

JEE Main 2016 Paper

Conducting Body	CBSE
Exam Date	3rd April 2016
Exam Mode	Offline Test (Pen and Paper Based)
Exam paper and Duration	2 paper (paper 1 and paper 2) of 3 hours each
Subject or Sections	Physics, Chemistry, Maths/ 3 Sections
No of Questions	30 from each section, Total 90 questions
Marks	120 marks per section. Total 360 Marks.
Question Type	MCQ's and single correct option.
For correct Answers	+4 marks
For Incorrect Answers	¼ marks of total marks per questions.

JEE Main 2016 Offline Paper: Distribution of Questions.

In JEE Main 2016 Paper-1 the distribution of questions were as

	Class 11		Class 12		Total	
Subject	Number of Questions	Total Marks	Number of Questions	Total Marks	Number of Questions	Total Marks
Maths	15	60	15	60	30	120
Physics	13	52	17	68	30	120
Chemistry	12	48	18	72	30	120
Grand Total	40	160	50	200	90	360

JEE Main 2016: Expert's Viewpoint

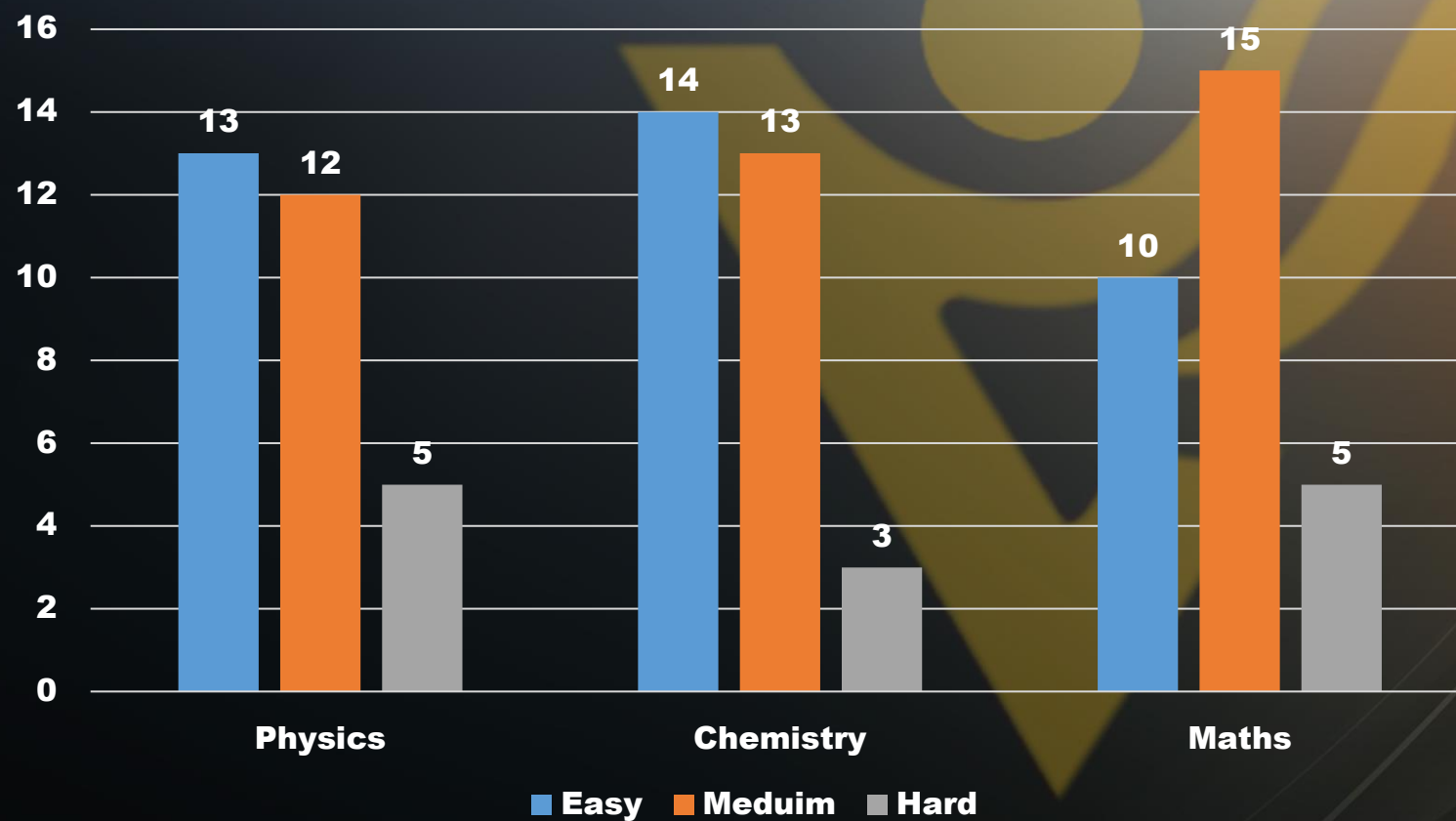
- **As per the experts the overall difficulty level of paper-1 is as follows**

Subjects	Difficulty Level
Physics	Lengthy and required critical thinking. Few questions were difficult
Chemistry	Was on the tougher side compared to previous years.
Maths	On a moderate level with few single concept questions.
Overall	Overall difficulty level was moderate but challenging if compared to 2015 JEE Main exam.

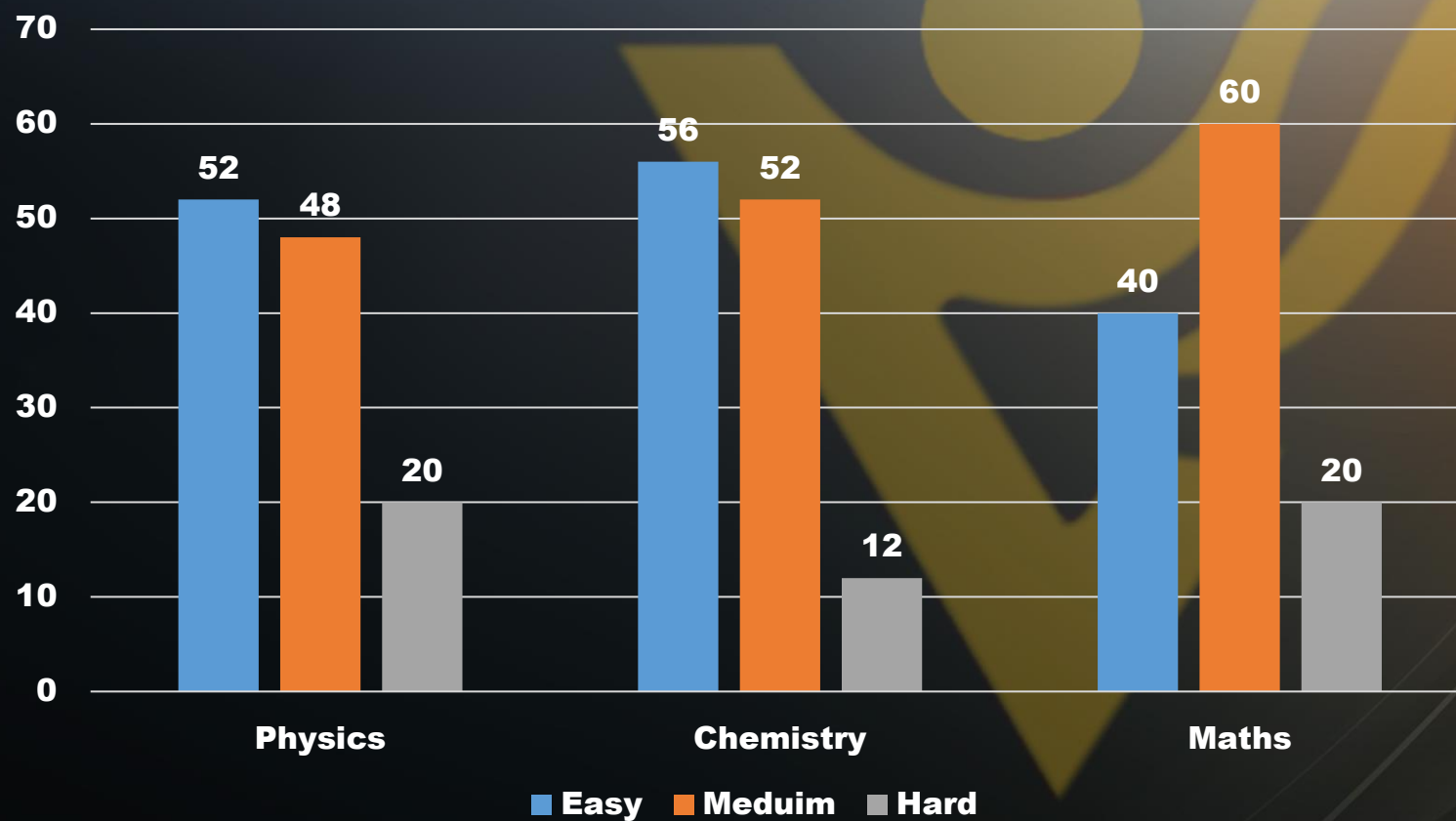
JEE Main 2016 Overall Difficulty Analysis

	Easy		Medium		Hard	
Subject	Number of Questions	Total Marks	Number of Questions	Total Marks	Number of Questions	Total Marks
Math	13	52	12	48	5	20
Physics	10	40	15	60	5	20
Chemistry	14	56	13	52	3	12
Grand Total	37	148	40	160	13	52

JEE Main 2016 Question – wise Difficulty Level



JEE Main 2016 Question – wise Difficulty Level



JEE Main 2016 Paper-1 analysis: Maths Section

- The questions were on a moderate level.
- Math questions in 2016 paper were surprisingly easy compared to questions that were set last year
- Some of the easy questions were set for topics such as Area, Circle, Logarithm, Progression Series, Hyperbola, etc.
- One questions from Binomial theorem seemed to be fundamentally wrong.

	Easy		Medium		Hard	
Subject	Number of Questions	Total Marks	Number of Questions	Total Marks	Number of Questions	Total Marks
Math	15	60	15	60	30	120

Topic Wise Question Breakup in Maths

Topics	No of Questions	Weightage of Marks
Algebra	1	3.33%
Vector	1	3.33%
Binomial Theorem	1	3.33%
Binomial Theorem	1	3.33%
Complex Number	1	3.33%
Coordinate Geometry	5	16.67%
Circle	2	6.67%
Hyperbola	1	3.33%
Parabola	1	3.33%

Topic Wise Question Breakup in Maths

Topics	No of Questions	Weightage of Marks
Straight Line	1	3.33%
Co-ordinate Geometry (3-D)	2	6.67%
Differential Calculus	5	16.67%
Application of Derivatives	1	3.33%
Functions	1	3.33%
Limit, Continuity and Differentiability	1	3.33%
Limit, Continuity and Differentiability	1	3.33%
Methods of Differentiation	2	3.33%
Tangent and Normal	1	3.33%

Topic Wise Question Breakup in Maths

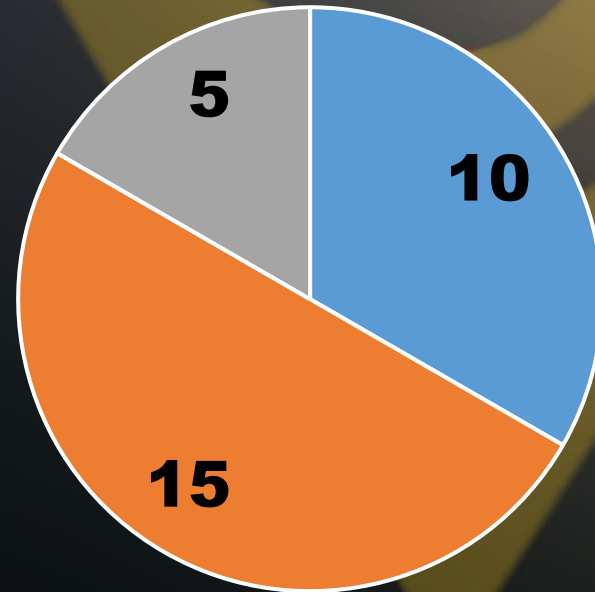
Topics	No of Questions	Weightage of Marks
Integral Calculus	4	13.33%
Area under Curve	1	3.33%
Definite Integration	1	3.33%
Differential Equation	1	3.33%
Indefinite Integration	1	3.33%
Mathematical Reasoning	1	3.33%
Matrix and Determinants	2	6.67%
Permutation and Combination	1	3.33%
Probability	1	3.33%

Topic Wise Question Breakup in Maths

Topics	No of Questions	Weightage of Marks
Quadratic Equation	1	3.33%
Sequence and Series	2	6.67%
Statistics	1	3.33%
Trigonometry	2	6.67%
Trigo, Ratio and Identities	1	3.33%
Trigonometric Equation	1	3.33%

JEE Main 2016 Paper Analysis: Maths Section

No. of Questions of Paper



■ Easy ■ Medium ■ Hard

JEE Main 2016 Paper I Analysis: Physics

- **Physics Section consisted of simple conceptual questions but lengthy in calculation.**
- **Questions were relatively simpler compared to 2015.**
- **Some question were also very similar to previous year paper.**
- **Paper had few questions with more than one answer.**

	Class 11		Class 12		Total	
Subject	Number of Questions	Total Marks	Number of Questions	Total Marks	Number of Questions	Total Marks
Physics	13	52	17	68	30	120

Topic wise Question Breakup in Physics

Topics	No of Questions	Weightage of Marks
Electrodynamics	6	20.00%
Alternating Current	1	3.33%
Capacitance	1	3.33%
Current Electricity	1	3.33%
Electromagnetic Field	2	6.67%
Electrostatics	1	3.33%
Heat and Thermodynamics	3	10.00%
KTG and Thermodynamics	3	10.00%

Topic wise Question Breakup in Physics

Topics	No of Questions	Weightage of Marks
Mechanics	7	23.33%
Error in Measurement	2	6.67%
Gravitation	1	3.33%
Rigid Body Dynamics	2	6.67%
Work, Power and Energy	2	6.67%

Topic wise Question Breakup in Physics

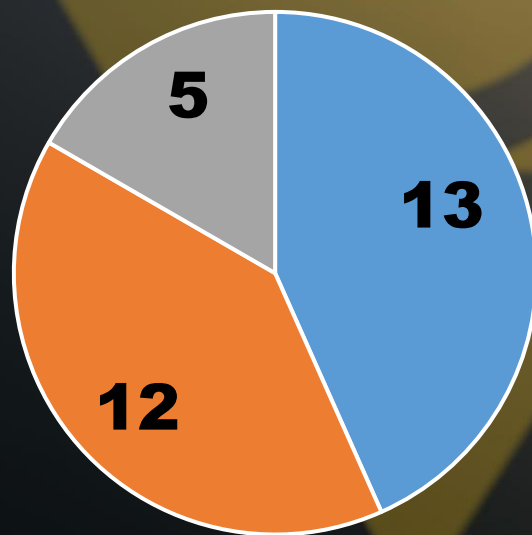
Topics	No of Questions	Weightage of Marks
Modern Physics	8	26.67%
Electromagnetic waves and Communication	2	6.67%
Modern Physics	2	6.67%
Semiconductors	4	13.33%
Optics	3	10.00%
Geometrical Optics and Physical Optics	2	6.67%
Wave Optics	1	3.33%

Topic wise Question Breakup in Physics

Topics	No of Questions	Weightage of Marks
SHM and Waves	3	10.00%
SHM	1	3.33%
Sound Waves	1	3.33%
String Wave	1	3.33%

JEE Main 2016 Paper Analysis: Physics Section

**No. of Questions and Difficulty
Percentage**



■ Easy ■ Medium ■ Hard

JEE Main 2016 Paper-1 Analysis: Chemistry

- **Chemistry section was easy and scoring amongst the three.**
- **The questions from Organic Chemistry was a bit difficult and consisted of fact based questions.**
- **Few questions from Physical Chemistry seem to contain insufficient and incorrect data**
- **Topics based on the NCERT syllabus.**

	Class 11		Class 12		Total	
Subject	Number of Questions	Total Marks	Number of Questions	Total Marks	Number of Questions	Total Marks
Chemistry	12	48	18	72	30	120

Topic wise Question Breakup in Chemistry

Topics	No of Questions	Weightage of Marks
Inorganic Chemistry – 11th	6	20.00%
Chemical Bonding	2	6.67%
Hydrogen and its Compound	1	3.33%
P–block	1	3.33%
Periodic Table and Periodicity in Properties	1	3.33%
S–block	1	3.33%

Topic wise Question Breakup in Chemistry

Topics	No of Questions	Weightage of Marks
Inorganic Chemistry-12th	6	20.00%
Coordination Compounds	2	6.67%
d block and f-block Elements	2	6.67%
Metallurgy	1	3.33%
Qualitative Analysis	1	3.33%

Topic wise Question Breakup in Chemistry

Topics	No of Questions	Weightage of Marks
Organic Chemistry – 11th	2	6.67%
General Organic Chemistry – II	2	6.67%

Topic wise Question Breakup in Chemistry

Topics	No of Questions	Weightage of Marks
Organic Chemistry – 12th	8	26.67%
Biomolecules	1	3.33%
Carbohydrates, Amino Acids and Polymers	1	3.33%
Environmental Chemistry	1	3.33%
Hydrocarbon (Alkane, Alkene and Alkyne)	3	10.00%
Practical Organic Chemistry	2	6.67%

Topic wise Question Breakup in Chemistry

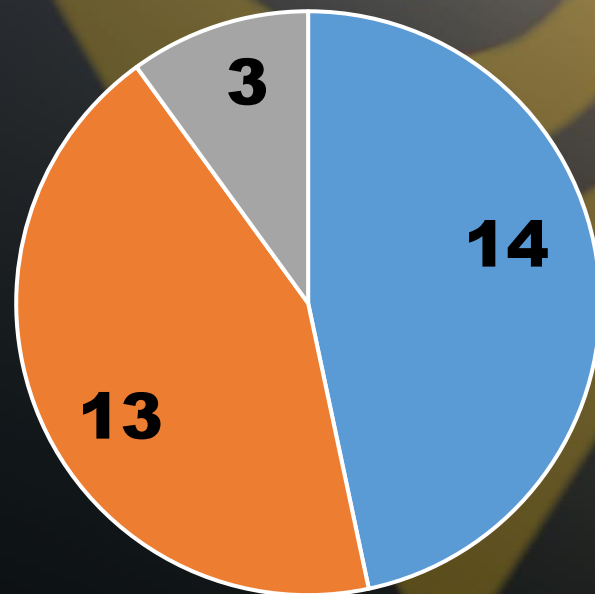
Topics	No of Questions	Weightage of Marks
Physical Chemistry – 11th	4	13.33%
Atomic Structure and Nuclear Chemistry	1	3.33%
Chemical Equilibrium	1	3.33%
Gaseous State	1	3.33%
Thermodynamics and Thermochemistry	1	3.33%

Topic wise Question Breakup in Chemistry

Topics	No of Questions	Weightage of Marks
Physical Chemistry – 12th	4	13.33%
Chemical Kinetics	1	3.33%
Solution and Colligative Properties	1	3.33%
Surface Chemistry	2	6.67%

JEE Main 2016 Paper Analysis Chemistry Section

No. of Questions of Paper



■ Easy ■ Meduim ■ Hard

Important Topics Asked in JEE Main 2016

Paper : Physics

- **Alternating Current**
- **Electromagnetic waves and communication**
- **Current Electricity**
- **Modern Physics**
- **Electromagnetic Field**
- **Electrostatics**
- **Semiconductors**
- **KTG and Thermodynamics**
- **Geometrical Optics and Physical Optics**
- **Rigid Body Dynamics**
- **Wave Optics**
- **Work Power and Energy**
- **SHM and Waves**

Paper : Chemistry

- **Chemical Bonding**
- **Practical Organic Chemistry**
- **Hydrogen and its compounds**
- **Atomic Structure and Nuclear Chemistry**
- **p-block**
- **s-block**
- **Thermodynamics and Thermochemistry**
- **Coordination Compounds**
- **d-block and f-block elements**
- **Surface Chemistry**
- **General Organic Chemistry – II**
- **Hydrocarbon (Alkane, Alkene and Alkyne)**

Important Topics Asked in JEE Main 2016

Paper : Maths

- **Vector**
- **Differential Equation**
- **Binomial Theorem**
- **Matrices and Determinants**
- **Complex Numbers**
- **Permutation and Combination**
- **Circle**
- **Probability**
- **Hyperbola**
- **Quadratic Equation**
- **Co-ordinate Geometry (3 – D)**
- **Sequence and Series**
- **Limit, Continuity and Differentiability**
- **Trigonometric Ratio and Identities**

JEE Main 2016 Cutoff

Category	Cut Off
General	100
OBC	70
SC	52
ST	48