

**A Detailed Analysis of JEE Main (Session 1) 2023**  
**01st February, 2023 Shift 1 ( 9 AM - 12 Noon)**  
**(Memory Based)**

**Disclaimer: Although students had to answer only 75 questions in exam, analysis below pertains to  $\leq 90$  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 12:00 pm & Second Shift from 3:00pm to 6:00 pm 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.  <b>Total: 75 Questions (25 questions in each subject)</b>
JEE Mains Total Marks	<b>300 Marks</b>
JEE Main Marking Scheme	<b>MCQs:</b> Four marks will be awarded for each correct answer and there will be a negative marking of one mark on each wrong answer. <b>Questions with numerical value answers:</b> Candidates will be given four marks for each correct answer and there will be a negative marking of 1 mark for each wrong answer.

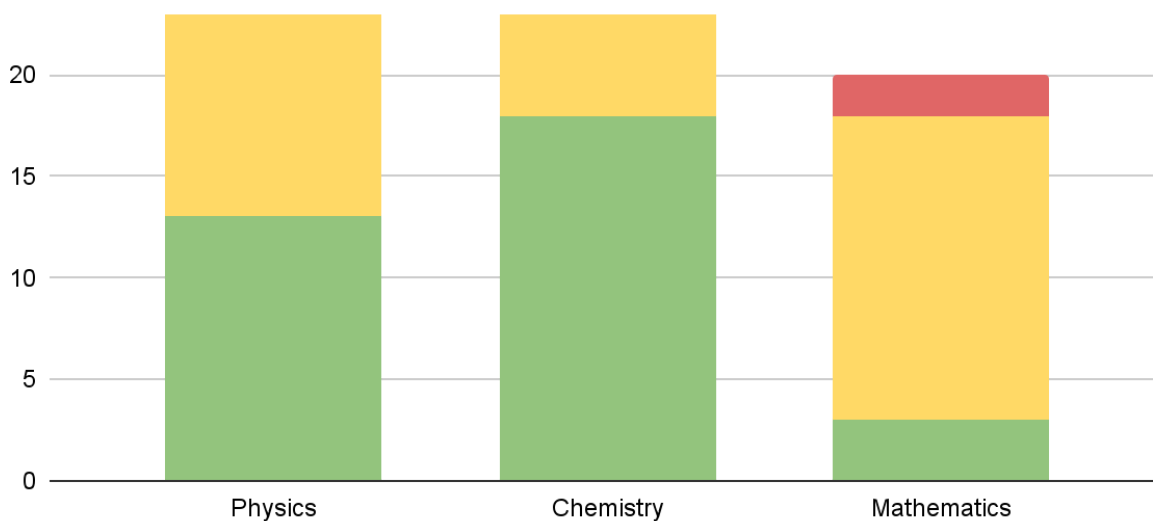
### Subject Wise Difficulty Level Analysis

Although it was a memory-based question analysis, our experts could figure out **66 questions out of 90 questions** i.e, **23** questions in Physics, **23** 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	13	52	10	40	0	0	23	92
Chemistry	18	72	5	20	0	0	23	92
Mathematics	3	12	15	60	2	8	20	80
<b>Grand Total</b>	<b>34</b>	<b>136</b>	<b>30</b>	<b>120</b>	<b>2</b>	<b>8</b>	<b>66</b>	<b>264</b>



25



### 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	12th	A	Physics	Current Electricity	Wheatstone Bridge	Easy
2	12th	A	Physics	Ray Optics & Optical Instruments	Spherical Mirror	Medium
3	11th	A	Physics	System Of Particles & Rotational Motion	Rolling Motion	Medium
4	11th	A	Physics	Motion In A Plane	Horizontal Projection	Easy
5	11th	A	Physics	Thermodynamics	Work Done In Adiabatic Process	Easy
6	11th	A	Physics	Gravitation	Acceleration Due To Gravity	Medium
7	12th	A	Physics	Moving Charges & Magnetism	Applications Of Biot Savart's Law	Easy
8	11th	A	Physics	Laws Of Motion	Friction	Medium
9	12th	A	Physics	Communication System	Frequency Modulation	Easy
10	11th	A	Physics	Units & Measurements	Dimensional Analysis	Easy
11	11th	A	Physics	System Of Particles & Rotational Motion	Rolling On Inclined Plane	Easy
12	11th	A	Physics	Motion In A Straight Line	Motion Under Gravity	Easy
13	11th	A	Physics	Mechanical Properties Of Fluids	Surface Tension	Medium
14	12th	A	Physics	Moving Charges & Magnetism	Motion Of Charge In Combined Electric & Magnetic Field	Medium
15	11th	A	Physics	Waves	Speed Of Transverse Wave on A String	Easy
16	12th	A	Physics	Electric Charges & Fields	Application Of Biot Savart's Law	Easy
17	12th	A	Physics	Solids & Semiconductor Devices	Properties Of Semiconductors	Medium
18	12th	B	Physics	Ray Optics & Optical Instruments	Spherical Mirror	Medium

19	12th	B	Physics	Alternating Current	Resonance In LCR Circuit	Medium
20	12th	B	Physics	Dual Nature Of Matter & Radiations	de Broglie Hypothesis	Easy
21	11th	B	Physics	Gravitation	Escape Speed	Easy
22	12th	B	Physics	Wave Optics	Law Of Malus	Medium
23	12th	B	Physics	Electric Charges & Fields	Electric Fields	Easy

### Chemistry

24	12th	A	Chemistry	Alcohol, Phenols and ethers	Rate of dehydration	Easy
25	12th	A	Chemistry	Coordination compound	Crystal field Theory	Easy
26	11th	A	Chemistry	States of matter	Kinetic Theory of Gases	Easy
27	11th	A	Chemistry	Hydrogen	Hydrogen economy	Easy
28	12th	A	Chemistry	Biomolecules	Structure of glucose and fructose	Easy
29	11th	A	Chemistry	Equilibrium	Equilibrium constant	Medium
30	12th	A	Chemistry	Chemistry in Everyday life	Drugs	Easy
31	11th	A	Chemistry	Hydrocarbons	Alkenes	Easy
32	11th	A	Chemistry	S block elements	Important compounds of group-1 elements	Easy
33	11th	A	Chemistry	Environmental Chemistry	Photochemical smog	Easy
34	12th	A	Chemistry	d and f block elements	Compounds of iron	Easy
35	12th	A	Chemistry	Biomolecules + Amines + Aldehyde, Ketones and carboxylic acid	Miscellaneous	Medium
36	11th		Chemistry	Atomic structure	Discovery of subatomic particles	Easy
37	11th	A	Chemistry	s block elements	Beryllium	Easy
38	12th	A	Chemistry	Haloalkanes and Haloarenes	Chemical reactions	Easy
39	12th	A	Chemistry	Electrochemistry	Nernst equation	Medium
40	12th	A	Chemistry	P block elements-II	Group-17 : Oxides of halogen	Easy
41	11th	B	Chemistry	d and f block elements	Chemical properties	Easy

42	12th	B	Chemistry	P block elements-II	Group -17: Oxo-acids of halogens	Easy
43	12th	B	Chemistry	Chemical Kinetics	First order kinetics	Medium
44	11th	B	Chemistry	Atomic structure	Bohr model	Easy
45	11th	B	Chemistry	Some basic concept of chemistry	Molality	Easy
46	12th	B	Chemistry	Solution	Colligative properties	Medium

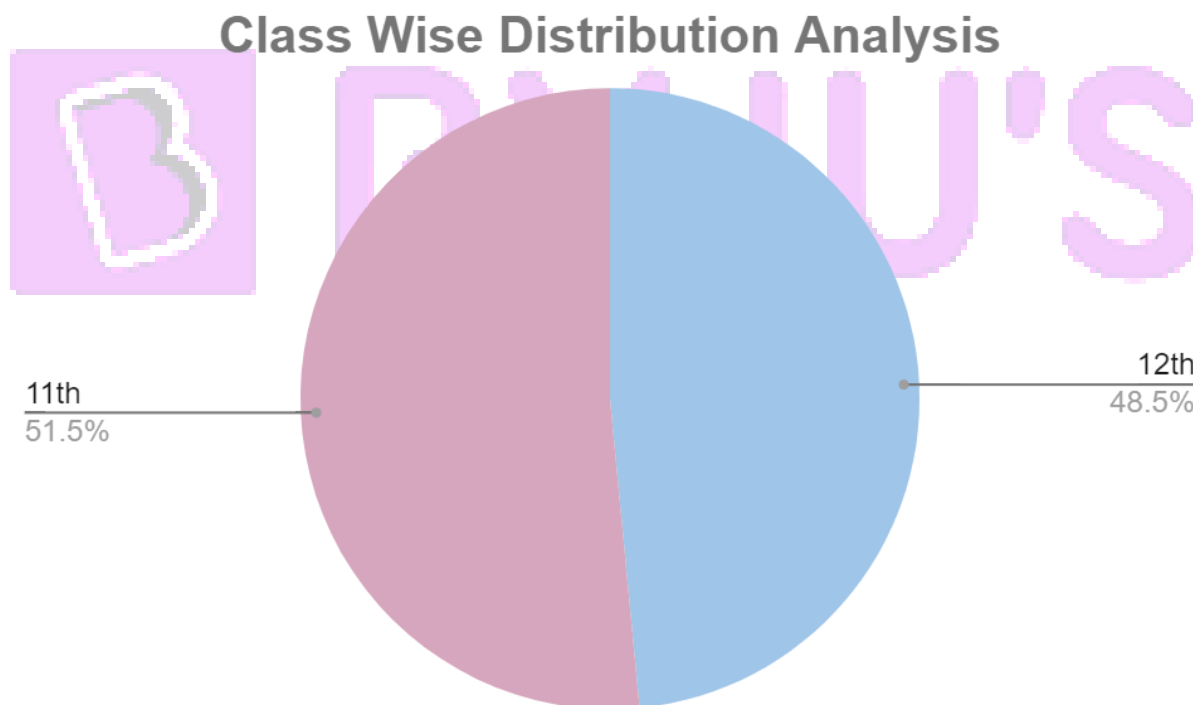
### Mathematics

47	12th	A	Mathematics	Integration	Integration as a limit of sum	Easy
48	12th	A	Mathematics	Differential equation	Linear differential equation	Medium
49	11th	A	Mathematics	Sequence and series	Vn method	Medium
50	11th	A	Mathematics	Permutations and combination	Permutation	Easy
51	12th	A	Mathematics	Differential equation	Miscellaneous	Difficult
52	11th	A	Mathematics	Quadratic equation	Exponential equation	Medium
53	11th	A	Mathematics	Statistics	Variance	Medium
54	11th	A	Mathematics	Binomial Theorem	Series related binomial coefficients	Medium
55	12th	A	Mathematics	Relation and function	Types of Relation	Medium
56	11th	A	Mathematics	Mathematical Reasoning	Negation of statement	Easy
57	12th	A	Mathematics	Inverse Trigonometric function	Equation	Medium
58	11th	A	Mathematics	Properties of Triangle	In radius, area	Medium
59	12th	B	Mathematics	Application of Integral	Area	Medium
60	11th	B	Mathematics	Binomial Theorem	Remainder	Medium
61	11th	B	Mathematics	Sequence series	Arithmetic progression	Medium
62	11th	B	Mathematics	Complex numbers	Circle geometry	Medium
63	12th	B	Mathematics	Continuity and Differentiability	Differentiation	Medium
64	12th	B	Mathematics	Determinant	System of equation	Medium
65	11th	B	Mathematics	Circle	Normal to circle	Difficult
66	11th	B	Mathematics	Permutations and combination	Principle of Inclusion and exclusion	Medium

### Class Wise Distribution Level Analysis

As per our expert faculties the questions from **Class 11th syllabus dominated Class 12th 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	11	44	12	48
Mathematics	12	48	8	32
<b>Grand Total</b>	<b>34</b>	<b>136</b>	<b>32</b>	<b>128</b>



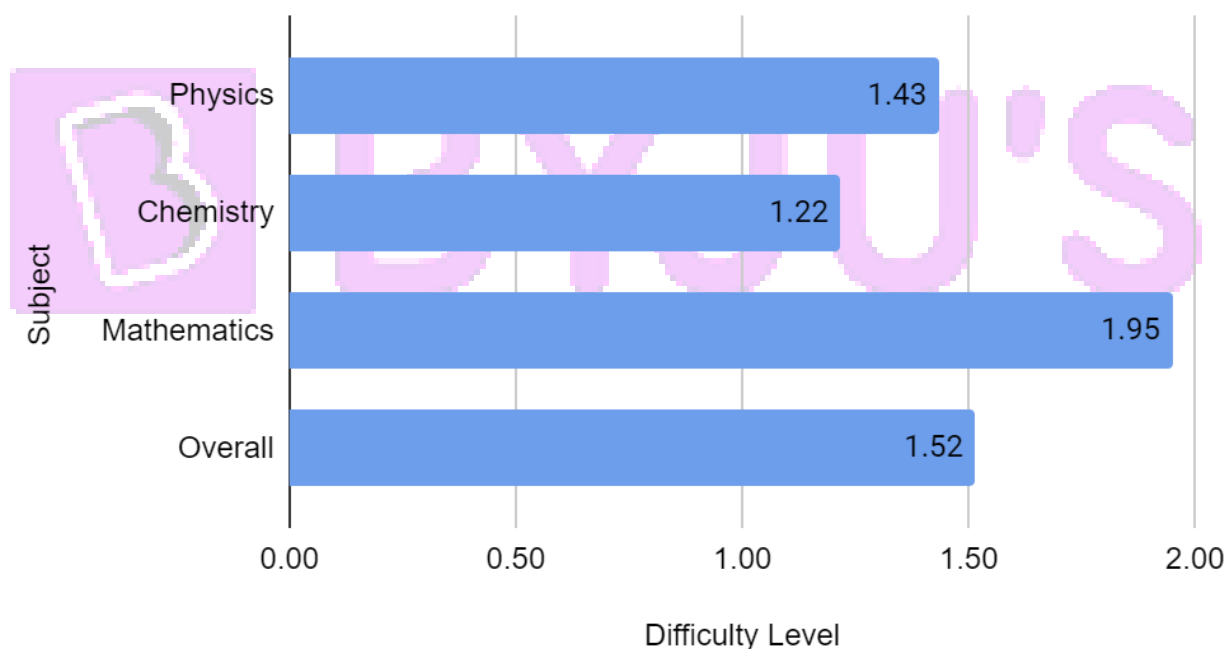
### Overall Difficulty Level Analysis

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	1.22
Mathematics	1.95
<b>Overall</b>	<b>1.52</b>

### Overall Difficulty Level JEE Mains (Session 1) 2023



### **Conclusion**

The Overall Difficulty rating for **01st February JEE Mains Session 1 (Shift 1) 2023** was **1.52** which was considered as **moderate to 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 > Physics > Chemistry.