

JEE Advanced 2019

Topicwise Paper Analysis



JEE Advanced 2019 Paper

Exam Date	27th May, 2019
Exam Mode	Computer-Based Online Test
Exam Paper and Duration	2 papers (Paper 1 and Paper 2) of 3 hours each
Subjects or Sections	Physics, Chemistry, Maths
Total Marks	372 Marks
Question Type	MCQs, Numerical Problems, Comprehension, list match sets
For correct Answers	+4 marks
For incorrect Answers	-1 mark

JEE Advanced 2019 Paper Marking Scheme

Each of the papers in JEE Advanced is divided in **three parts** with **three sections** each.

- Number of Parts (One for each Subject): **3**
- Number of Sections per Part: **3**

Marking Scheme						
Section	Number of Questions	Fully Correct	Not Attempted	Partial	Negative	Maximum
Single Option Correct	4	3	0	-	-1	12
Multiple Correct Options	8	4	0	1 for each correct option less than actual correct options	-1	32
Numerical Value	6	3	0	-	0	18
Total	18					62

JEE Advanced 2019 Paper: Distribution of Questions

In JEE Advanced Paper I and II there were a total of **146 marks** questions from class 11th syllabus and **226 marks** questions from class 12th syllabus.

Subject	Class 11		Class 12		Total	
	No of Questions	Total Marks	No of Questions	Total Marks	No of Questions	Total Marks
Chemistry	11	38	25	86	36	124
Mathematics	14	47	22	77	36	124
Physics	18	61	18	63	36	124
Grand Total	43	146	65	226	108	372

JEE Advanced 2019: Expert's Viewpoint

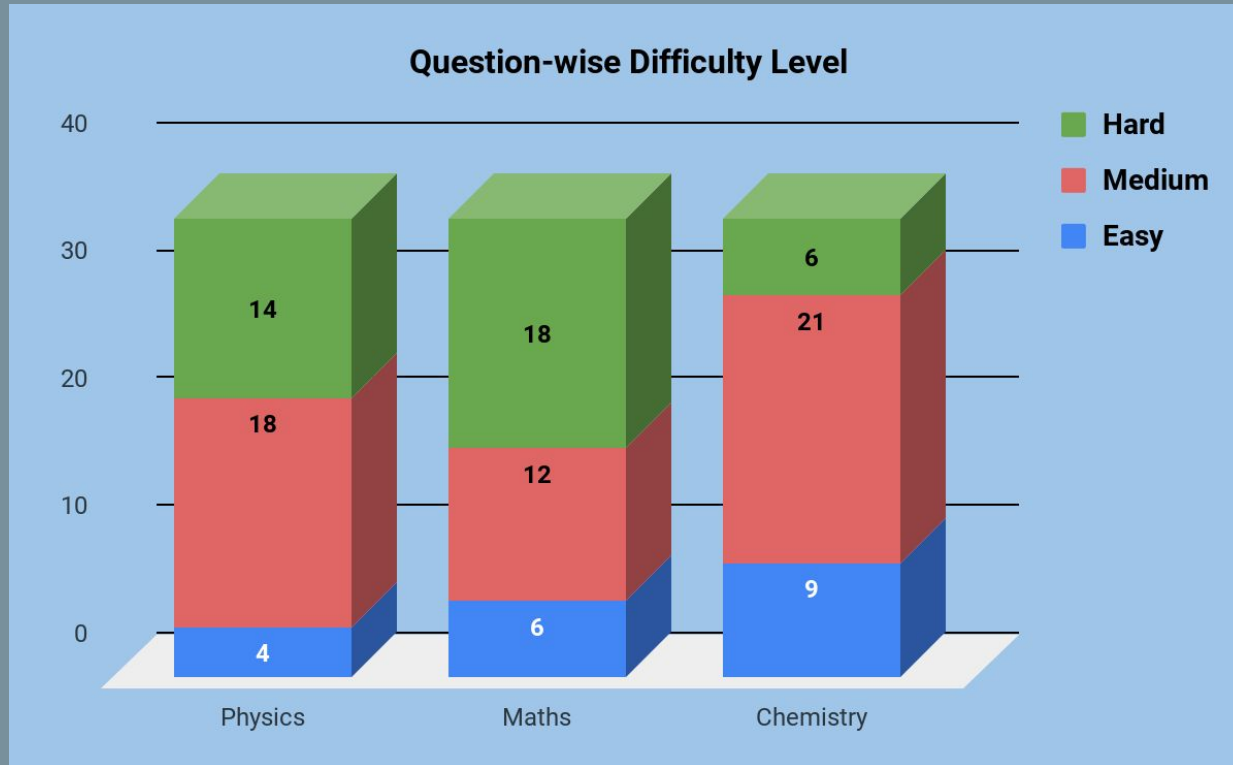
- Here is a summary of the difficulty level analysis given by experts.

Subjects	Difficulty Level
Physics	From Moderate to Difficult
Chemistry	Easy and scoring
Maths	On the difficult side with the majority of the questions being lengthy
Overall	Relatively tough than the previous year (2018)

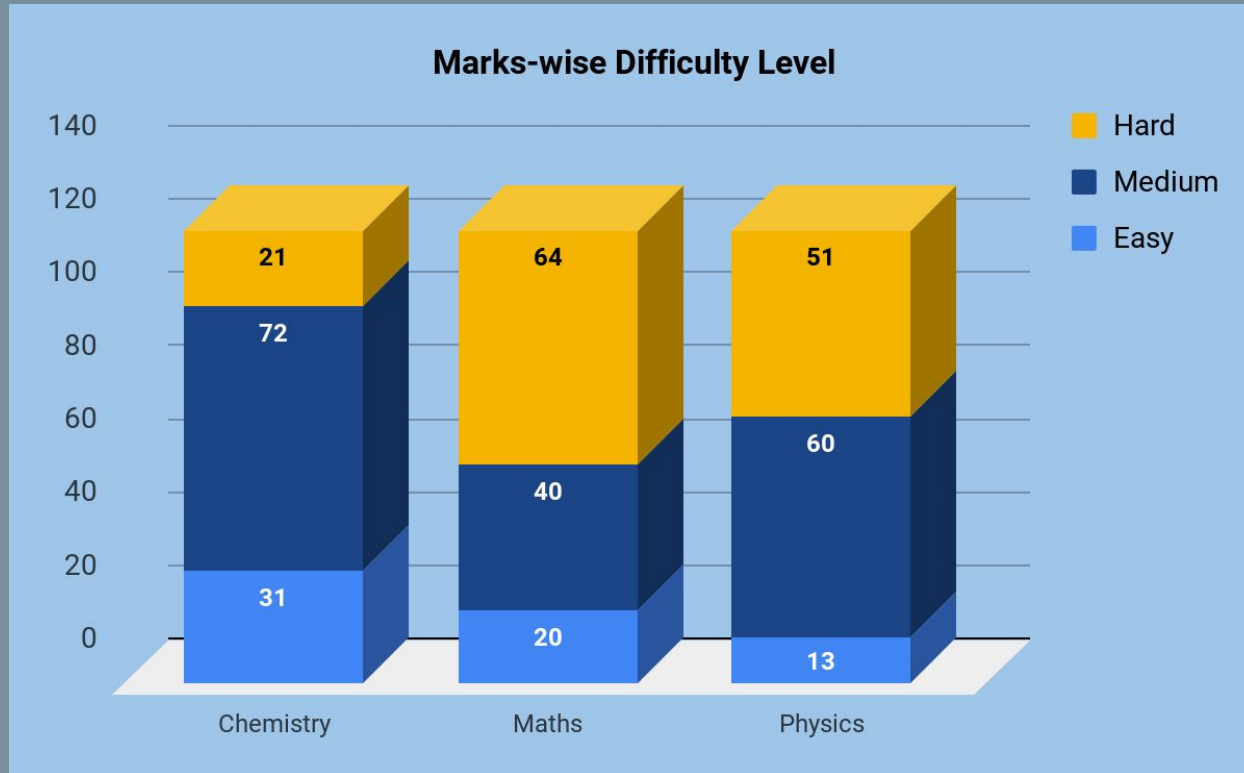
JEE Advanced 2019 Overall Difficulty Analysis

Subject	Easy		Moderate		Tough	
	No. of Questions	Total Marks	No. of Questions	Total Marks	No. of Questions	Total Marks
Physics	4	13	18	60	14	51
Chemistry	9	31	21	72	6	21
Maths	6	20	12	40	18	64
Grand Total	19	64	51	172	38	136

JEE Advanced 2019 Question-wise Difficulty Level



JEE Advanced 2019 Marks-wise Difficulty Level



JEE Advanced 2019 Paper Analysis: Physics

- Physics questions in paper 1 and paper 2 were on a moderate level but lengthy.
- The physics section in both the papers had questions that were concept and application based on some calculations.
- Most of the questions were set from Thermodynamics, Optics and Thermodynamics and Electrostatics.

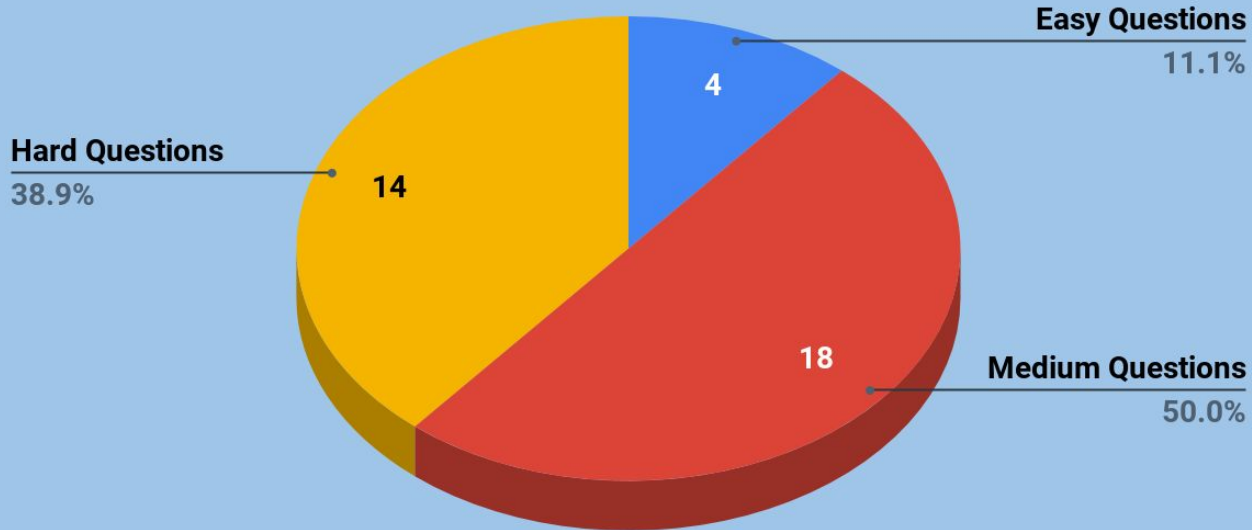
Subject	Class 11		Class 12		Total	
	No. of Questions	Total Marks	No. of Questions	Total Marks	Total Questions	Total Marks
Physics	18	61	18	63	36	124

Topic wise Question Breakup in Physics		
Topics	No of Questions	Weightage of Marks
Electrodynamics	8	23.39%
Capacitance	2	5.65%
Electromagnetic Induction	2	5.65%
Electrostatics	3	8.87%
Current Electricity	1	3.23%
Heat & Thermodynamics	6	16.13%
KTG & Thermodynamics	5	13.71%
Calorimetry & Thermal Expansion	1	2.42%
Mechanics	9	25.00%
Centre of Mass	1	3.23%
Error in Measurement	1	2.42%
Gravitation	1	2.42%
Rigid Body Dynamics	1	3.23%
Surface Tension	1	3.23%
Work, Power & Energy	1	2.42%
Elasticity & Viscosity	1	2.42%

Topic wise Question Breakup in Physics		
Topics	No of Questions	Weightage of Marks
Projectile Motion	1	2.42%
Unit & Dimension	1	3.23%
Modern Physics	4	10.48%
Modern Physics	2	5.65%
Nuclear Physics	2	4.84%
Optics	5	14.52%
Geometrical Optics & Physical Optics	4	11.29%
Wave Optics	1	3.23%
SHM & Waves	4	10.48%
Sound Waves	1	2.42%
String Wave	2	4.84%
SHM	1	3.23%

JEE Advanced 2019 Paper Analysis: Physics Section

No of Questions and Difficulty Percentage



JEE Advanced 2019 Paper Analysis: Chemistry

- Chemistry section in both paper 1 and paper 2 was the easiest.
- The questions were mainly designed to test the candidates' understanding of the concepts.
- In this section, questions from inorganic and organic chemistry were balanced while there was less number of questions from physical chemistry.

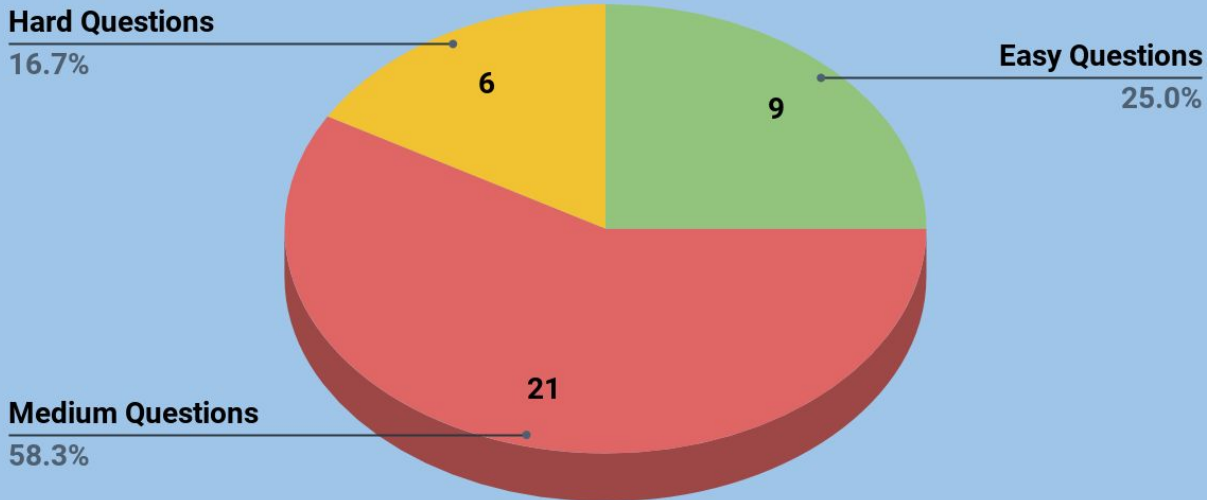
Subject	Class 11		Class 12		Total	
	No. of Questions	Total Marks	No. of Questions	Total Marks	Total Questions	Total Marks
Chemistry	11	38	25	86	36	124

Topic wise Question Breakup in Chemistry		
Topics	No of Questions	Weightage of Marks
Inorganic Chemistry-I	4	11.29%
Chemical Bonding	1	2.42%
p-block	3	8.87%
Inorganic Chemistry-II	6	16.94%
Coordination Compounds	1	2.42%
d-block & f-block Elements	2	6.45%
Qualitative Analysis	1	2.42%
Metallurgy	2	5.65%
Organic Chemistry-I	1	2.42%
General Organic Chemistry- II	1	2.42%
Organic Chemistry-II	11	31.45%
Aromatic Compounds	2	5.65%
Carbonyl compounds	3	8.06%
Organic Reaction Mechanism 4	1	3.23%
Stereoisomerism	1	2.42%

Topic wise Question Breakup in Chemistry		
Topics	No of Questions	Weightage of Marks
Biomolecules	1	3.23%
Grignard Reagent, Reduction, Oxidation & Hydrolysis	2	5.65%
Polymers	1	3.23%
Physical Chemistry-I	10	28.23%
Atomic Structure & Nuclear Chemistry	4	11.29%
Chemical Bonding	1	3.23%
Chemical Equilibrium	1	2.42%
Mole Concept	2	4.84%
Thermodynamics and Thermochemistry	1	3.23%
Gaseous State	1	3.23%
Physical Chemistry-II	4	9.68%
Chemical Kinetics	2	4.84%
Solution & Colligative Properties	1	2.42%
Surface Chemistry	1	2.42%

JEE Advanced 2019 Paper Analysis: Chemistry Section

No of Questions and Difficulty Percentage



JEE Advanced 2019 Paper Analysis: Maths Section

- The mathematics section in paper 1 and paper 2 had questions that were on a moderate to difficult level.
- Questions took a bit longer time to solve and attempting all the questions was a difficult task.
- Questions were mainly set from Algebra, Coordinate Geometry, and Integral Calculus. Few questions were based on Probability, Quadratic Equation and Sequence & Series.

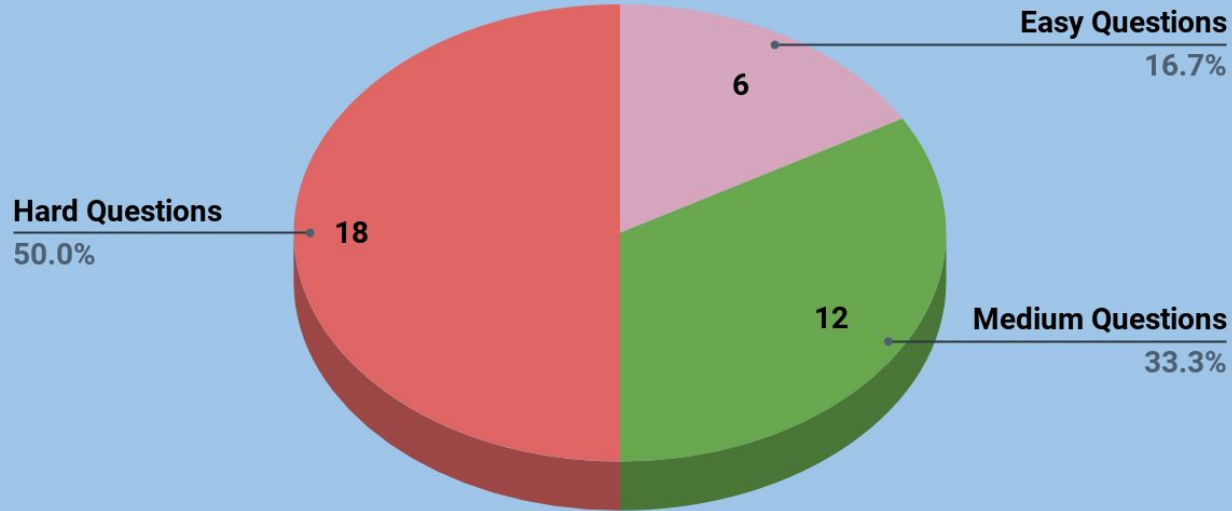
Subject	Class 11		Class 12		Total	
	No. of Questions	Total Marks	No. of Questions	Total Marks	Total Questions	Total Marks
Maths	14	47	22	77	36	124

Topic wise Question Breakup in Maths		
Topics	No of Questions	Weightage of Marks
Algebra	1	2.42%
Complex Numbers	2	4.84%
Coordinate Geometry	5	12.90%
Circle	4	9.68%
Ellipse	1	3.23%
Differential Calculus	5	14.52%
Functions	2	4.84%
Application of Derivatives	2	6.45%
Continuity & Derivability	1	3.23%
Integral Calculus	6	16.94%
Definite integration	5	13.71%
Differential equation	1	3.23%
Matrix & Determinants	4	12.10%

Topic wise Question Breakup in Maths		
Topics	No of Questions	Weightage of Marks
Permutation & Combination	2	4.84%
Probability	2	5.65%
Quadratic Equation	1	3.23%
Sequence & Series	1	2.42%
Trigonometry	3	8.87%
Solution of Triangle	1	3.23%
Inverse Trigonometric function	1	2.42%
Trigonometric Ratio & identities	1	3.23%
Vector and 3D	4	11.29%

JEE Advanced 2019 Paper Analysis: Maths Section

No of Questions and Difficulty Percentage



Important Topics Asked in JEE Advanced 2019 Paper: Physics

- ❑ Electrodynamics
- ❑ Mechanics
- ❑ Heat & Thermodynamics
- ❑ KTG & Thermodynamics
- ❑ Optics
- ❑ Modern Physics
- ❑ Geometrical Optics & Physical Optics
- ❑ SHM & Waves
- ❑ Electrostatics
- ❑ Capacitance
- ❑ Electromagnetic Induction
- ❑ Modern Physics
- ❑ Nuclear Physics
- ❑ String Wave

Chemistry

- ❑ Inorganic Chemistry-I
- ❑ Organic Chemistry-II
- ❑ Physical Chemistry-I
- ❑ Inorganic Chemistry-II
- ❑ Atomic Structure & Nuclear Chemistry
- ❑ Physical Chemistry-II
- ❑ p-block
- ❑ Carbonyl compounds
- ❑ d-block & f-block Elements
- ❑ Metallurgy
- ❑ Aromatic Compounds
- ❑ Reduction, Oxidation & Hydrolysis
- ❑ Mole Concept
- ❑ Chemical Kinetics

Maths

- ❑ Integral Calculus
- ❑ Coordinate Geometry
- ❑ Differential Calculus
- ❑ Definite integration
- ❑ Circle
- ❑ Matrix & Determinants
- ❑ Vector and 3D
- ❑ Binomial Theorem
- ❑ Trigonometry
- ❑ Complex Numbers
- ❑ Functions
- ❑ Application of Derivatives
- ❑ Permutation & Combination
- ❑ Probability

JEE Advanced 2019 Cutoff

Category	Minimum Percentage of Marks in Each Subject	Minimum Percentage of Aggregate Marks	Revised Cutoff
Common rank list (CRL)	10	35	25
GEN-EWS rank list	9	31.5	22.5
OBC-NCL rank list	9	31.5	22.5
SC rank list	5	17.5	12.5
ST	5	17.5	12.5
Common-PwD rank list (CRL)	5	17.5	12.5
OBC-NCL-PwD rank list	5	17.5	12.5
SC-PwD rank list	5	17.5	12.5
ST-PwD rank list	5	17.5	12.5
Preparatory course rank lists	2.5	8.75	6.25

Thank You!

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