hospital Rule	Medium
12th	65	Relations	Number of Relation	Easy
12th	66	Application of Derivatives	Maxima and Minima	Medium
12th	67	Continuity and Differentiability	Differentiability	Medium
12th	68	Matrices	Solving Equation using matrix method	Medium
12th	69	Application of Integrals	Area Bounded Between Two Curves	Medium
11th	70	Conic Sections	Parabola and Hyperbola	Easy
11th	71	Probability	Definition of Probability	Medium
11th	72	Conic Sections	Circle	Medium
11th	73	Trigonometric Functions	Heights and Distances	Medium
12th	74	Limits and Derivatives	Derivatives	Easy
12th	75	Integrals	Definite Integral	Medium
12th	76	Differential Equations	General and Particular Solution	Medium
12th	77	Vector Algebra	Cross Product	Difficult
11th	78	Sequences and Series	Telescopic Sums and Products	Easy
11th	79	Mathematical Reasoning	Implications	Easy
12th	80	Three Dimensional Geometry	Plane	Medium
12th	81	Matrices	Number of Matrix	Medium
11th	82	Sequences and Series	Arithmetic -Geometric Series (Agp)	Medium
11th	83	Sequences and Series	Telescopic Sums and Products	Medium
11th	84	Statistics	Variance and Standard Deviation	Easy
11th	85	Binomial Theorem	Properties of Binomial Coefficients	Easy

Note - As this being a memory-based analysis our experts could figure out 25 out of 30 questions from Section - A (20 questions) and Section - B (5 questions)

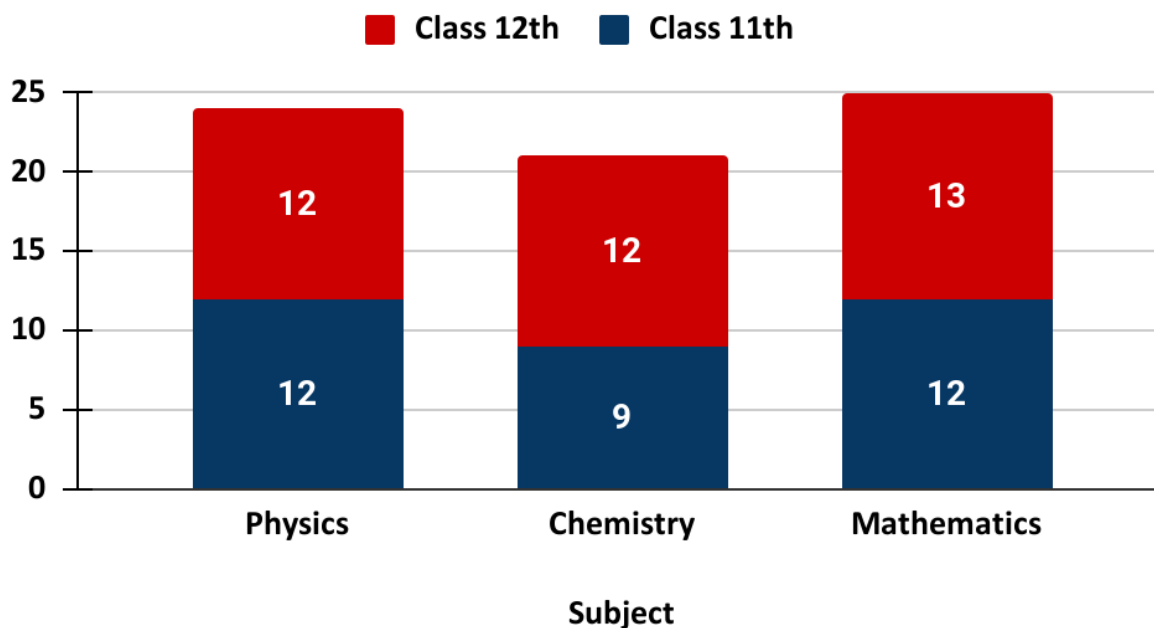
Class Wise Question Distribution

As per our expert faculties the questions from the Class 12th syllabus dominated the 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	12	48	12	48	40%	40%
Chemistry	9	36	12	48	30%	40%
Mathematics	12	48	13	52	40%	43%
Grand Total	33	132	37	148	37%	41%

Note - Percentage are taken out of 30 questions only. Grand Total percentages represent the average of the above-mentioned percentages.

Class Wise Question Distribution



Overall Difficulty Level Analysis

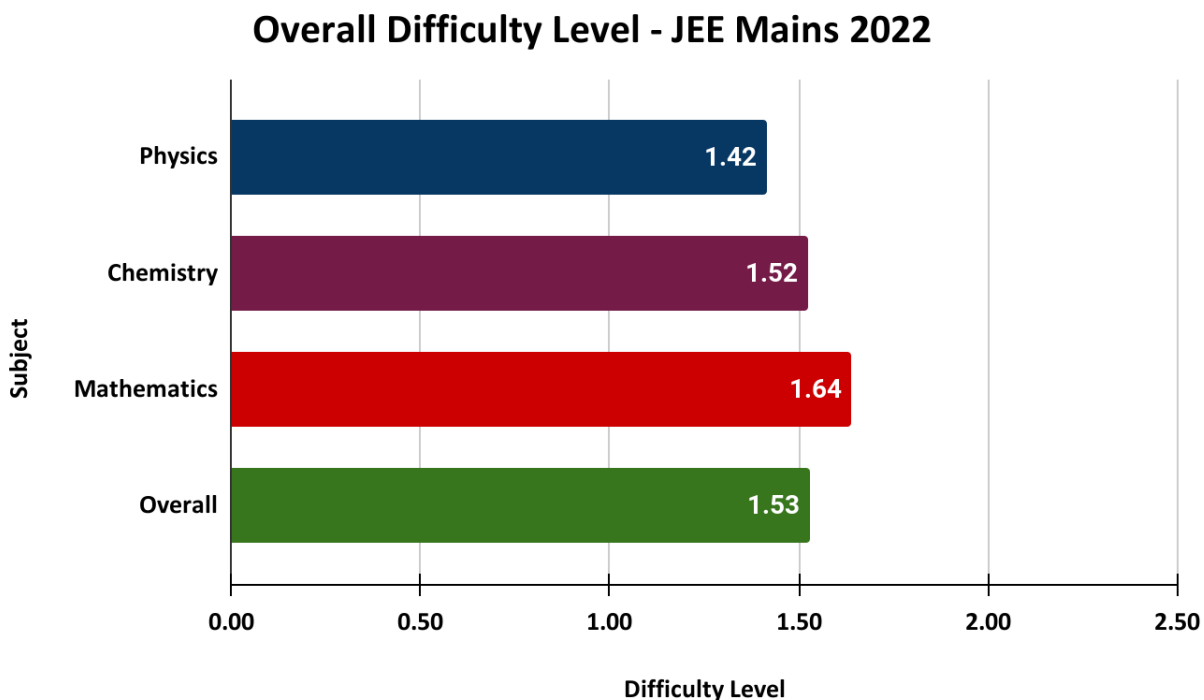
In this analysis, we have rated every question on a scale of 1 to 3. The ratings are done by our expert faculty. The individual ratings are then averaged to calculate the overall difficulty level.

Easy - 1

Medium - 2

Difficult - 3

Subject	Difficulty Level
Physics	1.42
Chemistry	1.52
Mathematics	1.64
Overall	1.53



As per our expert faculties this year JEE Mains session 2 B.E/B.Tech Shift 1 was easy to moderate difficulty.