

IIT-JEE – Mathematics - Pattern and Analysis

IIT-JEE the most challenging of the Engineering Entrance exams in the country and probably the world has proved that it has not lost its charm at all and has retained its glory as ever. IIT-JEE 2010 was conducted on 11th April 2010 with paper 1 from 9.00 – 12.00 hrs and paper 2 from 14.00 to 17.00 hrs.

The order of subjects in both papers were the same – Chemistry, Mathematics and Physics but the total marks, the number of questions and types of questions in both papers were distinct from each other.

Paper 1

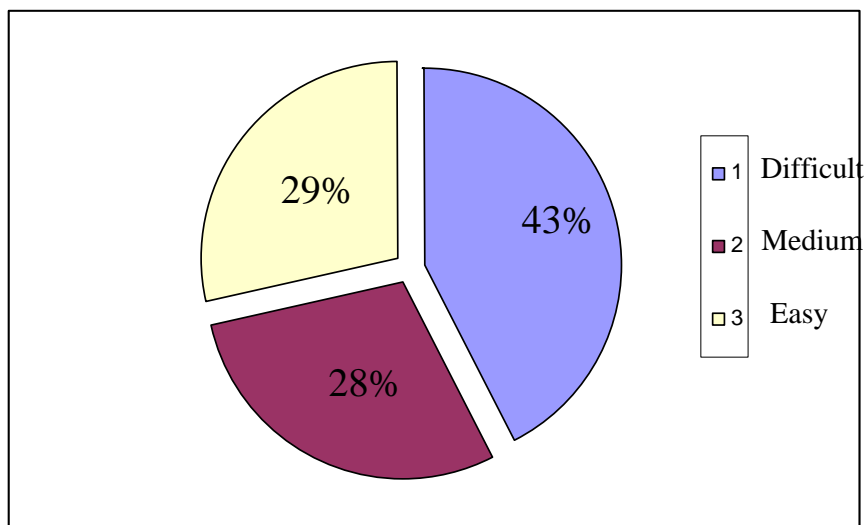
Paper 1 has 84 questions in total – in the order of Chemistry, Mathematics and Physics. Each subject had 28 questions and the pattern was exactly the same for all the subjects. All questions carried 3 marks. Hence the maximum mark for the paper is 252.

Type of question	Number of questions	Marks for a correct answer	Negative marking	Total marks for the section
Section I – Single Correct Choice Type	8	3	–1	24
Section II – Multiple Correct Choice Type	5	3	Nil	15
Section III – Paragraph Type	5	3	–1	15
Section IV – Integer Type	10	3	Nil	30

What was new in IIT-JEE 2010 in comparison with earlier years – Paper 1 :

- In the paragraph type 2 passages were there of which one passage had 3 questions and the other had 2 questions. Earlier all passages used to have the same number of questions.
- Likewise partial marks are awarded for correct answers in Multiple Correct Type questions.
- There were NO negative marks for the integer type questions and for the Multiple correct choice type.

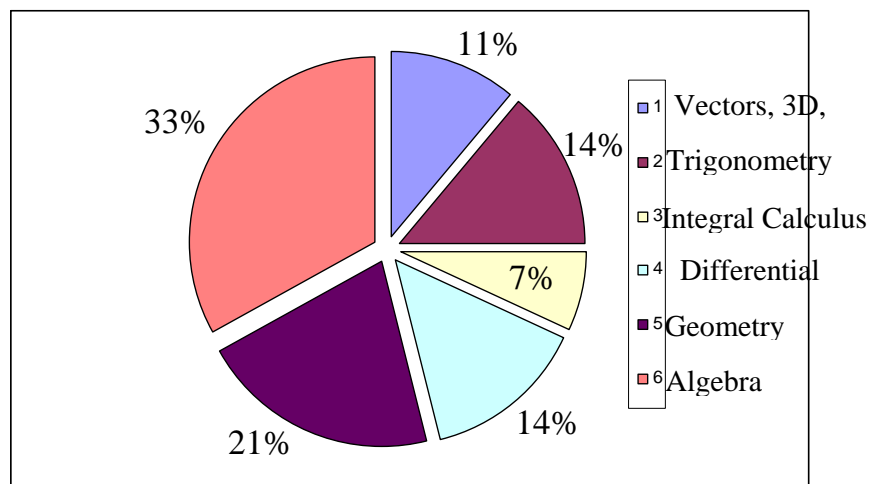
Paper 1 – Difficulty Analysis



Part 2 – Mathematics

Mathematics part of the 2010 JEE paper 1 was a lengthy paper compared to that of 2009. In depth understanding of the concepts with perseverance in solving problems would help the students to approach the paper. Trigonometry had a good representation in the paper and passage on matrices required proper innovative thinking to interpret and solve the questions. The integer type questions were difficult to crack in the given time frame. As shown below paper 1 was a difficult paper requiring more time to crack the questions.

Algebra and coordinate geometry had the major shares with Calculus, Trigonometry and Vectors just following close. Topic wise analysis is given below.



Paper 2

Paper 1 had 57 questions in total in the order of Chemistry, Mathematics and Physics. Each subject had 19 questions and as in paper 1 the pattern was exactly the same across the subjects. But questions had differential markings, each subject had 79 marks and the maximum mark for the paper is 237.

Type of question	Number of questions	Marks for a correct answer	Negative marking	Total marks for the section
Section I – Single Correct Choice Type	6	5	–2	30
Section II – Integer type	5	3	Nil	15
Section III – Paragraph Type	6	3	–1	18
Section IV – Matrix type	2	8	Nil	16

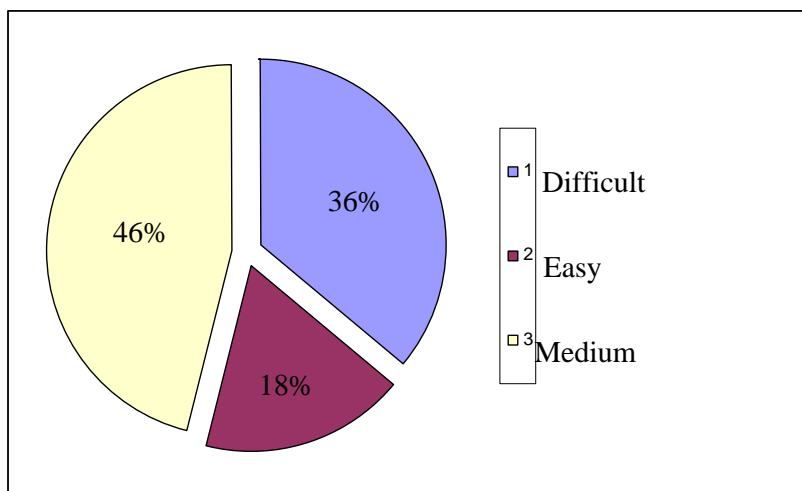
What was new in IIT-JEE 2010 in comparison with earlier years – Paper 2 :

- Single Correct Choice questions were valued heavier than before – 5 marks for a correct answer with (–2) for an incorrect answers.

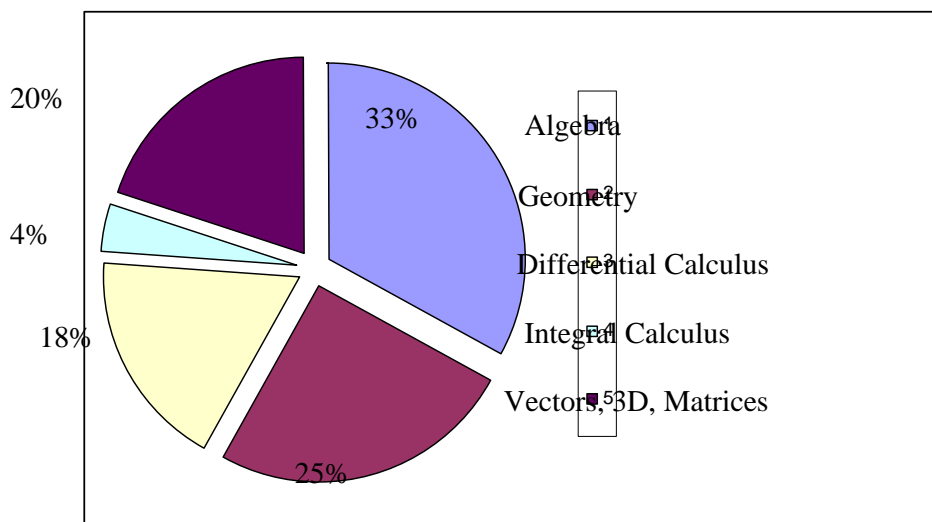
Part 2 – Mathematics

Paper 2 Mathematics part was easier than the first paper for two reasons – number of questions were notably lower and only half the number of Integer type questions were there. Matrix type question on Complex numbers had tricky options given in second column that only a meticulous eye will find. An excellent knowledge of analysis was checked by the paragraph type questions on the cubic polynomial. The integer type questions were easier than that in the first paper.

MATHEMATICS PAPER II – DIFFICULTY ANALYSIS



Topic wise analysis is given below



IITJEE MATHEMATICS

IIT- JEE 2006 to 2009 CHAPTERWISE ANALYSIS* Mathematics Chapter wise Analysis (No. of Questions)

Sl. No.	Chapter	2009		2008	2007	2006
		P-1	P-2			
1.	Complex Numbers	2		4	2	1
2.	Theory of Equations		2	1	4	2
3.	Sequences & Series		1	1	6	1
4.	Permutations & Combinations	1		1	1	1
5.	Binomial Theorem					
6.	Logarithm					
7.	Probability	3		2	3	3
8.	Matrices & Determinants	3		1		3
9.	Functions		2		4	
10.	Limits	1	1	2	1	1
11.	Continuity & Differentiability				1	1
12.	Differentiation			2	1	1
13.	Application of Derivatives	1	2	1	1	3
14.	Indefinite Integration			1	1	1
15.	Definite Integration		1	1	1	1
16.	Area of bounded regions	1		1		
17.	Differential Equations			1	2	1
18.	Straight Lines			2	2	
19.	Circle	1	1	4	3	
20.	Parabola		1	2		2

21.	Ellipse	1	1			
22.	Hyperbola			1	1	1
23.	Trigonometric Ratios & Identities	1				1
24.	Trigonometric Equations				1	1
25.	Inverse Circular Functions			1	1	
26.	Properties of Triangles	1	1	1	3	2
27.	Vectors	1		2	3	2
28.	3-D Geometry	1	1	4	2	1
29.	Miscellaneous	2	2	8		10