

JEE ADVANCED

2017

TOPIC WISE ANALYSIS



JEE Advanced 2017 Paper

| | |
|--------------------------------|---|
| Exam Conducting Body | IIT Madras |
| Exam Date | 21st May, 2017 |
| 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 | 366 Marks: 183 marks for each paper |
| Question Type | MCQs, Numerical Problems, Comprehension, list match sets |

JEE Advanced 2017 Paper Marking Scheme

JEE Advanced Paper I and Paper II are divided into **three sections** containing three different subjects each.

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

| | Paper I | | | | Paper II | | | |
|---------|---------------------------------|--|-----------|-------------|-------------------------------|-------------------------------------|-----------|-------------|
| Section | Question Pattern | Marking Scheme | No. of Q. | Total Marks | Question Pattern | Marking Scheme | No. of Q. | Total Marks |
| 1 | Multiple Answers Correct Type | +4 for correct, +1 for Partial correct, -2 for wrong | 7 | 28 | Single Answer Correct Type | +3 for correct, -1 for wrong | 7 | 21 |
| 2 | Numerical Answer Type | +3 for Correct, No Negative Marking | 5 | 15 | Multiple Answers Correct Type | +3 for Correct, No Negative Marking | 7 | 28 |
| 3 | Comprehension / Column matching | +3 for correct, -1 for wrong | 6 | 18 | Comprehension | +3 for correct, -1 for wrong | 2 | 12 |

JEE Advanced 2017 Paper: Distribution of Questions

The distribution of questions in both Paper I and Paper II was 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 |
| Chemistry | 14 | 48 | 22 | 74 | 36 | 122 |
| Mathematics | 14 | 46 | 22 | 76 | 36 | 122 |
| Physics | 17 | 57 | 19 | 65 | 36 | 122 |
| Grand Total | 45 | 151 | 63 | 215 | 108 | 366 |

JEE Advanced 2017: Expert's Viewpoint

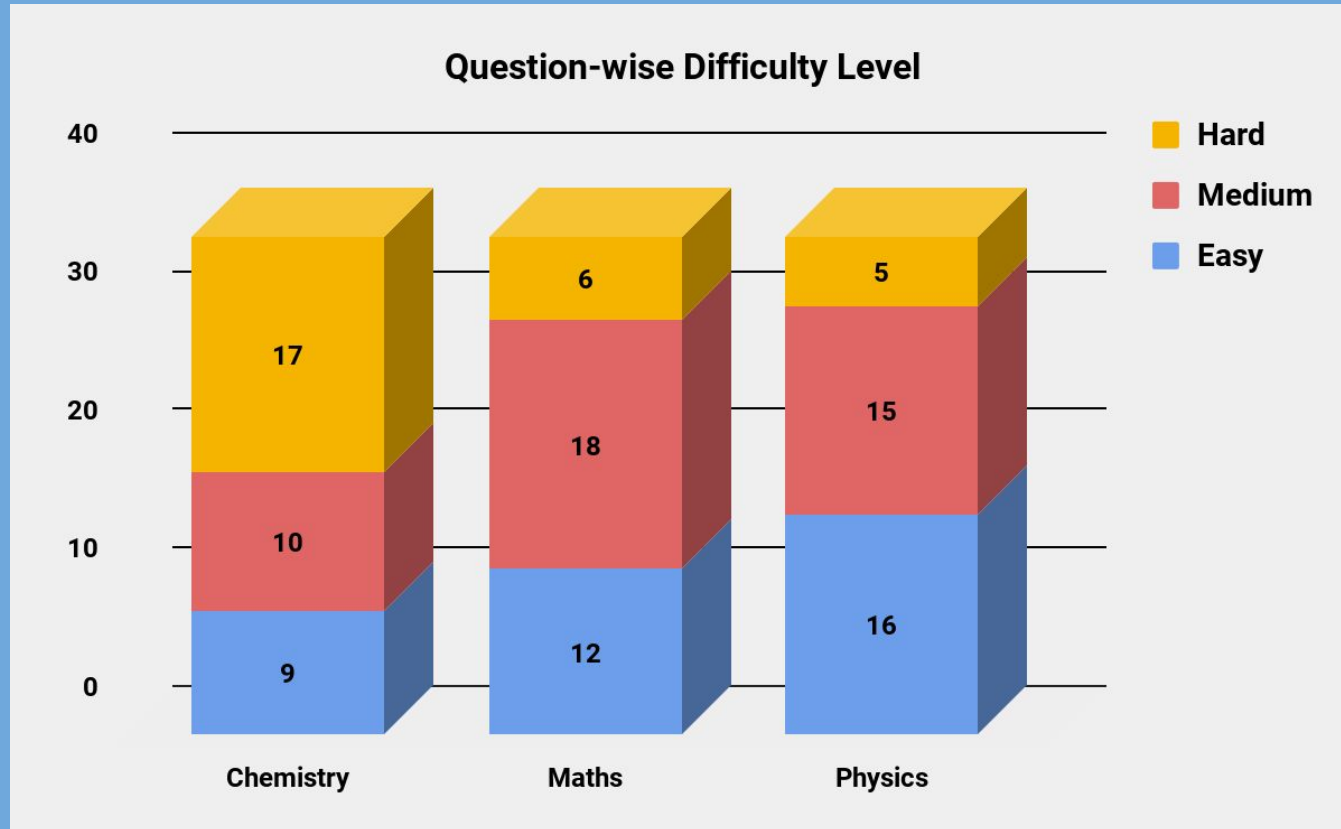
- As per the experts the difficulty level of the two papers were given as:

| Subjects | Difficulty Level |
|-----------|---|
| Physics | Between medium to difficult. |
| Chemistry | On the difficult side due to application-based approach of the questions. |
| Maths | Comparatively easier than Physics and Chemistry. |
| Overall | On a moderate level. The paper was relatively easy than last year (2016). |

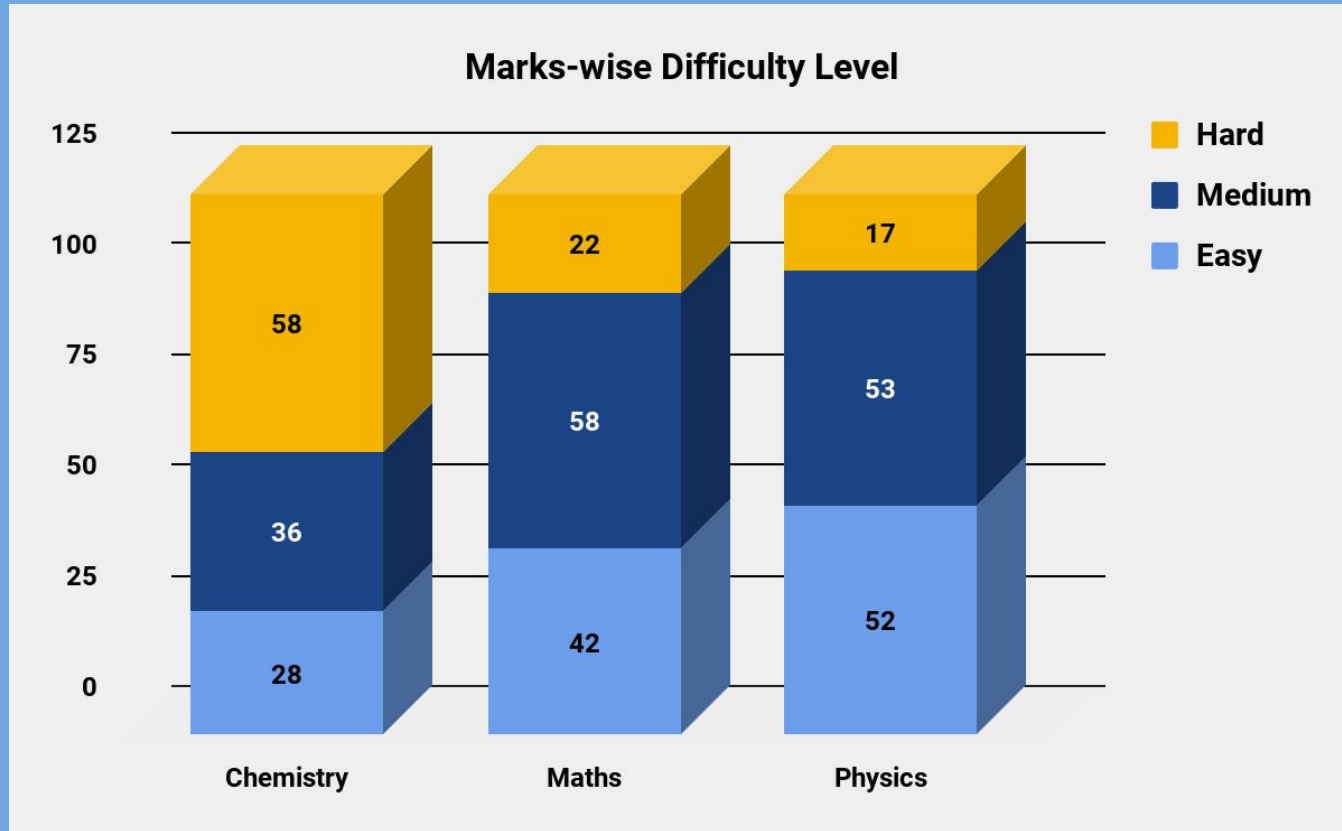
JEE Advanced 2017 Overall Difficulty Analysis

| Subject | Easy | | Moderate | | Tough | |
|-------------|------------------|-------------|------------------|-------------|------------------|-------------|
| | No. of Questions | Total Marks | No. of Questions | Total Marks | No. of Questions | Total Marks |
| Physics | 16 | 52 | 15 | 53 | 5 | 17 |
| Chemistry | 9 | 28 | 10 | 36 | 17 | 58 |
| Maths | 12 | 42 | 18 | 58 | 6 | 22 |
| Grand Total | 37 | 122 | 43 | 147 | 28 | 97 |

JEE Advanced 2017 Question-wise Difficulty Level



JEE Advanced 2017 Marks-wise Difficulty Level



JEE Advanced 2017 Paper Analysis: Physics

- Physics section in both the papers was moderate in terms of difficulty level.
- Questions consisted of both a mixture of conceptual and formula-based ones.
- Some of the questions were lengthy and calculative in nature as well.
- The overall paper was slightly easier compared to last year.
- Electromagnetics chapter saw majority of the questions followed by Mechanics.

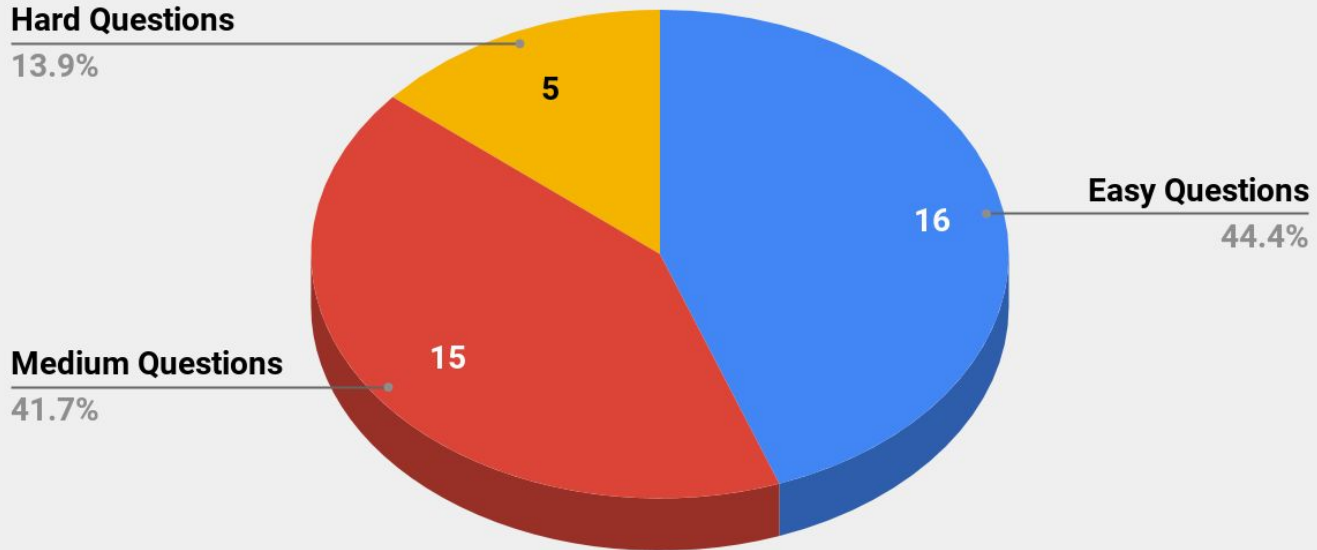
| Subject | Class 11 | | Class 12 | | Total | |
|---------|------------------|-------------|------------------|-------------|-----------------|-------------|
| | No. of Questions | Total Marks | No. of Questions | Total Marks | Total Questions | Total Marks |
| Physics | 17 | 57 | 19 | 65 | 36 | 122 |

Topic wise Question Breakup in Physics

| Topics | No of Questions | Weightage of Marks |
|------------------------------|-----------------|--------------------|
| Electromagnetic Field | 6 | 16.39% |
| Alternating Current | 2 | 6.56% |
| Electrostatics | 1 | 3.28% |
| Capacitance | 2 | 4.92% |
| Electromagnetic Induction | 1 | 3.28% |
| Centre of Mass | 1 | 3.28% |
| Heat & Thermodynamics | 5 | 13.93% |
| Gravitation | 1 | 2.46% |
| Error in Measurement | 1 | 2.46% |
| Rectilinear Motion & Vectors | 1 | 2.46% |
| Mathematical Tools | 1 | 2.46% |
| Surface Tension | 1 | 2.46% |
| Rigid Body Dynamics | 5 | 13.93% |
| Optics | 3 | 9.02% |
| Modern Physics | 3 | 7.38% |
| SHM & Waves | 2 | 5.74% |

JEE Advanced 2017 Paper Analysis: Physics Section

No of Questions and Difficulty Percentage



JEE Advanced 2017 Paper Analysis: Chemistry

- Chemistry section consisted of questions that were a bit difficult compared to Maths and Physics.
- The Chemistry section was difficult mainly because of the application-based approach of the questions.
- This section also had calculation-based questions.
- Inorganic chemistry had the highest weightage.
- Compared to last year, it was a tough paper.

| Subject | Class 11 | | Class 12 | | Total | |
|-----------|------------------|-------------|------------------|-------------|-----------------|-------------|
| | No. of Questions | Total Marks | No. of Questions | Total Marks | Total Questions | Total Marks |
| Chemistry | 14 | 48 | 22 | 74 | 36 | 122 |

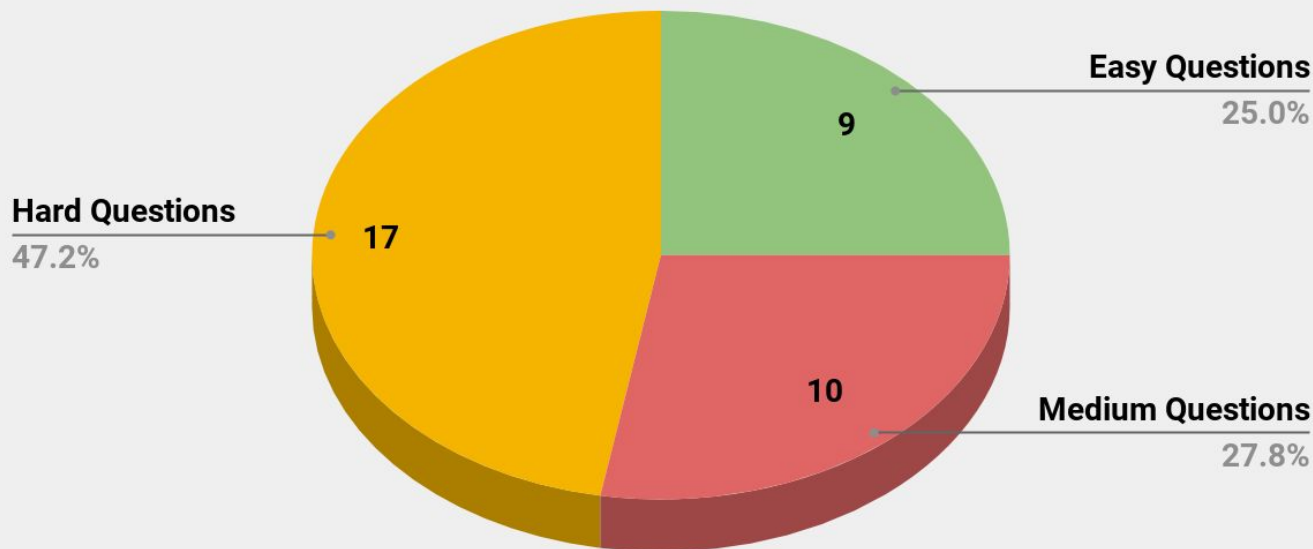
| Topic wise Question Breakup in Chemistry | | |
|---|------------------------|---------------------------|
| Topics | No of Questions | Weightage of Marks |
| Chemical Bonding | 6 | 18.03% |
| Coordination Compounds | 1 | 3.28% |
| p-block | 2 | 4.92% |
| General Organic Chemistry- II | 1 | 2.46% |
| d & f block Elements | 1 | 2.46% |
| Alkyl Halide, Alcohol & Ether | 3 | 9.02% |
| General Organic Chemistry | 1 | 2.46% |
| Carbonyl compounds | 3 | 8.20% |
| Aromatic Compounds | 3 | 7.38% |
| Atomic & Nuclear Chemistry | 3 | 7.38% |

Topic wise Question Breakup in Chemistry

| Topics | No of Questions | Weightage of Marks |
|-----------------------------------|-----------------|--------------------|
| IUPAC & Isomerism | 1 | 3.28% |
| Mole Concept | 1 | 2.46% |
| Chemical Equilibrium | 1 | 3.28% |
| Chemical Kinetics | 1 | 3.28% |
| Thermodynamics | 2 | 5.74% |
| Solid State | 1 | 2.46% |
| Electrochemistry | 2 | 4.92% |
| Surface Chemistry | 1 | 3.28% |
| Solution & Colligative Properties | 2 | 5.74% |

JEE Advanced 2017 Paper Analysis: Chemistry Section

No of Questions and Difficulty Percentage



JEE Advanced 2017 Paper Analysis: Maths Section

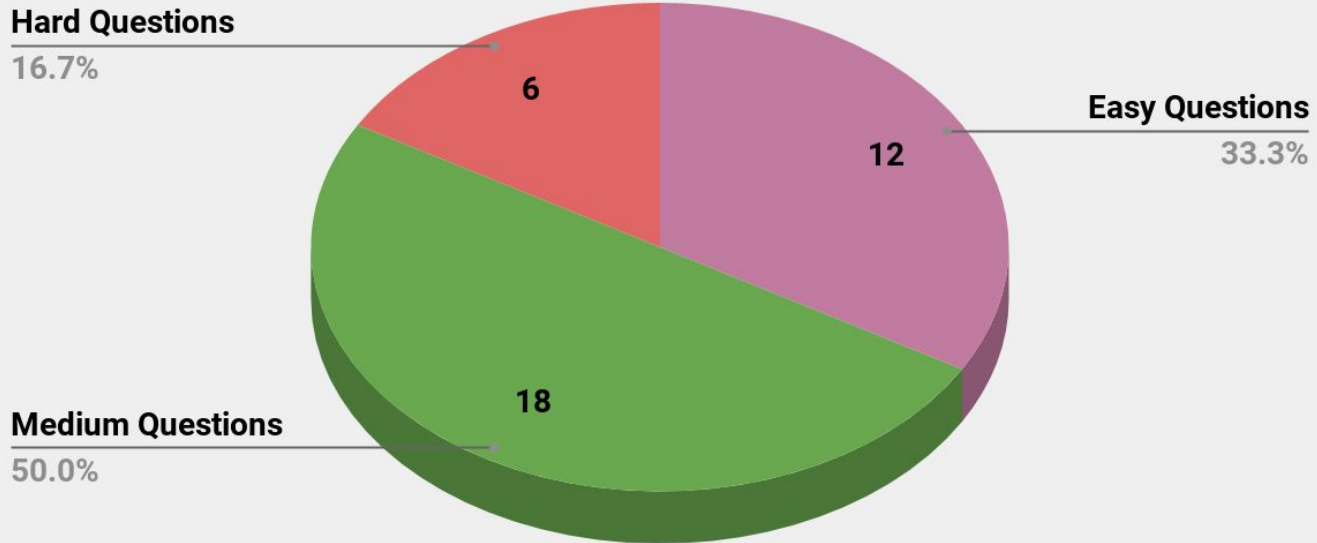
- Mathematics was on a moderate level this time.
- Students with good understanding of the concepts should be able to do well.
- Most of the questions were asked from Calculus and Algebra followed by Coordinate Geometry.
- Compared to last year though, it was significantly easier.

| Subject | Class 11 | | Class 12 | | Total | |
|---------|------------------|-------------|------------------|-------------|-----------------|-------------|
| | No. of Questions | Total Marks | No. of Questions | Total Marks | Total Questions | Total Marks |
| Maths | 14 | 46 | 22 | 76 | 36 | 122 |

| Topic wise Question Breakup in Maths | | |
|---|------------------------|---------------------------|
| Topics | No of Questions | Weightage of Marks |
| Algebra | 1 | 2.46% |
| Coordinate Geometry | 6 | 16.39% |
| Complex Numbers | 1 | 3.28% |
| Integral Calculus | 6 | 18.03% |
| Differential Calculus | 7 | 19.67% |
| Permutation & Combination | 2 | 4.92% |
| Matrix & Determinants | 4 | 11.48% |
| Quadratic Equation | 2 | 4.92% |
| Probability | 2 | 5.74% |
| Trigonometry | 1 | 3.28% |
| Sequence & Series | 1 | 2.46% |
| Vector and 3D | 3 | 7.38% |

JEE Advanced 2017 Paper Analysis: Maths Section

No of Questions and Difficulty Percentage



Important Topics Asked in JEE Advanced 2017 Paper: Physics

- ❑ Electromagnetic Field
- ❑ Alternating Current
- ❑ Capacitance
- ❑ Heat & Thermodynamics
- ❑ Gravitation
- ❑ Error in Measurement
- ❑ Mathematical Tools
- ❑ Surface Tension
- ❑ Rigid Body Dynamics
- ❑ Optics
- ❑ Modern Physics
- ❑ SHM & Waves

Chemistry

- ❑ Chemical Bonding
- ❑ p-block
- ❑ Alkyl Halide, Alcohol & Ether
- ❑ General Organic Chemistry
- ❑ Carbonyl compounds
- ❑ Aromatic Compounds
- ❑ Atomic & Nuclear Chemistry
- ❑ Mole Concept
- ❑ Chemical Equilibrium
- ❑ Thermodynamics
- ❑ Electrochemistry
- ❑ Solution & Colligative Properties

Maths

- ❑ Algebra
- ❑ Coordinate Geometry
- ❑ Complex Numbers
- ❑ Integral Calculus
- ❑ Differential Calculus
- ❑ Permutation & Combination
- ❑ Matrix & Determinants
- ❑ Quadratic Equation
- ❑ Probability
- ❑ Trigonometry
- ❑ Sequence & Series
- ❑ Vector and 3D

JEE Advanced 2017 Cutoff

| Category | Minimum Percentage of Marks in Each Subject | Minimum Percentage of Aggregate Marks |
|-------------------------------|---|---------------------------------------|
| Common rank list (CRL) | 10 | 35 |
| OBC-NCL rank list | 9 | 31.5 |
| SC rank list | 5 | 17.5 |
| ST | 5 | 17.5 |
| Common-PwD rank list (CRL) | 5 | 17.5 |
| OBC-NCL-PwD rank list | 5 | 17.5 |
| SC-PwD rank list | 5 | 17.5 |
| ST-PwD rank list | 5 | 17.5 |
| Preparatory course rank lists | 2.5 | 8.75 |

Thank You!

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