

# Insight Into IIT-JEE 2009

As expected, the IITs played with their exam pattern yet again. This year's IIT-JEE had Paper-I and Paper-II similar to those of last year. However, the number of questions in both the papers was different from the last year's. The Paper-I had 20 questions in each of the subjects i.e. Physics, Chemistry and Mathematics and Paper-II had 19 questions in each subject. Though the number of questions asked was less than that of the last year, the overall composition of the paper coincided with the past year's pattern.

If we look at the Mathematics portion, the questions asked in the Mathematics sections of IIT-JEE 2009, though seemed easy, were highly conceptual. In Paper-I of Mathematics, Calculus, Algebra and Probability portions dominated with each contributing 20% questions towards the overall composition. Additionally, Algebra and 2D Geometry formulated a significant 15% of the overall composition of the Paper. The remaining part of the Paper-I was supplemented by questions on Trigonometry and 3D-Vectors. Interestingly, the weightage of questions asked from Class XII portion of the JEE syllabus was at 65%, which is 7-8% higher than that of the last year. This, nevertheless, is a positive thing as far as benefit to students is concerned. If you look at the composition of Paper-II of Mathematics, the paper was highly skewed towards Calculus and 2-D Geometry, with 36% and 26% of the questions asked from these two portions respectively. Algebra, 3D-Vectors and Trigonometry added the next significant part of the paper. Surprisingly, there was not any question on probability in Paper-II. The divide of Class XI and XII portion remained at 53% - 47%.



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With respect to Chemistry, this year's IIT-JEE Chemistry paper was very well balanced and student with properly grounded concepts can easily score well above 80% marks. In Paper-I, Organic Chemistry played pivotal role with 40% questions coming from this part. Inorganic and Physical Chemistry contributed an equal 30% of the overall Paper-I. If we look at the divide of Class XI and XII portions, here also the Class XII portion constituted 70% of the questions. On the other hand, the Paper-II of the Chemistry followed the age old pattern of question distribution. The Physical Chemistry constituted 42% of the overall Chemistry Paper-II, followed by Inorganic Chemistry at 32% and Organic at 26%. The divide of Class XI and XII portion also followed the tradition.

Finally, with respect to Physics, in Paper-I almost 1/3<sup>rd</sup> of the questions were asked from Modern Physics and in Paper-II it was Mechanics which contributed 1/3<sup>rd</sup> of the questions. The level of the questions asked in Physics this year was highly conceptual and will definitely be the deciding factor, along with Mathematics. Paper-I also had good representation from Electricity and Mechanics portion. On the other hand, Paper-II had a good account on Heat-Thermodynamics and Optics portion. Interestingly, the Paper-I had 65% of its questions from Class XII portion, however the percentage of questions asked from Class XII in Paper-II dropped to mere 42%. Yet again, it is the Physics which took a lot of its questions from introductory part of JEE Physics i.e. Class XI portion.

Topic-wise detailed analysis of IIT-JEE 2009 Paper-I & Paper-II with respect to the number of questions and the marks weightage is as follows:

**Topic-wise Analysis of MATHEMATICS - IIT-JEE 2009  
(Paper-1)**

	XII Calculus	XI Trigonometry	XI Algebra	XI 2D - Geometry	XII Probability	XII 3-D + Vector	XII Algebra	Total
Easy	1	1	1	2	3	2	0	10
Medium	3	0	1	1	1	0	0	6
Tough	0	1		0	0	0	3	4
Total	4	2	2	3	4	2	3	20
Markwise	19	8	9	14	12	6	12	80
	XI marks	31	XII marks	49				
	XI syllabus	7	XII syllabus	13				



**Topic-wise Analysis of MATHEMATICS - IIT-JEE 2009**

**(Paper-2)**

	XII	XI	XI	XI	XII	XII	XII	
	Calculus	Trigonometry	Algebra	2D - Geometry	Probability	3-D + Vector	Algebra	Total
Easy	0	2	0	0	0	1	0	3
Medium	4	0	2	4	0	0	1	11
Tough	3	0	0	1	0	1	0	5
Total	7	2	2	5	0	2	1	19
Markwise	32	8	7	18		11	4	80
	XI marks	33	XII marks	47				
	XI syllabus	9	XII syllabus	10				

**Topic-wise Analysis of CHEMISTRY - IIT-JEE 2009  
(Paper-1)**

	Organic Chemistry	Inorganic Chemistry	Physical Chemistry	Total
Easy	2	0	1	3
Medium	2	3	4	9
Tough	4	3	1	8
Total	8	6	6	20
Markwise	33	23	24	80
	XI marks	24	XII marks	56
	XI syllabus	6	XII syllabus	14

**Topic-wise Analysis of CHEMISTRY - IIT-JEE 2009  
(Paper-2)**

	Organic Chemistry	Inorganic Chemistry	Physical Chemistry	Total
Easy	2	4	5	11
Medium	2	2	2	6
Tough	1	0	1	2
Total	5	6	8	19
Markwise	22	31	27	80
	XI marks	34	XII marks	46
	XI syllabus	9	XII syllabus	10

**Topic-wise Analysis of PHYSICS - IIT-JEE 2009 (Paper-1)**

	XII Electricity	XI Heat & Thermodynamics	XII Modern Physics	XI Mechanics	XII Optics	XI Oscillation & Waves	XII Magnetism	XI&XII Miscellaneous	Total
Easy	2	1	2	1	1	1	1	0	9
Medium	1	0	1	1	0	0	0	1	4
Tough	1	0	3	2	0	0	1	0	7
Total	4	1	6	4	1	1	2	1	20
Markwise	14	4	24	21	3	3	7	4	80
	XI marks	32	XII marks	48					
	XI syllabus	7	XII syllabus	13					

**Topic-wise Analysis of PHYSICS - IIT-JEE 2009 (Paper-2)**

	XII Electricity	XI Heat & Thermodynamics	XII Modern Physics	XI Mechanics	XII Optics	XI Oscillation & Waves	XII Magnetism	XI&XII Miscellaneous	Total
Easy	0	1	0	3	0	0	0	1	5
Medium	1	1	0	3	3	1	2	0	11
Tough	0	1	1	0	0	0	0	1	3
Total	1	3	1	6	3	1	2	2	19
Markwise	4	12	3	23	14	4	8	12	80
	XI marks	45	XII marks	35					
	XI syllabus	11	XII syllabus	8					