

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

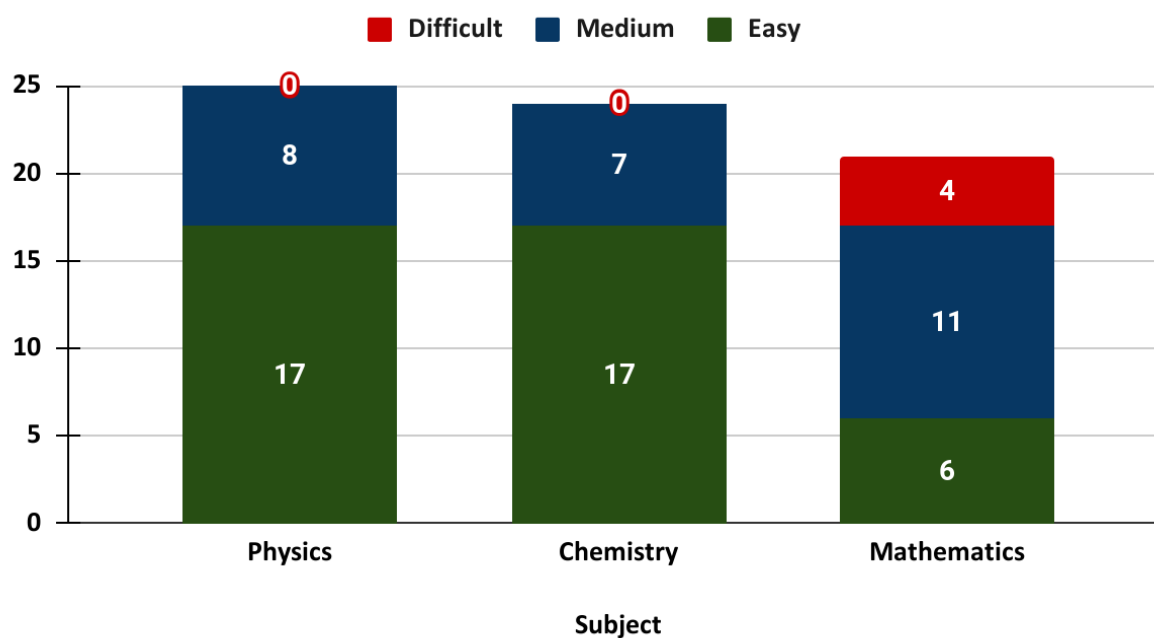
- Section A consists of 20 questions in each subject (Question Numbers – 01 to 20, 31 to 50 and 61 to 80). All questions are compulsory.
- Section B consisted of 10 questions in each subject (Question Nos – 21 to 30, 51 to 60 and 81 to 90). In Section B, a candidate needs to attempt any 5 questions out 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, **25** questions in Physics, **24** questions in Chemistry and **21** 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	17	68	7	28	0	0	24	96
Mathematics	6	24	11	44	4	16	21	84
Grand Total	40	160	26	104	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 and 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	Nuclei	Law of Radioactive Decay	Medium
12th	2	Nuclei	Law of Radioactive Decay	Easy
11th	3	Waves	The Speed of A Travelling Wave	Easy
12th	4	Electromagnetic Waves	Nature of Electromagnetic Wave	Easy
12th	5	Current Electricity	Potentiometer	Medium
11th	6	Mechanical Properties of Solids	Elastic Moduli	Easy
12th	7	Electrostatic Potential and Capacitance	Capacitors With Dielectrics	Medium
11th	8	Motion In A Straight Line	Motion under gravity	Easy
11th	9	Units and Measurements	Dimensional Analysis and Its Applications	Easy
11th	10	Thermodynamics	Carnot Engine	Easy
12th	11	Wave Optics	YoungS Double Slit Experiment (Alternate Method)	Easy
11th	12	Gravitation	Acceleration Due To Gravity Upon The Earths Surface	Easy
12th	13	Communication Systems	Amplitude Modulation	Easy
11th	14	Wave Optics	The DopplerS Effect	Medium
11th	15	Kinetic Theory	Behaviour of Gases	Easy
12th	16	Ray Optics and Optical Instruments	Reflecting Telescope (Cassegrain)	Medium
12th	17	Semiconductor Electronics : Materials, Devices and Simple Circuits	Special Purpose P-N Junction Diodes	Easy
12th	18	Dual Nature of Radiation and Matter	Wave Nature of Matter	Medium
11th	19	Laws of Motion	Newtons Second Law of Motion	Easy
12th	20	Moving Charges and Magnetism	The Moving Coil Galvanometer	Easy
11th	21	Work, Energy and Power	Scalar Product	Easy
11th	22	System of Particles and Rotational Motion	Theorems of Perpendicular and Parallel Axes	Medium
11th	23	Work, Energy and Power	The Conservation of Mechanical Energy	Easy
12th	29	Alternating Current	Alternating Current and EMF	Easy
12th	30	Electric Charges and Fields	Electric Dipole In A Uniform Electric Field	Medium

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 also easy to attempt. Chemistry had 7 medium & 17 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	Polymers	Monomer units	Easy
12th	32	ElectroChemistry	Electrochemical Series	Medium
11th	33	Organic Chemistry Some Basic Principles and Techniques	Acid Strength	Medium
11th	34	Hydrocarbons	Alkenes	Easy
12th	35	ElectroChemistry	Commercial Cells Or Batteries	Easy
12th	36	The P-Block Elements	Preparation of Nitrogen Gas	Easy
12th	37	The P-Block Elements	Group 16 Elements	Easy
12th	38	Biomolecules	Carbohydrates	Easy
12th	39	General Principles and Processes of Isolation of Elements	Concentration Methods	Easy
11th	40	Hydrocarbons	Properties of Benzene	Medium
11th	41	Structure of Atom	Bohr's Model For Hydrogen Atom	Easy
12th	42	Surface Chemistry	Catalysis	Easy
11th	43	Hydrogen	Water	Easy
11th	44	The S-Block Elements	Group-1 Elements : Alkali Metals	Easy
12th	45	Chemistry In Everyday Life	Drug-Target Interaction	Easy
11th	51	Chemical Bonding and Molecular Structure	Molecular Orbital Theory (MOT)	Medium
12th	52	The D and F-Block Elements	Preparation and Properties of The Compounds of D-Block Elements	Medium
11th	53	Some Basic Concepts of Chemistry	Limiting Reagent	Easy
12th	54	Solutions	Colligative Properties	Easy
11th	55	Equilibrium	The pH Scale	Easy
12th	56	The P-Block Elements	Interhalogen Compounds	Easy
12th	57	Chemical Kinetics and Nuclear Chemistry	Integrated Rate Equations	Medium
12th	58	The D and F-Block Elements	Preparation and Properties of The Compounds of D-Block Elements	Easy
12th	59	The Solid State	Calculation of Packing Efficiency	Medium

Note - As this being a memory-based analysis our experts could figure out 24 out of 30 questions from Section - A (15 questions) and Section - B (9 questions)

Mathematics (Section 5 & 6)

Mathematics was easy to moderate difficulty. Mathematics was comparatively the most difficult section to attempt. Mathematics had 6 easy questions, 11 medium questions and 4 difficult questions. Following is the question distribution as per Class, Chapter, Topic & Difficulty -

Class	Question No	Chapter Name	Topic Name	Difficulty Level
11th	61	Binomial Theorem	Remainder	Easy
11th	62	Inverse Trigonometric Functions	Solutions of Inverse Trigonometric Equations	Easy
12th	63	Differential Equations	Exact Differential	Medium
11th	64	Sequences and Series	Special Series	Difficult
11th	65	Complex Number	Geometry of Complex Numbers	Difficult
12th	66	Matrices	Adjoint	Medium
12th	67	Inverse Trigonometric Functions	Domain	Easy
11th	68	Conic Sections	Parabola	Medium
12th	69	Differential Equations	Variable separable	Medium
11th	70	Sequences and Series	A.M. and G.M. Inequality and Its Application	Medium
12th	71	Integrals	Leibnitz Rule	Difficult
12th	72	Application of Integrals	Area Under Curves	Easy
11th	73	Trigonometric Functions	Properties of Triangles	Easy
11th	74	Mathematical Reasoning	Mathematical Reasoning	Medium
11th	81	Conic Sections	Ellipse and Hyperbola	Medium
11th	82	Straight Lines	Special point	Medium
11th	86	Conic Sections	Ellipse	Difficult
12th	87	Continuity and Differentiability	Mean Value Theorem	Medium
12th	88	Probability	Conditional Probability	Easy
11th	89	Sequences and Series	Geometric Progression (G.P.)	Medium
11th	90	Permutations and Combinations	Permutations	Medium

Note - As this being a memory-based analysis our experts could figure out 21 out of 30 questions from Section - A (14 questions) and Section - B (7 questions)

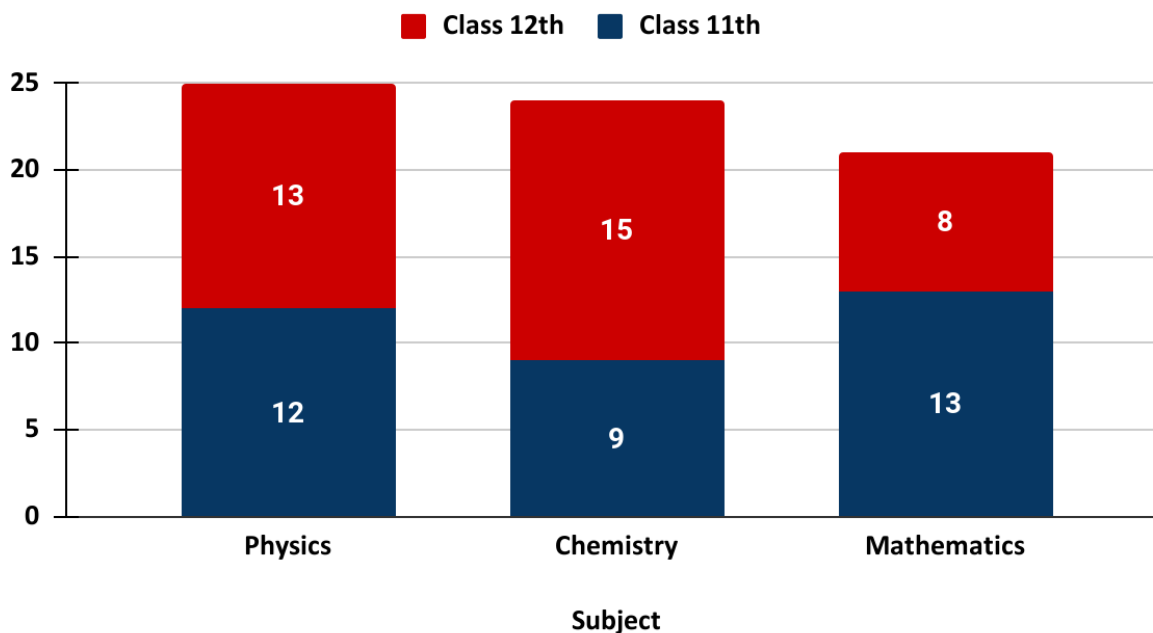
Class Wise Question Distribution

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	13	52	40%	43%
Chemistry	9	36	15	60	30%	50%
Mathematics	13	52	8	32	43%	27%
Grand Total	34	136	36	144	38%	40%

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

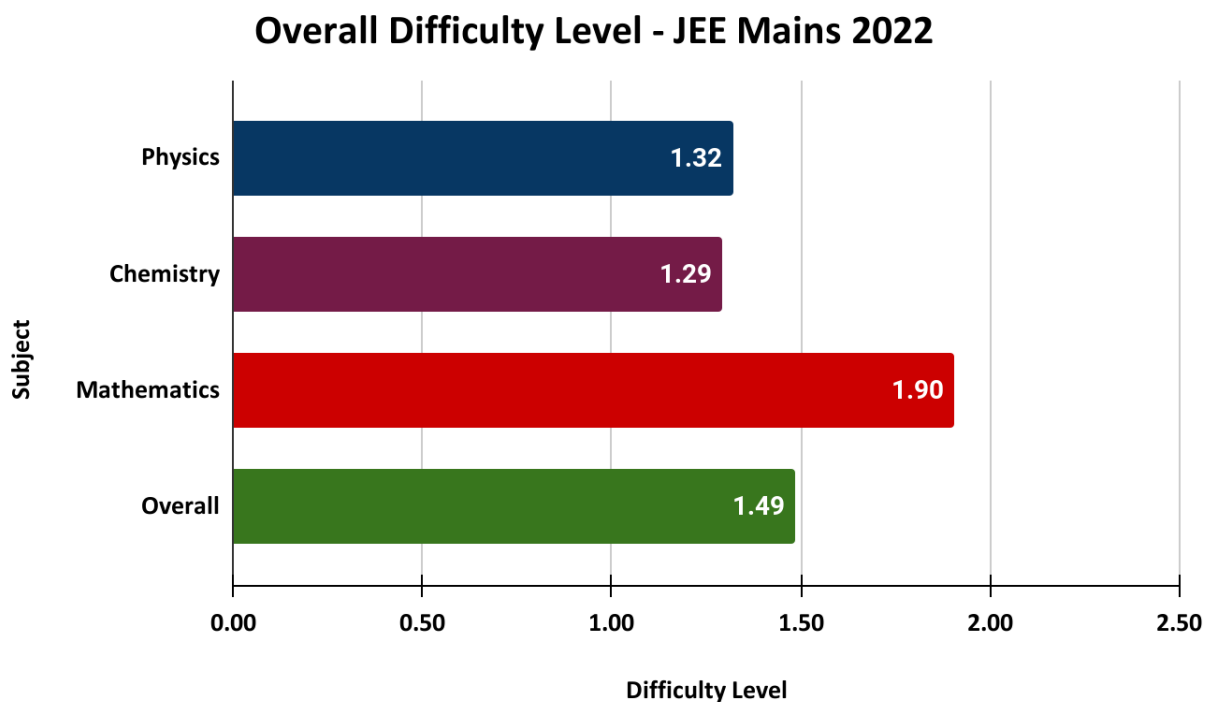
In this analysis, we have rated every question on a scale of 1 to 3. The ratings are done by our expert faculty. The individual ratings are then averaged to calculate the overall difficulty level.

Easy - 1

Medium - 2

Difficult - 3

Subject	Difficulty Level
Physics	1.32
Chemistry	1.29
Mathematics	1.90
Overall	1.49



As per our expert faculties this year JEE Mains session 2 B.E/B.Tech Shift 1 was easy to moderate difficulty. This shift was comparatively easy then compared to other shifts & days.