

## **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.

<b>Cut-off Published by IIT Authorities</b>		
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>

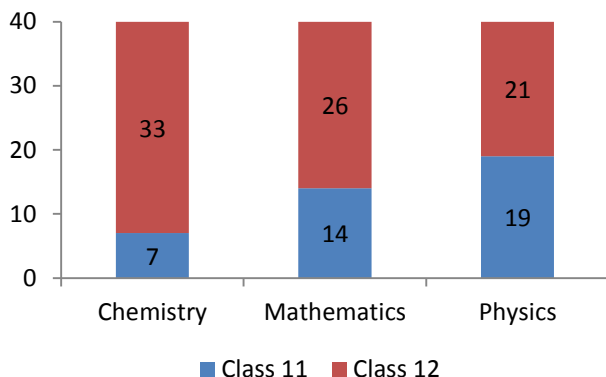
#### Question Pattern for Each Subject in Paper 2

	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>

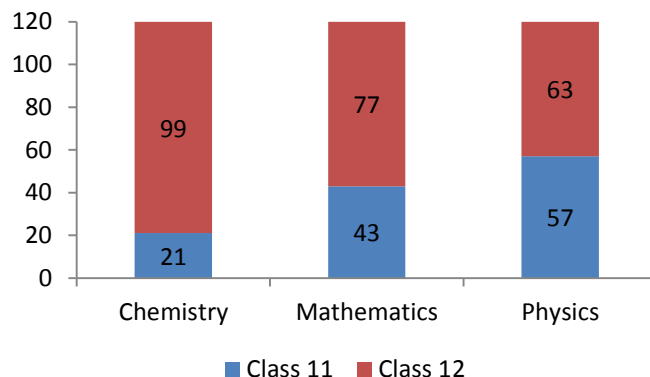
### CLASS WISE DISTRIBUTION OF QUESTIONS AND MARKS

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

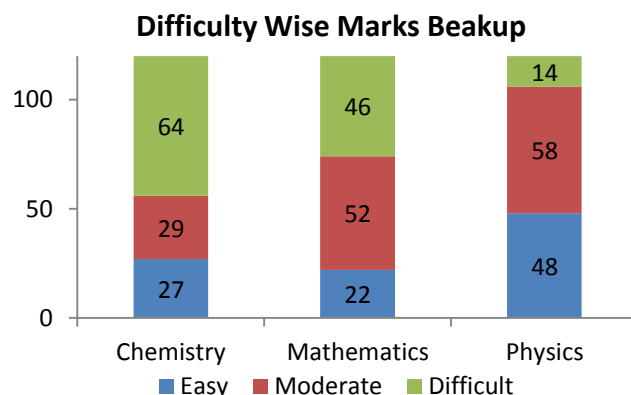
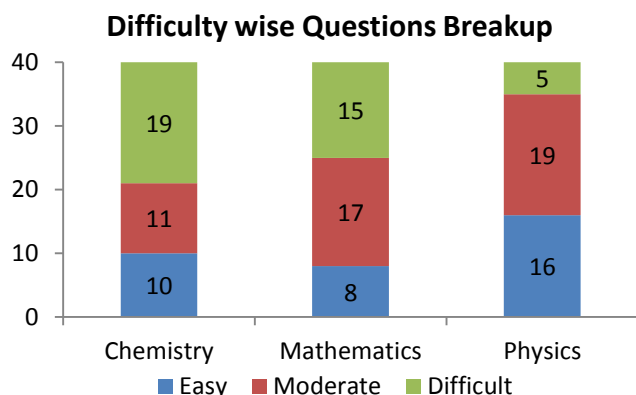
Subject	Paper 1	Paper 2	Total
Physics	1.65	1.80	1.73
Chemistry	2.30	2.15	2.23
Mathematics	2.35	2.00	2.18
<b>Total</b>	<b>2.10</b>	<b>1.98</b>	<b>2.04</b>

## 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>