

A Detailed Analysis of JEE Main (Session 1) 2023
24th January, 2023 Shift 1 (9 am - 12 Noon)
(Memory Based)

Disclaimer: Although students had to answer only 75 questions in exam, analysis below pertains to ≤ 90 questions

JEE Main 2023 (B.E./B.Tech) exam is being conducted entirely in the computer-based mode by the National Testing Agency (NTA). JEE Main Exam 2023 (B.E./B.Tech.) will be held on January 24, 25, 29, 30, 31 and February 1, 2023. The Paper will be conducted in two shifts i.e, First Shift from 9:00am to 12:00pm & Second Shift from 3:00pm to 6:00pm daily.

JEE Main Exam Pattern 2023: Paper 1 (B.E/B.Tech)

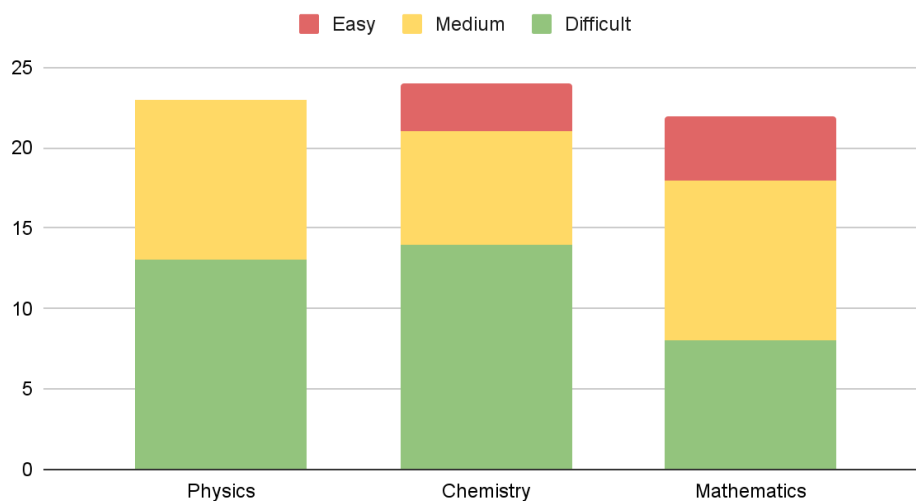
Particulars	Details
Exam Mode	Computer-based examination
Test Duration	Three hours
No. of Subjects	(i)Physics (ii)Chemistry (iii)Mathematics
Type of questions	MCQs: 4 options with only 1 correct option Numerical Value Questions: Questions whose answers are to be filled in as a numerical value
JEE Mains Total No. of questions	Mathematics: 25 (20+10) 20 Questions were compulsory MCQ Based & 10 Questions were answers as a numerical value. Out of these 10 questions, 5 questions are compulsory. Physics: 25 (20+10) 20 Questions were compulsory MCQ Based & 10 Questions were answers as a numerical value. Out of these 10 questions, 5 questions are compulsory. Chemistry: 25 (20+10) 20 Questions were compulsory MCQ Based & 10 Questions were answers as a numerical value. Out of these 10 questions, 5 questions are compulsory. Total: 75 Questions (25 questions in each subject)
JEE Mains Total Marks	300 Marks
JEE Main Marking Scheme	MCQs: Four marks will be awarded for each correct answer and there will be a negative marking of one mark on each wrong answer. Questions with numerical value answers: Candidates will be given four marks for each correct answer and there will be a negative marking of 1 mark for each wrong answer.

Subject Wise Difficulty Level Analysis

Although it was a memory-based question analysis, our experts could figure out **70 questions out of 90 questions** i.e, **23** questions in Physics, **24** 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	13	52	10	40	0	0	23	92
Chemistry	14	56	7	28	3	12	24	96
Mathematics	8	32	10	40	4	16	22	88
Grand Total	35	140	27	108	7	28	69	276

Subject Wise Difficulty Level Analysis



Question Wise Distribution Analysis

Following is the question distribution table as per Class,Chapter, Topic & Difficulty -

Physics

Question No	Class	Section	Subject	Chapter Name	Topic Name	Difficulty Level
1	11th	A	Physics	Waves	Displacement Relation in Progressive wave	Easy
2	12th	A	Physics	Electric Charge & Field	Coulomb's Law	Medium
3	11th	A	Physics	System Of Particles & Rotational Motion	Radius Of Gyration	Medium
4	12th	A	Physics	Current Electricity	Grouping Of Resistors	Medium
5	11th	A	Physics	Laws Of Motion	Common Forces	Medium
6	12th	A	Physics	Electromagnetic Induction	Faraday's Law	Medium
7	12th	A	Physics	Alternating Current	Quality Factor	Easy
8	11th	A	Physics	Motion In A Plane	Projectile Motion	Medium
9	12th	A	Physics	Dual Nature Of Matter & Radiations	Photoelectric Effect	Easy
10	12th	A	Physics	Electromagnetic Induction	Faraday's Law	Easy
11	11th	A	Physics	Thermal Properties Of Matter	Thermal Expansion	Easy
12	12th	A	Physics	Moving Charges & Magnetism	Magnetic Force	Easy
13	12th	A	Physics	Moving Charges & Magnetism	Magnetic Field Due to Current Loop	Medium
14	12th	A	Physics	Solids & Semiconductor Devices	Photodiode	Easy
15	11th	A	Physics	Laws Of Motion	Apparent weight in Lift	Easy
16	12th	A	Physics	Nuclei	Radioactivity	Medium
17	12th	B	Physics	Communication System	Modulation Index	Easy
18	11th	B	Physics	Work Energy & Power	Kinetic Energy	Medium
19	11th	B	Physics	Mechanical Properties Of Solids	Young's Modulus	Easy

20	12th	B	Physics	Electrostatics Potential & Capacitance	Electrostatics Potential Energy	Easy
21	11th	B	Physics	Gravitation	Variation in Acceleration due to gravity	Easy
22	11th	B	Physics	Oscillations	Combination Of Springs	Easy
23	11th	B	Physics	System Of Particles & Rotational Motion	Moment Of Inertia	Medium

Chemistry

24	11th	A	Chemistry	Ionic Equilibrium	Buffer solutions	Medium
25	12th	A	Chemistry	d and f block elements	Qualitative analysis	Easy
26	11th	A	Chemistry	Hydrocarbons	Alkenes	Difficult
27	11th	A	Chemistry	General Organic Chemistry	Resonance	Difficult
28	12th	A	Chemistry	Alcohols, Phenols and ethers	Reaction with HBr	Medium
29	12th	A	Chemistry	Coordination compounds	Valence Bond Theory	Easy
30	12th	A	Chemistry	Coordination compounds	Magnetic moment	Easy
31	12th	A	Chemistry	Haloalkanes and Haloarenes	Polyhalogens	Easy
32	12th	A	Chemistry	Solutions	Colligative properties	Easy
33	11th	A	Chemistry	S block elements	Properties of beryllium	Medium
34	12th	A	Chemistry	Alcohols, Phenols and ethers	Miscellaneous	Difficult
35	12th	A	Chemistry	Chemistry in Everyday Life	Tranquilizers	Easy
36	12th	A	Chemistry	Coordination compounds	Magnetic moment	Easy
37	11th	A	Chemistry	S block	Some important compounds of s block elements	Easy
38	12th	A	Chemistry	P block elements-II	Oxy acids	Easy
39	12th	A	Chemistry	Aldehyde, Ketones and carboxylic acid	Benzoin condensation	Medium

40	12th	A	Chemistry	Solid state	Metal deficiency defect	Medium
41	12th	A	Chemistry	Metallurgy	Miscellaneous	Easy
42	12th	A	Chemistry	Electrochemistry	Relationship between Gibbs energy and equilibrium constant	Easy
43	12th	A	Chemistry	Chemical Kinetics	Activation Energy	Easy
44	12th	B	Chemistry	Coordination compounds	Werner's Theory	Easy
45	11th	B	Chemistry	Some basic concept of chemistry	Dilution	Easy
46	11th	B	Chemistry	Thermodynamics	Spontaneity	Medium
47	12th	B	Chemistry	Biomolecules	Nucleic acid	Medium

Mathematics

48	12th	A	Mathematics	Three Dimensional Geometry	Skew Lines	Easy
49	11th	A	Mathematics	Conic Section - 2	Hyperbola	Easy
50	11th	A	Mathematics	Limits & Derivatives	Limit at Infinity	Medium
51	12th	A	Mathematics	Application of Integration	Area bounded between two curves	Medium
52	11th	A	Mathematics	Binomial Theorem	Bino Series	Medium
53	11th	A	Mathematics	Mathematical Reasoning	Equivalent statement	Easy
54	11th	A	Mathematics	Permutation & Combination	Combinations	Easy
55	12th	A	Mathematics	Differential Equation	Linear D. E	Easy
56	11th	A	Mathematics	Relations & functions	G.I.F	Difficult
57	12th	A	Mathematics	Continuity & Differentiability	Differentiability	Difficult
58	12th	A	Mathematics	Three Dimensional Geometry	Distance of point from plane	Medium
59	11th	A	Mathematics	Complex Numbers	Polar form	Medium
60	11th	A	Mathematics	Binomial Theorem	Bino Series	Difficult
61	12th	A	Mathematics	Differentiation	High Order Diff.	Medium

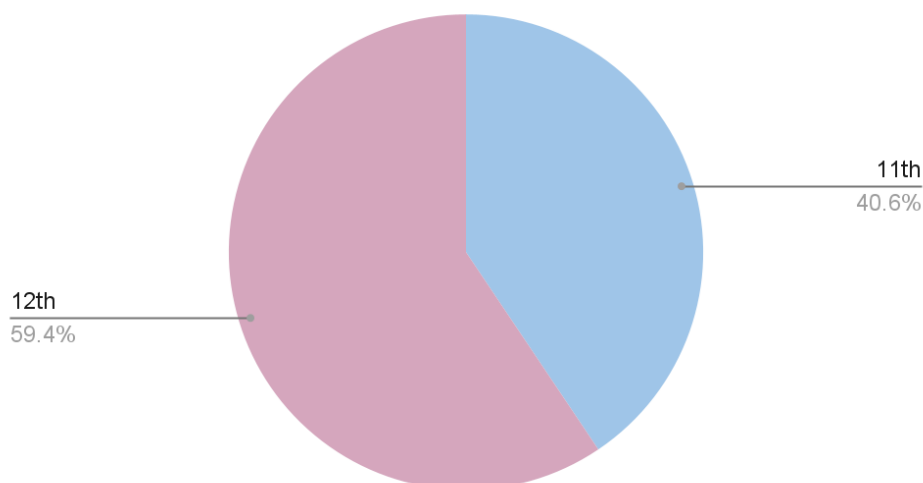
62	12th	A	Mathematics	Matrices & Determinants	Matrix Equation	Medium
63	12th	A	Mathematics	Vector Algebra	STP	Medium
64	12th	A	Mathematics	Relations & functions	Types of Relation	Medium
65	12th	A	Mathematics	Inverse Trigonometry	Properties	Easy
66	11th	B	Mathematics	Permutation & Combination	Combination	Easy
67	11th	B	Mathematics	Conic Section-2	Ellipse	Difficult
68	12th	B	Mathematics	Definite Integral	Properties	Medium
69	12th	B	Mathematics	Definite Integral	Properties	Easy

Class Wise Distribution Level Analysis

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	
	No. of Questions	Total Marks	No. of Questions	Total Marks
Physics	11	44	12	48
Chemistry	7	28	17	68
Mathematics	10	40	12	48
Grand Total	28	112	41	164

Class Wise Distribution Analysis

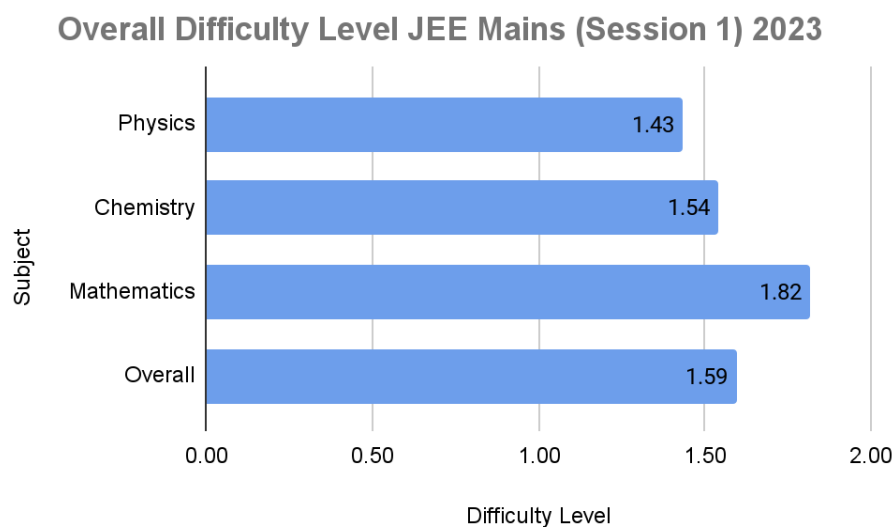


Overall Difficulty Level Analysis

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	1.43
Chemistry	1.54
Mathematics	1.82
Overall	1.59



Conclusion

The Overall Difficulty rating for **JEE Mains Session 1 (Shift 1) 2023** was **1.59** which was considered as moderately difficult. Overall Mathematics was the most difficult subject to attempt. The order of difficulty in different subjects as assessed by a large section of aspirants is Mathematics > Chemistry > Physics.

