

## **AIEEE 2007 Analysis**

This year students had it relatively easy in the AIEEE. While the basic format of a single paper test was retained, there were significant departures in the pattern as compared to the 2006 paper. There were 40 questions in each of the three subjects of Mathematics, Physics and Chemistry as compared to the last year's distribution of 40 questions in Mathematics and 55 questions each in Physics and Chemistry. Thus, making it a total of 120 questions this year instead of the 150 questions in the last year. The second departure this year was the uniform marking scheme as compared to the differential scheme last year. Each question, irrespective of the subject, carried 3 marks. The negative marking was  $1/3^{\text{rd}}$ . Total marks were 360.

Coming to the level of difficulty, about 50% questions in Mathematics and Physics were fairly simple or straightforward requiring direct use of formula/result or law. For Chemistry this number was about 30%. About 60% of the Chemistry part comprised of questions that either were not direct or required a little time to arrive at the answer.

The surprising thing was that there were some errors in the question paper. A question in Physics talks of a certain distance as  $\frac{\alpha}{R}$  which should have been  $\alpha R$ . Similarly, in Mathematics there are three questions with errors. Two of these have wrong or ambiguous options, while one question is incorrect. This is surprising because such errors have hardly happened in past question papers.

The strategy lied in keeping cool and identifying the simpler questions to attempt first before moving to the more difficult questions, which weren't many. As usual, better utilization of time would result in better marks. So, the constraining factor was once again time, and not level of difficulty. The topic-wise breakup for each subject is given below.

### **Mathematics**

Topic	2006	2007
Sets, Relations and Functions	1	1
Limits, Continuity & Differentiability	2	2
Application of Derivatives	4	4
Definite Integrals & Area under the Curve	4	3
Cartesian coordinates & Straight Line	3	3
Circles	2	1
Conics	2	2
Quadratic Equations & Progressions	3	2
Complex Numbers	2	1
Binomial Theorem, Exponential & Logarithmic Series	2	3
Permutation & Combination	1	1
Probability	0	2
Vectors	4	2
3-D Coordinate Geometry	1	3
Differential Equations & Properties of Triangles	1	2
Trigonometric Ratios, Equations, & Inverse Circular Function	3	1
Heights and Distances	0	1
Matrices & Determinants	2	2

Statics & Dynamics	1	3
Statistics	2	1
	40	40

### Cutoff for Mathematics

Max Marks	120
<b>Cut - off score for 12,000 AIR</b>	<b>50 to 55</b>
Difficulty Level	
Easy ( Direct Simple)	17
Moderate	17
Difficult	5

### Physics

Topic	2006	2007
Units, Dimensions	1	
Kinematics	1	2
New ton's laws and friction	2	1
Work, Power & Energy	4	1
System of particles	2	1
Gravitation, Rotational mechanics	3	3
Properties of Matter	1	
SHM, Oscillations	3	4
Mechanical Waves and Sound	2	1
Optics	1	2
Heat and Thermodynamics	4	4
Electrostatics	3	6
Current Electricity	7	1
Magnetic effects of current and earth's magnetism	3	5
EMI , AC and EM waves	5	2
Modern Physics	13	7
	55	40

### Cutoff Score for Physics

Max Marks	120
<b>Cut - off score for 12,000 AIR</b>	<b>55 - 60</b>
Difficulty Level	
Easy ( Direct Simple)	22
Moderate	15
Difficult	3

## Chemistry

Topic	2006	2007
Atomic Structure and Classification	5	1
Chemical Bonding	5	3
Stoichiometry	2	2
States of Matter	1	1
Chemical & Ionic Equilibrium	3	3
Chemical Kinetics & Nuclear Chemistry	3	4
Chemical Thermodynamics	4	3
Solutions	2	2
Electrochemistry	3	2
General Organic Chemistry	10	9
Organic Chemistry – Functional Gp II	3	1
Organic Chemistry – Functional Gp III	4	1
Chemistry of Representative Elements	4	4
Transition Elements	1	3
Coordination Compounds & Organometallics	4	
Surface Chemistry	1	
Biomolecules		1
	55	40

## Cutoff for Chemistry

Max Marks	120
<b>Cut - off score for 12,000 AIR</b>	<b>50 to 55</b>
Difficulty Level	
Easy ( Direct Simple)	10
Moderate	25
Difficult	5

Our overall verdict is that AIEEE 2007 was of slightly lower level of difficulty than AIEEE 2006. A student getting between 165 and 170 marks overall can expect a national rank of about 10000 or so, which of course is decent enough for getting a seat at a reasonably good college.

**Best of Luck!**