

**A Detailed Analysis of JEE Main (Session 1) 2023**  
**29th January, 2023 Shift 2 ( 3 PM - 6 PM)**  
**(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)**

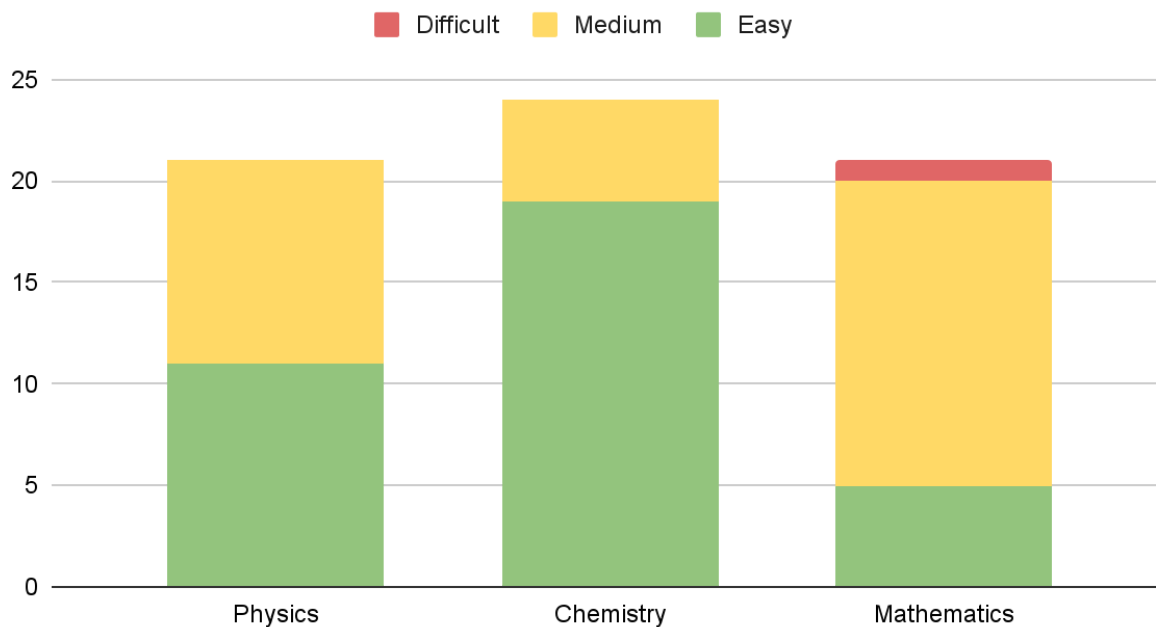
Particulars	Details
Exam Mode	Computer-based examination
Test Duration	Three hours
No. of Subjects	(i)Physics (ii)Chemistry (iii)Mathematics
Type of questions	MCQs: 4 options with only 1 correct option  Numerical Value Questions: Questions whose answers are to be filled in as a numerical value
JEE Mains 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, **21** 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	11	44	10	40	0	0	21	84
Chemistry	19	76	5	20	0	0	24	96
Mathematics	5	20	15	60	1	4	21	84
<b>Grand Total</b>	<b>35</b>	<b>140</b>	<b>30</b>	<b>120</b>	<b>1</b>	<b>4</b>	<b>66</b>	<b>264</b>

### Subject Wise Difficulty Level Analysis



### **Question Wise Distribution Analysis**

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

#### **Physics**

<b>Question No</b>	<b>Class</b>	<b>Section</b>	<b>Subject</b>	<b>Chapter Name</b>	<b>Topic Name</b>	<b>Difficulty Level</b>
1	11th	A	Physics	Oscillations	SHM	Easy
2	11th	A	Physics	System Of Particles & Rotational Motion	Pure Rolling and Pure Sliding	Medium
3	11th	A	Physics	Motion In A Plane	Circular Motion	Medium
4	11th	A	Physics	Laws Of Motion	Connected Motion	Easy
5	12th	A	Physics	Alternating Current	RMS Value of AC	Easy
6	12th	A	Physics	Solids & Semiconductor Devices	Logic Gates	Medium
7	12th	A	Physics	Communication System	Modulation Index	Easy
8	11th	A	Physics	Gravitation	Gravitational Potential	Easy
9	12th	A	Physics	Wave Optics	Resolving Power	Easy
10	11th	A	Physics	Units & Measurements	Dimensional Analysis	Medium
11	12th	A	Physics	Electromagnetic Wave	Properties Of EM Waves	Easy
12	12th	A	Physics	Dual Nature Of Matter & Radiations	de Broglie Hypothesis	Easy
13	12th	A	Physics	Electric Charges & Fields	Motion of charge in Electric field	Medium
14	12th	A	Physics	Current Electricity	Potentiometer	Medium
15	12th	A	Physics	Electromagnetic Induction	Faraday's Laws	Medium
16	11th	B	Physics	Kinetic Theory Of Gases	RMS and Average Speed	Medium
17	12th	B	Physics	Dual Nature Of Matter & Radiations	de Broglie Hypothesis	Easy

18	11th	B	Physics	System Of Particles & Rotational Motion	Conservation Of Angular Momentum	Easy
19	11th	B	Physics	Motion In A Plane	Projectile Motion	Medium
20	11th	B	Physics	Laws Of Motion	Impulse Momentum Theorem	Easy
21	12th	B	Physics	Nuclei	Decay Law	Medium

### Chemistry

22	12th	A	Chemistry	Haloalkanes and haloarenes	Optical Isomerism	Medium
23	12th	A	Chemistry	Coordination compounds	Valence Bond Theory	Easy
24	12th	A	Chemistry	Chemistry in everyday life	Drugs	Easy
25	11th	A	Chemistry	Atomic structure	Bohr model	Easy
26	11th	A	Chemistry	Chemical Bonding	Molecular Orbital theory	Easy
27	12th	A	Chemistry	Metallurgy	Ores and minerals	Easy
28	11th	A	Chemistry	P block elements-I	Group -13	Easy
29	11th	A	Chemistry	Thermodynamics	Laws of thermodynamics	Easy
30	12th	A	Chemistry	Polymers	Types of polymers	Easy
31	11th	A	Chemistry	States of Matter	Kinetic Theory of Gases	Easy
32	11th	A	Chemistry	S-block elements	Chemical properties	Easy
33	11th	A	Chemistry	Environmental Chemistry	BOD	Easy
34	12th	A	Chemistry	Surface Chemistry	Purification of colloids	Easy
35	11th	A	Chemistry	Atomic structure	De-Broglie Hypothesis	Easy
36	12th	A	Chemistry	Amines	Hoffmann Bromamide degradation	Easy
37	12th	B	Chemistry	Alcohol, Phenols and ether	Dehydration of alcohols	Medium
38	12th	A	Chemistry	Amines	Gabriel Pthalamide synthesis	Medium
39	12th	A	Chemistry	Alcohol, Phenols and ether		Easy

40	12th	A	Chemistry	Solid state	Voids in HCP	Easy
41	12th	A	Chemistry	States of Matter	Van der waal equation	Easy
42	12th	B	Chemistry	P blok elements-II	Nature of oxides	Easy
43	12th	B	Chemistry	Chemical Kinetics	Half-life- first order	Medium
44	12th	A	Chemistry	Chemical Kinetics	unit of rate constant	Easy
45	12th	B	Chemistry	Coordination compounds	Denticity	Medium

### Mathematics

46	11th	A	Mathematics	Permutations and combination	Permutations	Easy
47	11th	A	Mathematics	Permutations and combination	Permutations	Easy
48	12th	A	Mathematics	Integration	Definite and Integration	Medium
49	12th	A	Mathematics	3D Geometry	Shortest distance between two lines	Medium
50	12th	A	Mathematics	Relation and functions	Relations	Easy
51	11th	A	Mathematics	Mathematical reasoning	Equivalent	Easy
52	12th	A	Mathematics	Definite Integrals	Properties of Definite Integrals	Medium
53	12th	A	Mathematics	Applications of Integrals	Area Bounded by two curves	Medium
54	11th	A	Mathematics	Differential Equations	Linear Differential equation	Medium
55	11th	A	Mathematics	Quadratic equations	Sum of roots	Easy
56	12th	A	Mathematics	3D Geometry	Line and Plane	Medium
57	11th	A	Mathematics	Trigonometric Equation	Range	Medium
58	12th	A	Mathematics	Vectors	Vectors equation	Medium
59	11th	A	Mathematics	Statistics	Variance	Medium
60	12th	A	Mathematics	Application of derivative	Tangents & Normals	Medium
61	11th	A	Mathematics	Complex numbers	Triangle inequality	Medium
62	11th	A	Mathematics	Binomial Theorem	Series related binomial coefficients	Medium
63	11th	B	Mathematics	Permutations and combination	Counting	Medium

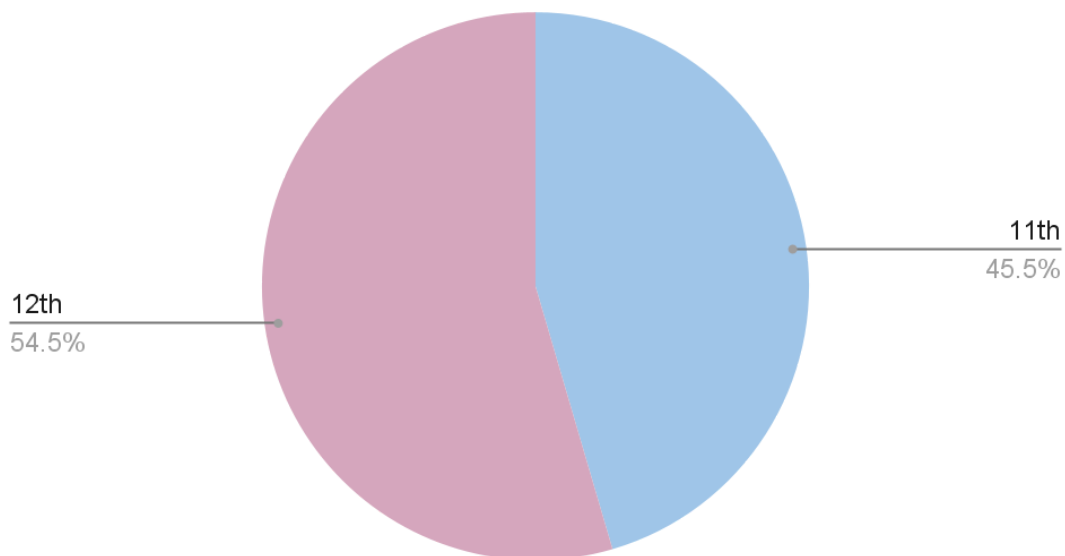
64	12th	B	Mathematics	Relations and functions	Functional equation	Difficult
65	11th	B	Mathematics	Circle	Tangent to circle	Medium
66	11th	B	Mathematics	Sequence and series	Method of difference	Medium

### **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	10	40	11	44
Chemistry	8	32	16	64
Mathematics	12	48	9	36
<b>Grand Total</b>	<b>30</b>	<b>120</b>	<b>36</b>	<b>144</b>

### **Class Wise Distribution Analysis**



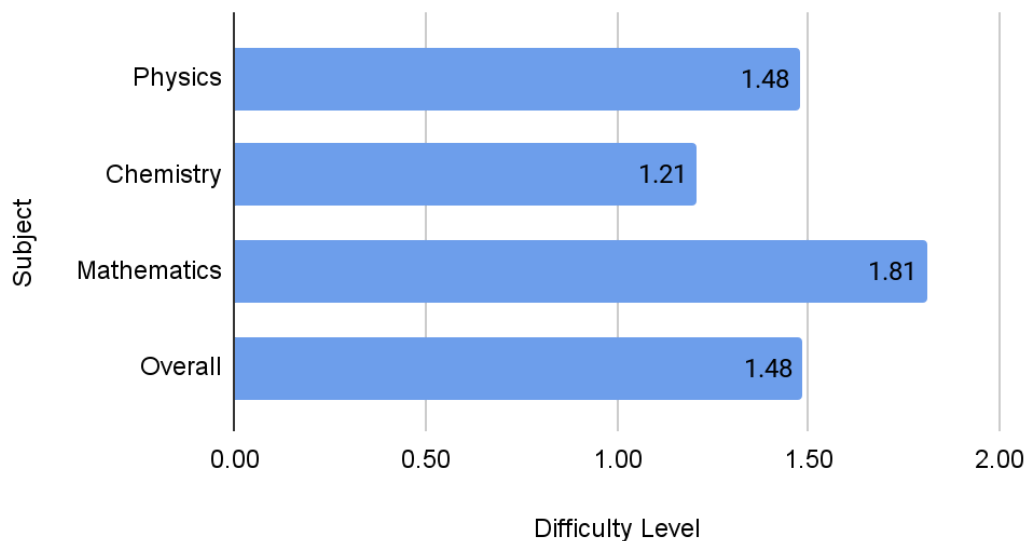
## Overall Difficulty Level Analysis

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	1.48
Chemistry	1.21
Mathematics	1.81
<b>Overall</b>	<b>1.48</b>

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



### Conclusion

The Overall Difficulty rating for **29th January JEE Mains Session 1 (Shift 1) 2023** was **1.48** 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