

## JEE (Advanced) 2013: A Detailed Analysis

After comprehensive changes in one of the toughest Entrance Examination in the world, stage-2 for IITs, JEE (Advanced) 2013 was conducted on 2 June 2013 (Sunday). Around 1.25 Lakh students appeared for this exam, who have earlier qualified in JEE (Main) 2013 conducted on 7-April-2013 (Sunday)

As earlier IIT-JEE Examinations, JEE (Advanced) 2013 was conducted in two parts (Paper 1 & Paper 2). Paper 1 was conducted from 9 AM to 12 PM and Paper 2 was conducted from 2 PM to 5 PM.

### OVERALL MARKS DISTRIBUTION

In Paper I, Total 60 Questions were asked. 20 Questions from Each Subject were asked. Both papers were of 180 Marks with 60 Marks for each subject.

Subject		Paper 1	Paper 2	Total
In Physics, Chemistry & Mathematics EACH	No of Questions	20	20	40
	Total Marks	60	60	120
<b>Total</b>	<b>No of Questions</b>	<b>60</b>	<b>60</b>	<b>120</b>
	<b>Total Marks</b>	<b>180</b>	<b>180</b>	<b>360</b>

### PUBLISHED CUT-OFF BY IIT AUTHORITIES

This year JEE has already published cut-off in their JEE (Advanced) 2013 Brochure.

Cut-off Published by IIT Authorities		
Category	Individual Subject Cut-off	Overall Cut-off
General	10.0%	35.0%
OBC	9.0%	31.5%
SC	5.0%	17.5%
ST	5.0%	17.5%

### BRIEF QUANTITATIVE ANALYSIS

The Pattern of Questions in Each Physics, Chemistry and Mathematics was Similar in Both Papers. For Each Subject following was marks distribution

#### Question Pattern for Each Subject in Paper 1

	Single Answer MCQ (ZERO Negative Marking)	Multiple Answer MCQ (-1 Negative Marking)	Single Digit Integer Type (-1 Negative Marking)	Total
Questions/Subject	10	5	5	20
Marks / Question	2	4	4	
<b>Marks/Subject</b>	20	20	20	<b>60</b>
<b>Total Questions</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>60</b>
<b>Total Marks</b>	<b>90</b>	<b>60</b>	<b>60</b>	<b>180</b>

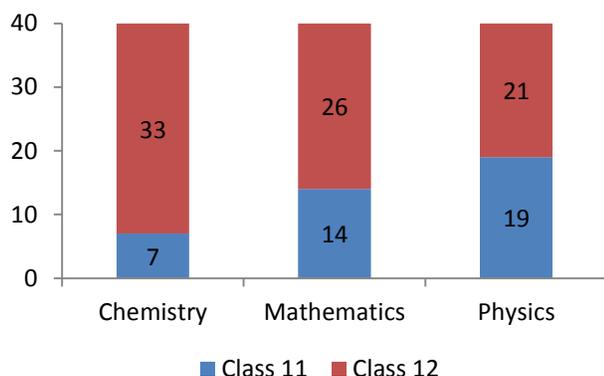
#### Question Pattern for Each Subject in Paper 2

	Multiple Answer MCQ (-1 Negative Marking)	Comprehension Type MCQ (-1 Negative Marking)	Matching Type MCQ (-1 Negative Marking)	Total
Questions/Subject	8	8	4	20
Marks / Question	3	3	3	
<b>Marks/Subject</b>	24	24	12	<b>60</b>
<b>Total Questions</b>	<b>24</b>	<b>18</b>	<b>18</b>	<b>60</b>
<b>Total Marks</b>	<b>72</b>	<b>54</b>	<b>54</b>	<b>180</b>

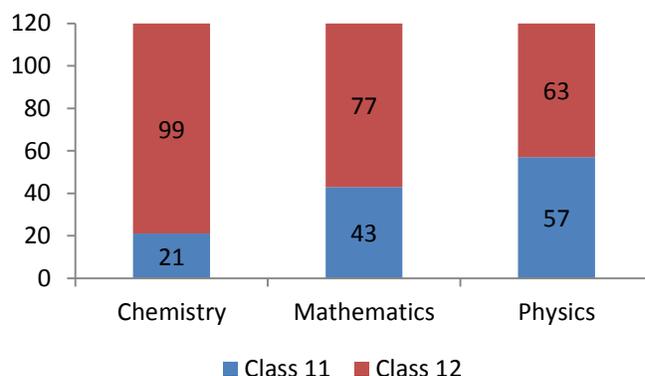
### CLASS WISE DISTRIBUTION OF QUESTIONS AND MARKS

Subject	Paper	No of Questions		Marks	
		11 <sup>th</sup>	12 <sup>th</sup>	11 <sup>th</sup>	12 <sup>th</sup>
Physics	Paper 1	10	10	30	30
	Paper 2	9	11	27	33
Chemistry	Paper 1	2	18	6	54
	Paper 2	5	15	15	45
Mathematics	Paper 1	5	15	16	44
	Paper 2	9	11	27	33
<b>Total</b>	<b>Paper 1</b>	<b>17</b>	<b>43</b>	<b>52</b>	<b>128</b>
	<b>Paper 2</b>	<b>23</b>	<b>37</b>	<b>69</b>	<b>111</b>

#### Classwise Question Breakup



#### Classwise Marks Breakup



## OVERALL DIFFICULTY LEVEL ANALYSIS

In this analysis we have rated every question on a scale of 1 to 5. The ratings are done by expert faculty of Resonance. The individual ratings are then averaged to calculate over all difficulty level.

- 1: Easy
- 2: Moderate
- 3: Difficult

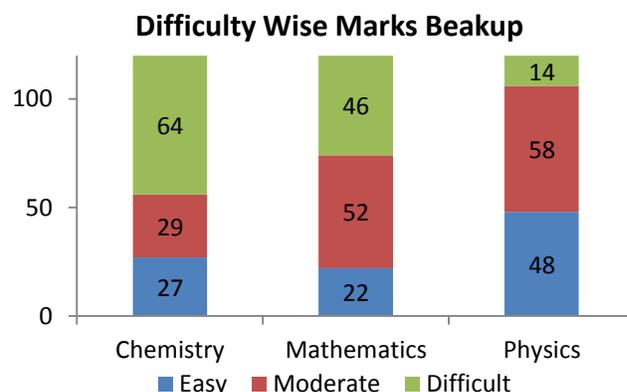
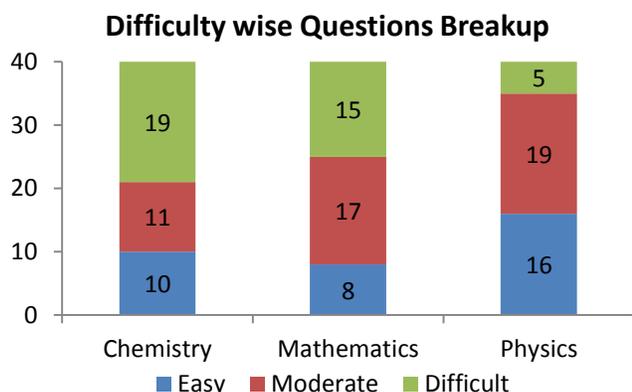
Subject	Paper 1	Paper 2	Total
Physics	1.65	1.80	1.73
Chemistry	2.30	2.15	2.23
Mathematics	2.35	2.00	2.18
<b>Total</b>	<b>2.10</b>	<b>1.98</b>	<b>2.04</b>

## Difficulty Level Analysis: No of Questions

Subject	Easy	Moderate	Difficult	Total
<b>Chemistry</b>	10	11	19	40
<b>Mathematics</b>	8	17	15	40
<b>Physics</b>	16	19	5	40
<b>Total</b>	34	47	39	<b>120</b>

## Difficulty Level Analysis: Marks Allocation

Subject	Easy	Moderate	Difficult	Total
<b>Chemistry</b>	27	29	64	120
<b>Mathematics</b>	22	52	46	120
<b>Physics</b>	48	58	14	120
<b>Total</b>	97	139	124	<b>360</b>



## PHYSICS ANALYSIS

### Topic wise Allocation of Marks

Topics	No of Questions	Total Marks	% Weightage
Nuclear Physics	4	13	11%
Electro Magnetic Field	4	13	11%
Work, Power & Energy	4	12	10%
Modern Physics	3	9	8%
Electrostatics	2	7	6%
Geometrical Optics & Physical Optics	3	7	6%
Alternating Current	2	6	5%
Centre of Mass	2	5	4%
Error in Measurement	2	5	4%
Heat Transfer	2	5	4%
KTG & Thermodynamics	2	5	4%
Fluid Mechanics & Properties of Matter	1	4	3%
Circular Motion	1	4	3%
String Wave	1	4	3%
Capacitance	1	4	3%
Rigid Body Dynamics	1	4	3%
Unit & Dimension	1	3	3%
Sound Waves	1	3	3%
Gravitation	1	3	3%
Elasticity & Viscosity	1	2	2%
Wave Optics	1	2	2%
<b>Grand Total</b>	<b>40</b>	<b>120</b>	<b>100%</b>

### CHEMISTRY ANALYSIS

#### Topic wise Allocation of Marks

Topics	No of Questions	Total Marks	% Weightage
Transition Elements and Coordination Chemistry	3	10	8%
Gaseous State	3	10	8%
Qualitative Analysis	4	10	8%
p-block	3	9	8%
Aromatic Compound	3	9	8%
Biochemistry	2	8	7%
Carboxylic Acid and their Derivatives	2	7	6%
Chemical Kinetics	2	6	5%
Electrochemistry	2	6	5%
General Organic Chemistry- II	2	6	5%
Metallurgy	2	5	4%
Colligative Properties	1	4	3%
General Organic Chemistry-I	1	4	3%
Chemical Equilibrium	1	3	3%
Chemical Bonding	1	3	3%
Ionic Equilibrium	1	3	3%
Atomic Structure & Nuclear Chemistry	1	3	3%
Hydrocarbon	1	3	3%
Carbonyl compounds	1	3	3%
Reaction Mechanism	1	2	2%
Thermodynamics and Thermochemistry	1	2	2%
Solid State	1	2	2%
Surface Chemistry	1	2	2%
<b>Grand Total</b>	<b>40</b>	<b>120</b>	<b>100%</b>

## MATHEMATICS ANALYSIS

### Topic wise Allocation of Marks

Topics	No of Questions	Total Marks	% Weightage
Application of Derivatives	7	22	18%
Complex Numbers	5	14	12%
Probability	4	12	10%
Co-ordinate Geometry (3-D)	4	12	10%
Vector	3	9	8%
Parabola	2	6	5%
Inverse Trigonometric function	2	5	4%
Binomial Theorem	1	4	3%
Permutation & Combination	1	4	3%
Sequence & Series	1	4	3%
Matrix & Determinants	1	4	3%
Methods of Differentiation	1	4	3%
Solution of Triangle	1	3	3%
Fundamentals of Mathematics	1	3	3%
Circle	1	3	3%
Limit of function	1	3	3%
Differential equation	1	2	2%
Straight Line	1	2	2%
Definite integration	1	2	2%
Area under curve	1	2	2%
<b>Grand Total</b>	<b>40</b>	<b>120</b>	<b>100%</b>