

# JEE MAIN

2014

## TOPIC WISE ANALYSIS



# JEE Main 2014 Paper

<b>Conducting Body</b>	<b>CBSE</b>
<b>Exam Date</b>	<b>6th April, 2014</b>
<b>Exam Mode</b>	<b>Offline Test (Pen and Paper Based)</b>
<b>Exam Paper and Duration</b>	<b>2 papers (Paper 1 and Paper 2) of 3 hours each</b>
<b>Subjects or Sections</b>	<b>Physics, Chemistry, Maths / 3 Sections</b>
<b>No. of Questions</b>	<b>30 from each section. Total 90 questions</b>
<b>Marks</b>	<b>120 marks per section. Total 360 Marks</b>
<b>Question Type</b>	<b>MCQs and single correct option.</b>
<b>For correct Answers</b>	<b>+4 marks</b>
<b>For incorrect Answers</b>	<b>1/4 marks of total marks per question</b>

# JEE Main 2014 Offline Paper: Distribution of Questions

JEE Main 2014 paper consisted of questions from 11th and 12th standard syllabus and were distributed in the following manner:

Subject	Class 11		Class 12		Total	
	No of Questions	Total Marks	No of Questions	Total Marks	No of Questions	Total Marks
Mathematics	15	60	15	60	30	120
Physics	15	60	15	60	30	120
Chemistry	11	44	19	76	30	120
Grand Total	41	164	49	196	90	360

The number of questions asked from 11th-grade syllabus was 41 and from 12th-grade syllabus was 49.

# JEE Main 2014: Expert's Viewpoint

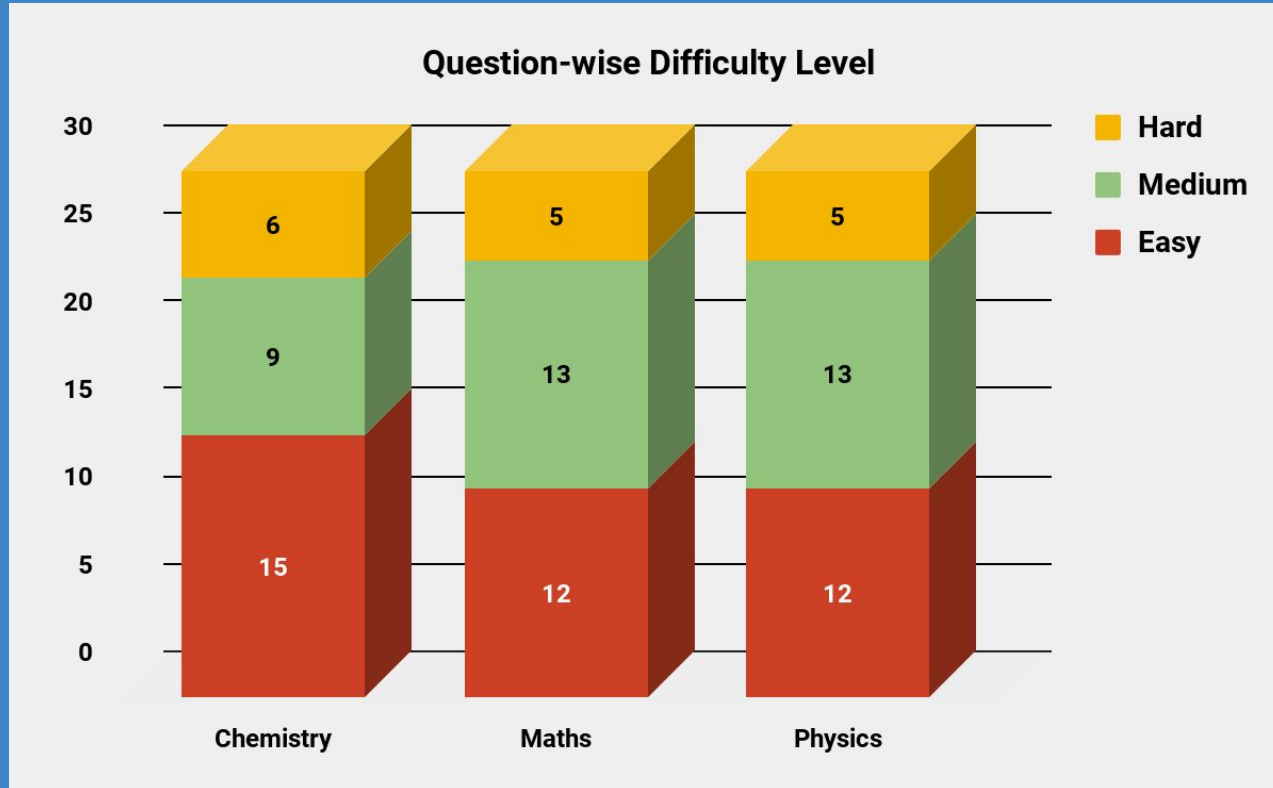
- Here is an analysis of the overall difficulty level of paper I as per the experts:

Subjects	Difficulty Level
Physics	The paper was of moderate difficulty level.
Chemistry	Easy questions were present.
Maths	Lengthy but not very tough.
Overall	Overall paper was very much similar to last year's (2013) paper in terms of difficulty level.

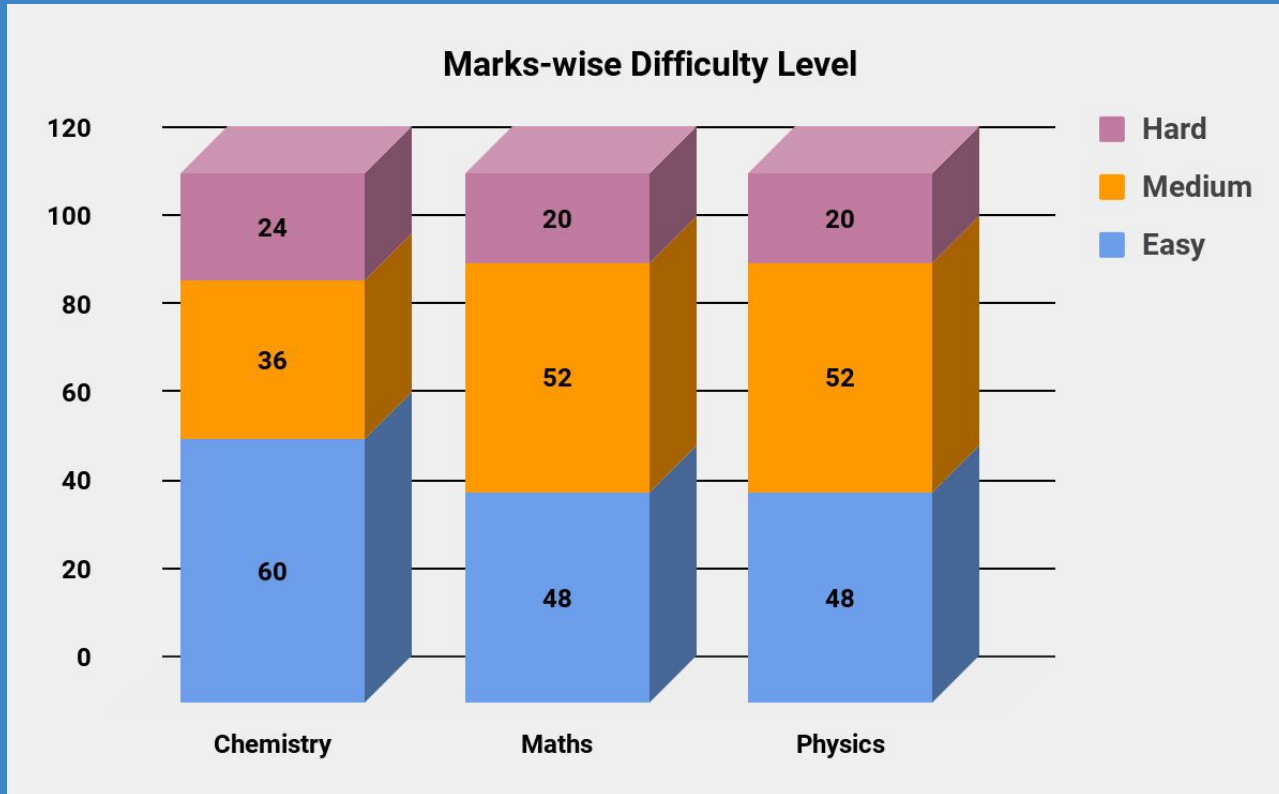
# JEE Main 2014 Overall Difficulty Analysis

Subject	Easy		Moderate		Tough	
	No. of Questions	Total Marks	No. of Questions	Total Marks	No. of Questions	Total Marks
Maths	12	48	13	52	5	20
Physics	12	48	13	52	5	20
Chemistry	15	60	9	36	6	24
Grand Total	39	156	35	140	16	64

# JEE Main 2014 Question-wise Difficulty Level



# JEE Main 2014 Marks-wise Difficulty Level



# JEE Main 2014 Paper I Analysis: Chemistry

- Chemistry was on easier side compared with Physics & Mathematics
- All the three parts of Chemistry were easy and scoring. More number of questions were set from Physical chemistry and least were from Inorganic chemistry.
- There wasn't any ambiguity in chemistry questions. So, most of the questions were straightforward.
- Students can save time in solving the questions and use it for other sections.

Subject	Class 11		Class 12		Total	
	No. of Questions	Total Marks	No. of Questions	Total Marks	Total Questions	Total Marks
Chemistry	11	44	19	76	30	120



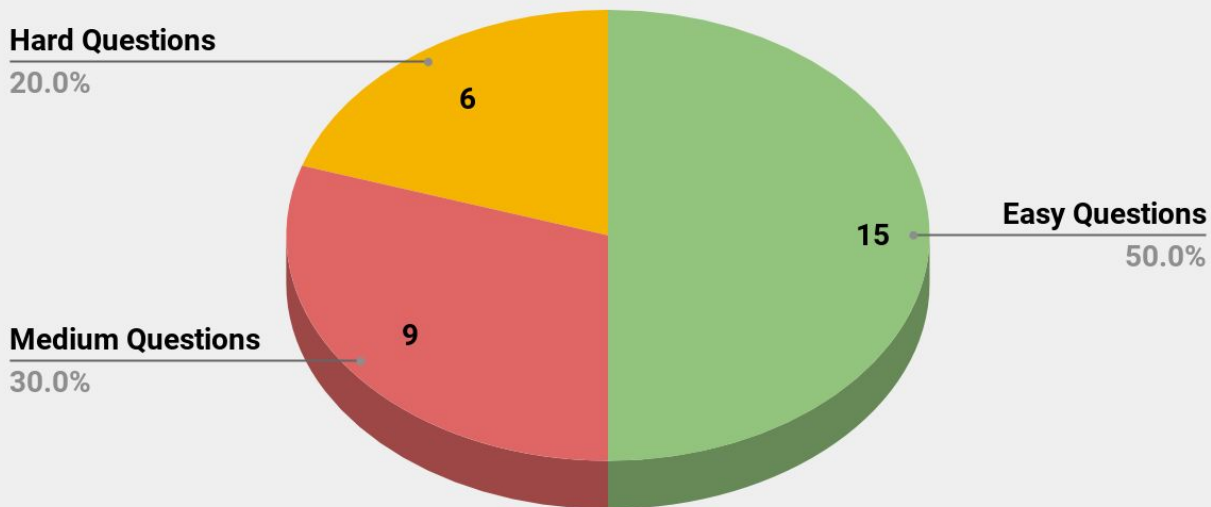
Topic wise Question Breakup in Chemistry		
Topics	No of Questions	Weightage of Marks
<b>Inorganic Chemistry</b>	<b>8</b>	<b>27%</b>
Chemical Bonding	2	7%
d-block & f-block	2	7%
p-block	1	3.33%
Reaction Mechanics	2	7%
Transition Elements and Coordination Chemistry	1	3.33%
<b>Organic Chemistry</b>	<b>8</b>	<b>27%</b>
Aromatic Compound	1	3.33%
Carbohydrates, Amino Acids and Polymers	3	10%
General Organic Chemistry	1	3.33%
Hydrocarbons	1	3.33%
Oxidation & Reduction	1	3.33%
Practical Organic Chemistry	1	3.33%

### Topic wise Question Breakup in Chemistry

Topics	No of Questions	Weightage of Marks
<b>Physical Chemistry</b>	<b>14</b>	<b>47%</b>
Atomic Structure	1	3.33%
Chemical Equilibrium	1	3.33%
Chemical Kinetics	1	3.33%
Electrochemistry	4	13%
Equivalent Concept & Titration	1	3.33%
Gaseous State	1	3.33%
Mole Concept	2	7%
Solid State	1	3.33%
Solution & Colligative Properties	1	3.33%
Thermodynamics & Thermochemistry	1	3.33%

# JEE Main 2014 Paper Analysis: Chemistry Section

No of Questions and Difficulty Percentage



# JEE Main 2014 Paper I Analysis: Maths Section

- Maths paper was lengthy though not very tough.
- More weightage was given to chapters such as Algebra, Coordinate Geometry, Calculus than Vector & 3 Dimensional Geometry and Trigonometry.
- No unexpected questions were asked.
- Comparatively easier than previous year paper.

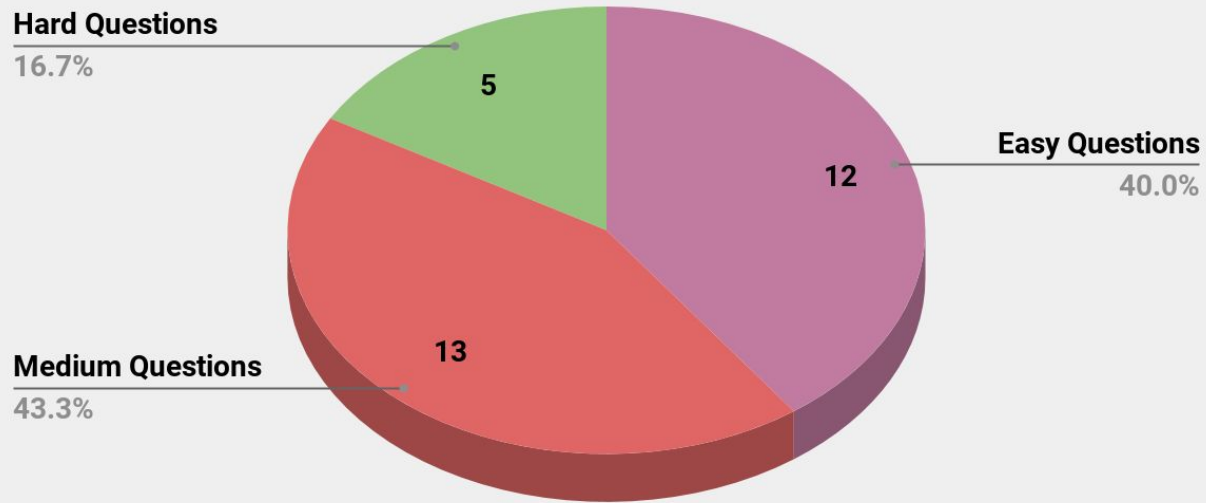
Subject	Class 11		Class 12		Total	
	No. of Questions	Total Marks	No. of Questions	Total Marks	Total Questions	Total Marks
Maths	15	60	15	60	15	120

<b>Topic wise Question Breakup in Maths</b>		
<b>Topics</b>	<b>No of Questions</b>	<b>Weightage of Marks</b>
<b>Binomial Theorem</b>	<b>1</b>	<b>3.30%</b>
<b>Complex Numbers</b>	<b>1</b>	<b>3.30%</b>
<b>Coordinate Geometry</b>	<b>5</b>	<b>16.70%</b>
Circle	1	3.30%
Ellipse	1	3.30%
Parabola	1	3.30%
Straight Line	2	6.70%
<b>Coordinate Geometry (3-D)</b>	<b>2</b>	<b>6.70%</b>
<b>Differential Calculus</b>	<b>5</b>	<b>16.70%</b>
Application of Derivatives	2	6.70%
Functions	1	3.30%
Limit of functions	1	3.30%
Sets & Relation	1	3.30%

<b>Topic wise Question Breakup in Maths</b>		
<b>Topics</b>	<b>No of Questions</b>	<b>Weightage of Marks</b>
<b>Integral Calculus</b>	<b>4</b>	<b>13.80%</b>
Area under curve	1	3.30%
Differential equation	1	3.30%
Indefinite integration	2	6.70%
<b>Mathematical Reasoning</b>	<b>1</b>	<b>3.30%</b>
<b>Matrix &amp; Determinants</b>	<b>2</b>	<b>6.70%</b>
<b>Probability</b>	<b>1</b>	<b>3.30%</b>
<b>Quadratic Equation</b>	<b>2</b>	<b>6.70%</b>
<b>Sequence &amp; Series</b>	<b>2</b>	<b>6.70%</b>
<b>Statistics</b>	<b>1</b>	<b>3.30%</b>
<b>Trigonometry</b>	<b>2</b>	<b>6.70%</b>
Height & Distance	1	3.30%
Trigonometric equation	1	3.30%
<b>Vector</b>	<b>1</b>	<b>3.30%</b>

# JEE Main 2014 Paper Analysis: Maths Section

No of Questions and Difficulty Percentage



# JEE Main 2014 Paper I Analysis: Physics

- Physics Paper was above average and some of the questions involved calculations, which made the paper a bit lengthy and difficult.
- Questions were from asked from topics such as Fluid Mechanics and properties of matter, electrodynamics. These questions were of difficult in nature.
- More weightage was given to chapters like Mechanics & Electromagnetism , Optics, Modern Physics and Magnetics.

Subject	Class 11		Class 12		Total	
	No. of Questions	Total Marks	No. of Questions	Total Marks	Total Questions	Total Marks
Physics	13	52	17	68	30	120

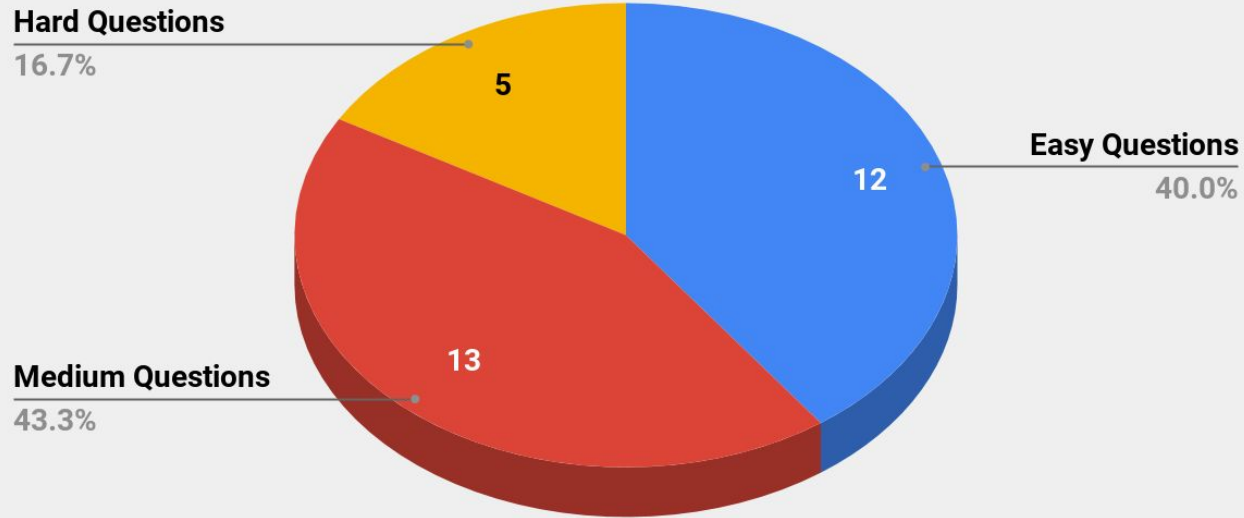


Topic wise Question Breakup in Physics		
Topics	No of Questions	Weightage of Marks
<b>Electrodynamics</b>	<b>6</b>	<b>19%</b>
Capacitance	1	3%
Current Electricity	1	3%
Electromagnetic Field	1	3%
E.M.I	2	7%
Electrostatic	1	3%
<b>Heat And Thermodynamics</b>	<b>3</b>	<b>10%</b>
Heat Transfer	2	7%
Ktg And Thermodynamics	1	3%
<b>Mechanics</b>	<b>5</b>	<b>32%</b>
Center Of Mass	1	3%
Fluid Mechanics & Properties Of Matter	2	7%
Gravitation	1	3%
Projectile Motion	1	3%

<b>Topic wise Question Breakup in Physics</b>		
<b>Topics</b>	<b>No of Questions</b>	<b>Weightage of Marks</b>
<b>Rigid body dynamic</b>	<b>3</b>	<b>12%</b>
<b>Surface tension</b>	<b>1</b>	<b>3%</b>
<b>Unit &amp; dimension</b>	<b>1</b>	<b>3%</b>
<b>Modern physics</b>	<b>6</b>	<b>21%</b>
Em waves & communication	2	7%
Modern physics	2	7%
Semiconductor	2	7%
<b>Optics</b>	<b>3</b>	<b>10%</b>
Geometrical and physical optics	2	7%
Wave optics	1	3%
<b>SHM &amp; WAVES</b>	<b>2</b>	<b>6%</b>
SHM	1	3%
String waves and sound wave	1	3%

# JEE Main 2014 Paper Analysis: Physics Section

No. Of Questions and Difficulty Percentage



# Important Topics Asked in JEE Main 2014 Paper: Physics

- ❑ Electrodynamics
- ❑ capacitance
- ❑ Current electricity
- ❑ Electromagnetic field
- ❑ E.M.I
- ❑ Heat and thermodynamics
- ❑ Center of mass
- ❑ Fluid mechanics & properties of matter
- ❑ Rigid body dynamic
- ❑ Em waves & communication
- ❑ Modern physics
- ❑ Semiconductor
- ❑ Optics
- ❑ SHM & WAVES

# Chemistry

- ❑ Chemical Bonding
- ❑ d-block & f-block
- ❑ Reaction Mechanics
- ❑ Aromatic Compound
- ❑ Carbohydrates, Amino Acids and Polymers
- ❑ Hydrocarbons
- ❑ Oxidation & Reduction
- ❑ Atomic Structure
- ❑ Chemical Kinetics
- ❑ Electrochemistry
- ❑ Gaseous State
- ❑ Mole Concept
- ❑ Solid State
- ❑ Thermodynamics & Thermochemistry

# Maths

- ❑ Binomial Theorem
- ❑ Coordinate Geometry
- ❑ Straight Line
- ❑ Differential Calculus
- ❑ Application of Derivatives
- ❑ Integral Calculus
- ❑ Indefinite integration
- ❑ Matrix & Determinants
- ❑ Quadratic Equation
- ❑ Sequence & Series
- ❑ Trigonometry
- ❑ Vector

# JEE Main 2014 Cutoff

Category	Cut Off
Common Merit List (CML)	115
Other Backward Class (OBC - NCL)	74
Scheduled Caste (SC)	53
Scheduled Tribe (ST)	47

# Thank You!

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