

In-Depth Analysis - JEE Mains S2 B.E/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	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

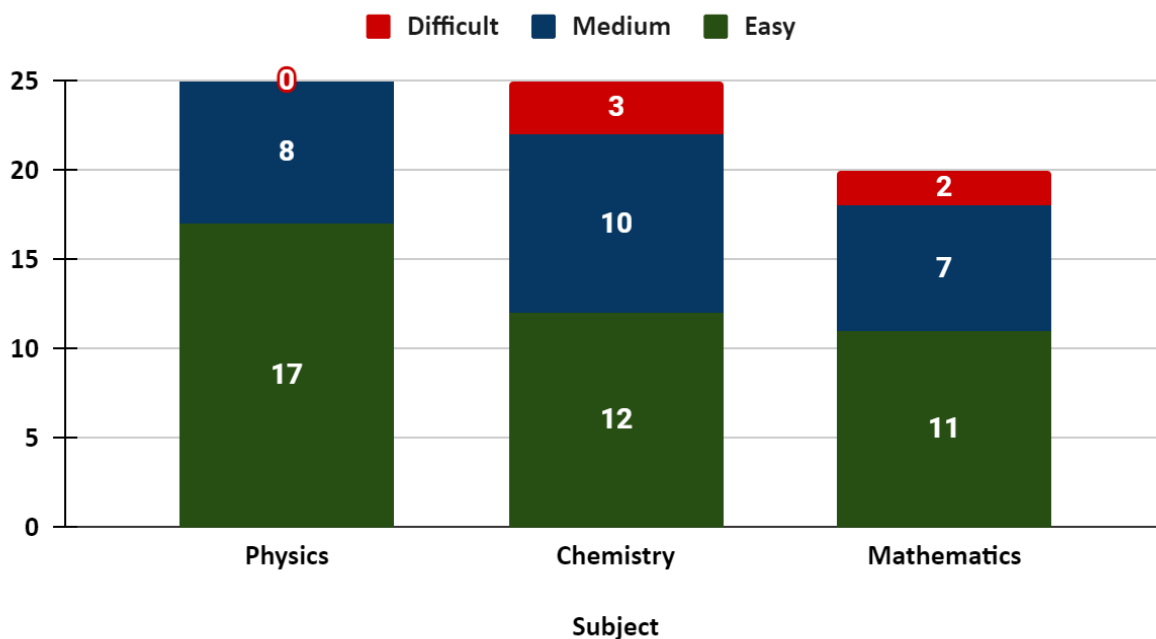
- Section A consists of 20 questions in each subject (Question Numbers – 01 to 20, 31 to 50 and 61 to 80). All questions are compulsory.
- Section B consisted of 10 questions in each subject (Question Nos – 21 to 30, 51 to 60 and 81 to 90). In Section B, a candidate needs to attempt any 5 questions out 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, **25** questions in Physics, **25** questions in Chemistry and **20** 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	8	32	0	0	25	100
Chemistry	12	48	10	40	3	12	25	100
Mathematics	11	44	7	28	2	8	20	80
Grand Total	40	160	25	100	5	20	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 & few were difficult.
- Most of the questions from Mathematics were easy to moderate and few were difficult.

Physics (Section 1 & 2)

Physics was the easiest subject to attempt. Physics had 17 easy questions & 8 medium-type questions. Following is the question distribution table as per Class, Chapter, Topic & Difficulty -

Class	Question No	Chapter Name	Topic Name	Difficulty Level
12th	1	Current Electricity	Wheatstone Bridge	Easy
11th	2	Oscillations	Combination of springs Oscillations	Easy
11th	3	Motion In A Plane	Oblique Projection	Easy
11th	4	Laws of Motion	Newtons Second Law of Motion	Medium
11th	5	Gravitation	Gravitational Potential Energy	Easy
12th	6	Electrostatic Potential and Capacitance	Sharing of Charge and Common Potential	Medium
12th	7	Nuclei	Size of The Nucleus	Easy
12th	8	Dual Nature of Radiation and Matter	Wave Nature of Matter	Easy
12th	9	Communication Systems	Amplitude Modulation	Easy
12th	10	Experimental Physics	Vernier Caliper	Easy
11th	11	Thermal Properties of Matter	Change of State	Medium
11th	12	System of Particles and Rotational Motion	Theorems of Perpendicular and Parallel Axes	Easy
12th	13	Nuclei	Atomic Masses and Composition of Nucleus	Easy
11th	14	Mechanical Properties of Solids	Elastic Moduli	Easy
12th	15	Ray Optics and Optical Instruments	Total Internal Reflection	Easy
11th	16	Laws of Motion	Newtons Second Law of Motion	Easy
11th	17	Current Electricity	Potentiometer	Medium
12th	18	Moving Charges and Magnetism	Current Loop As A Magnetic Dipole	Medium
12th	19	Electrostatic Potential and Capacitance	Capacitors With Dielectrics	Medium
12th	20	Semiconductor Electronics : Materials, Devices and Simple Circuits	Junction Transistor	Medium
11th	21	Laws of Motion	Newtons Second Law of Motion	Easy
12th	22	Nuclei	Mass-Energy and Nuclear Binding Energy	Easy
12th	28	Electromagnetic Induction	FaradayS Law of Induction	Medium
11th	29	Kinetic Theory	Degree of Freedom	Easy

12th	30	Electric Charges and Fields	Forces Between Multiple Charges	Easy
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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)

Chemistry (Section 3 & 4)

Chemistry was of moderate difficulty. Chemistry had 10 medium, 12 easy questions and 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	31	The P-Block Elements	Boron Family	Easy
11th	32	The P-Block Elements	Boron Family	Medium
12th	33	The D and F-Block Elements	General Properties of The Transition Elements (D-Block)	Easy
12th	34	Chemistry In Everyday Life	Drugs and Their Classification	Easy
12th	35	General Principles and Processes of Isolation of Elements	Extractive Metallurgy	Medium
11th	36	Organic Chemistry Some Basic Principles and Techniques	Classification of Organic Compounds	Easy
12th	37	Polymers	Classification of Polymers	Easy
12th	38	Aldehydes, Ketones and Carboxylic Acids	Methods of Preparation of For Aldehydes and Ketones	Medium
11th	39	Thermodynamics	Heat Capacity	Difficult
12th	40	Biomolecules	Polysaccharides	Easy
11th	41	The S-Block Elements	General Characteristics of Compounds of The Alkaline Earth Metals	Medium
12th	42	Amines	Diazonium Salts	Easy
11th	43	Structure of Atom	Dual Nature of Matter	Difficult
11th	44	Equilibrium	Acid Base Titration	Medium
12th	45	Coordination Compounds	Magnetic Movement	Medium
11th	46	The S-Block Elements	Fajan Rule	Easy
11th	47	Hydrogen	Hydrogen Peroxide (H ₂ O ₂)	Medium
11th	48	Structure of Atom	Atomic Models	Medium
11th	51	Some Basic Concepts of Chemistry	Percentage Composition	Easy
11th	52	Thermodynamics	Enthalpy (H)	Easy
12th	53	Solutions	Colligative Properties	Easy
11th	54	Hydrocarbons	Preparation of Alkanes	Easy

12th	55	Solutions	Ideal and Non-Ideal Solutions	Medium
12th	56	Chemical Kinetics and Nuclear Chemistry	Order of Reaction From Reaction Mechanism	Medium
12th	57	Equilibrium	Buffer Solution	Difficult

Note - As this being a memory-based analysis our experts could figure out 25 out of 30 questions from Section - A (18 questions) and Section - B (7 questions)

Mathematics (Section 5 & 6)

Mathematics was of moderate difficulty. Mathematics had 11 easy questions, 7 medium questions and 2 difficult questions. Following is the question distribution as per Class, Chapter, Topic & Difficulty -

Class	Question No	Chapter Name	Topic Name	Difficulty Level
12th	61	Matrices	Transpose of Matrix	Easy
12th	62	Integrals	Periodic Properties of Definite Integrals	Easy
12th	63	Application of Integrals	Area Bounded Between Two Curves	Medium
12th	64	Application of Derivatives	Shortest distance between two curves	Medium
11th	65	Conic Sections	Parabola	Medium
11th	66	Conic Sections	Hyperbola	Easy
11th	67	Complex Number	Geometry of Complex Numbers	Easy
11th	68	Limits and Derivatives	Algebraic Limit	Medium
12th	69	Differential Equations	Linear Differential Equations	Medium
11th	70	Conic Sections	Circle	Easy
11th	71	Binomial Theorem	Series related Binomial Coefficients	Difficult
12th	72	Probability	Bernoulli Trials and Binomial Distribution	Easy
11th	73	Conic Sections	Straight Line	Difficult
12th	74	Vector Algebra	Cross Product	Easy
11th	81	Permutations and Combinations	Permutations	Medium
11th	82	Sequences and Series	Telescopic Sums and Products	Medium
11th	83	Quadratic Equations	Sum and product of roots	Easy
12th	84	Relations and Functions	Cartesian Product of Sets	Easy
11th	85	Sets	Operations On Sets	Easy
11th	86	Limits and Derivatives	Derivatives	Easy

Note - As this being a memory-based analysis our experts could figure out 20 out of 30 questions from Section - A (14 questions) and Section - B (6 questions)

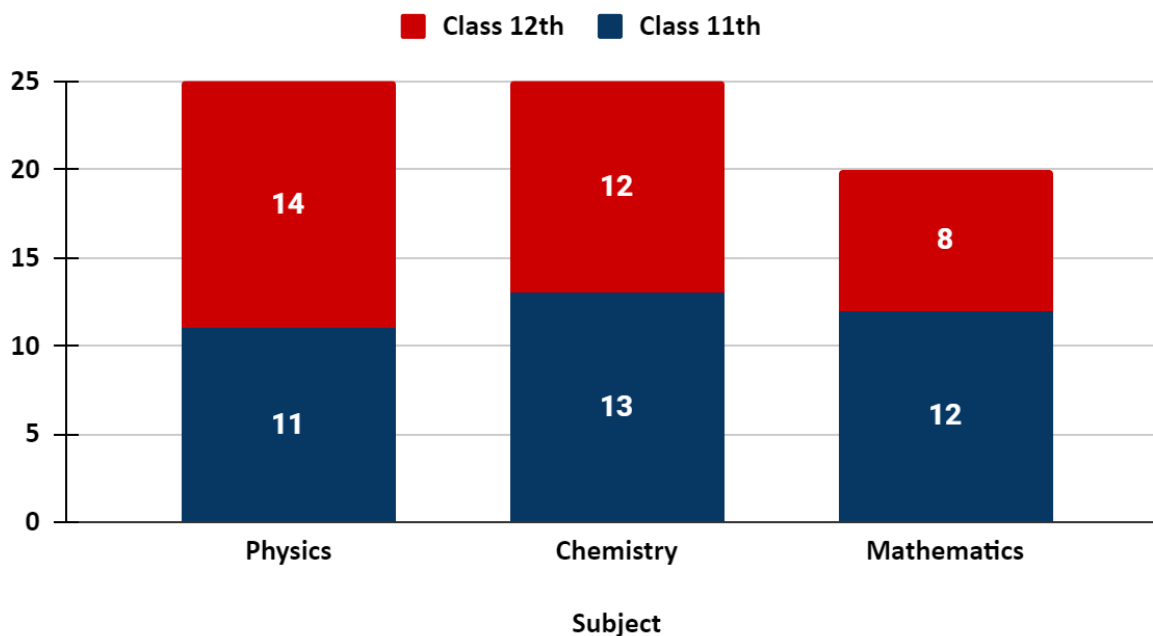
Class Wise Question Distribution

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	11	44	14	56	37%	47%
Chemistry	13	52	12	48	43%	40%
Mathematics	12	48	8	32	40%	27%
Grand Total	36	144	34	136	40%	38%

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

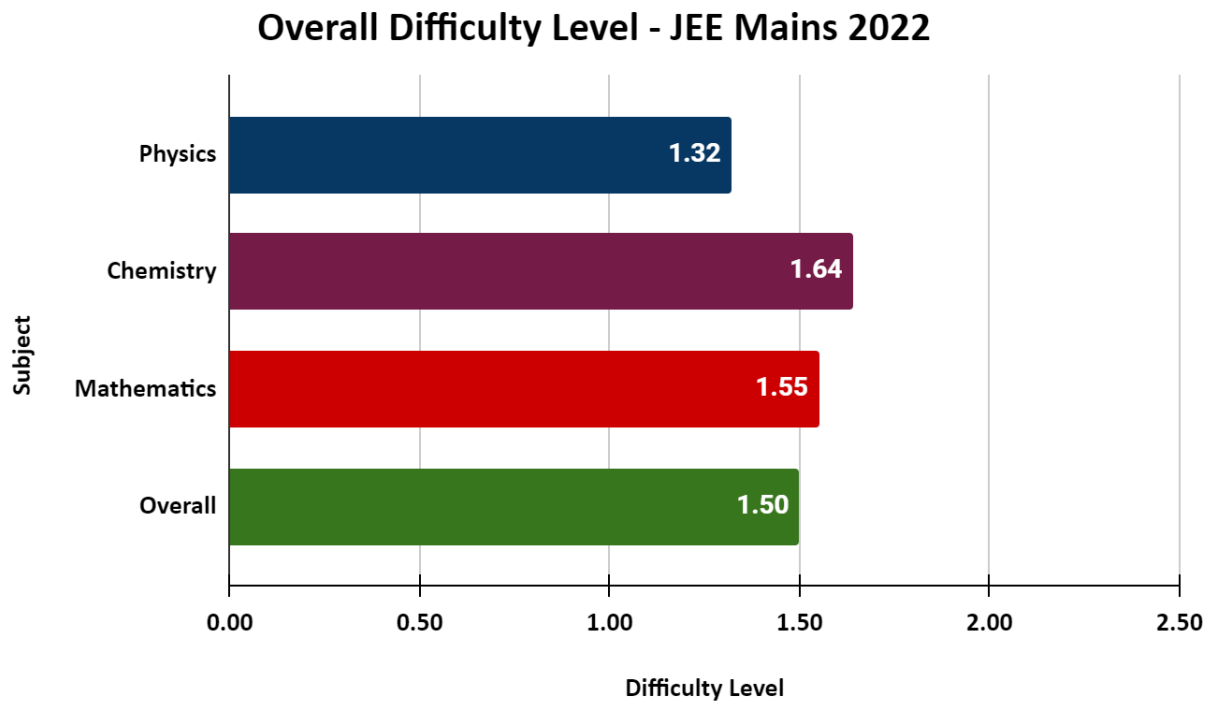
In this analysis, we have rated every question on a scale of 1 to 3. The ratings are done by our expert faculty. The individual ratings are then averaged to calculate the overall difficulty level.

Easy - 1

Medium - 2

Difficult - 3

Subject	Difficulty Level
Physics	1.32
Chemistry	1.64
Mathematics	1.55
Overall	1.50



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