

JEE (Advanced) 2018 Paper Analysis

After the major change by IITs in 2013, JEE is conducted in two stage, one is JEE main and other is JEE advanced. This time stage of examination JEE advanced was conducted on 21st May 2017. Now as the paper is over students are eagerly waiting for analysis of both papers and to fulfill this requirement of students, askIITians experts have come up with the detailed analysis of both papers - 1 and 2. Here is the summary of everything 2 in the form of Paper Analysis.

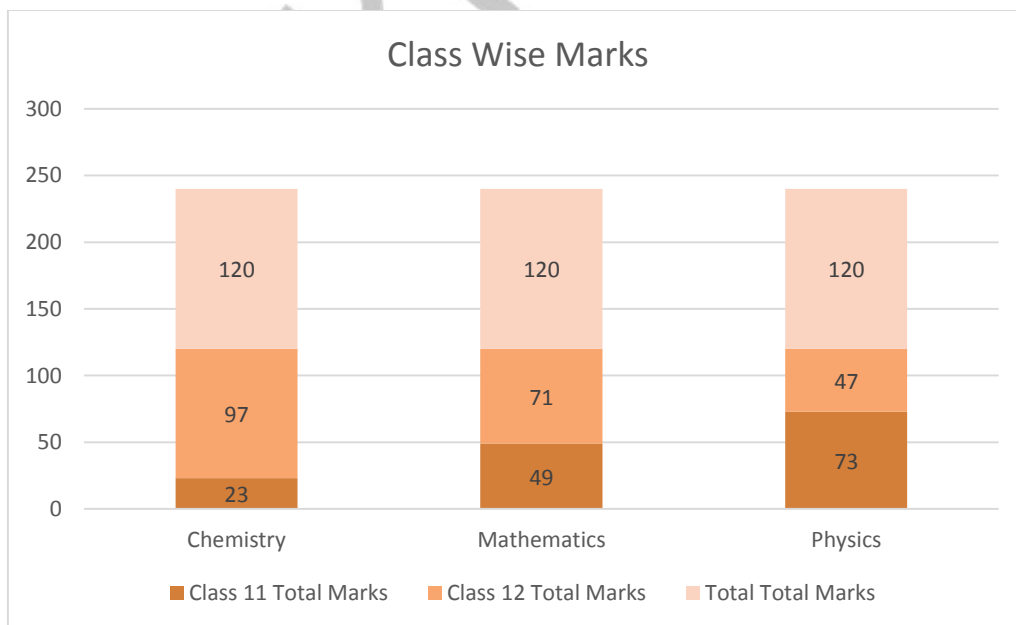
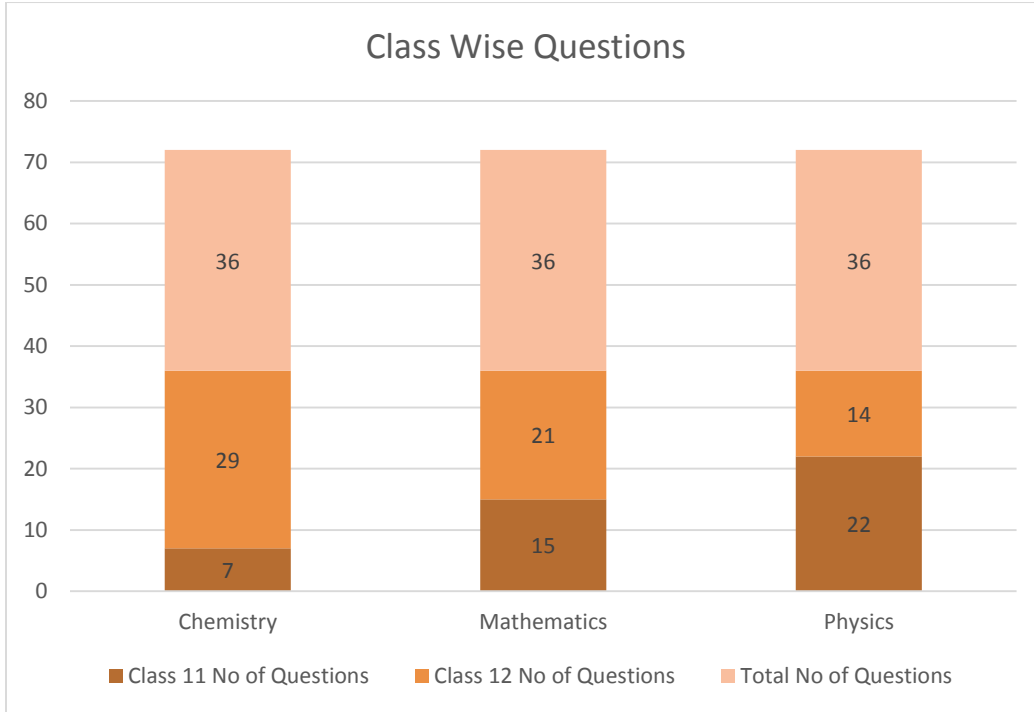
IIT Madras conducted stage 2 of JEE level exam called JEE advance. Timings for paper 1 was 9 AM to 12 PM and that of paper 2 was 2 PM to 5 PM. Overall most students were happy as the papers were slightly on the easier side. But still there were some who are not happy as the cutoff is expected to rise this year as compared to previous years.

Subject wise Chemistry was the most difficult in both the papers, Physics was moderate and Mathematics was easier. Also, this time JEE had introduced some new types of questions in paper 1 in which questions were given in form of 3 columns and students had to interpret the correct options.

Overall Marks Distribution

Here is the distribution of questions in various categories along with their marks in respective categories.

Subject	Class 11		Class 12		Total	
	No of Questions	Total Marks	No of Questions	Total Marks	No of Questions	Total Marks
Chemistry	7	23	29	97	36	120
Paper One	3	10	15	50	18	60
Paper Two	4	13	14	47	18	60
Mathematics	15	49	21	71	36	120
Paper One	10	32	8	28	18	60
Paper Two	5	17	13	43	18	60
Physics	22	73	14	47	36	120
Paper One	13	43	5	17	18	60
Paper Two	9	30	9	30	18	60
Grand Total	44	145	64	215	108	360

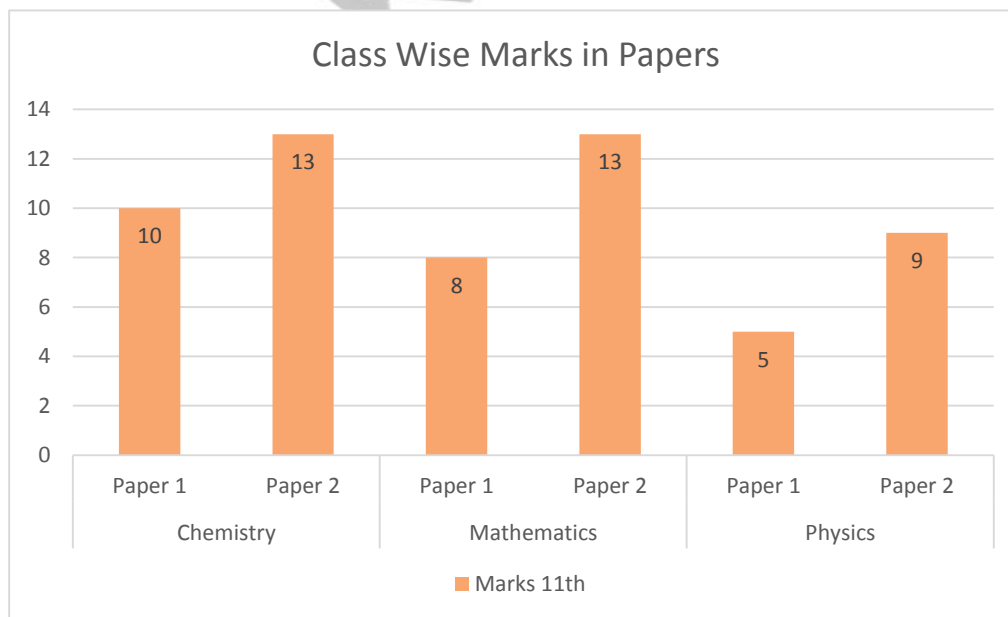


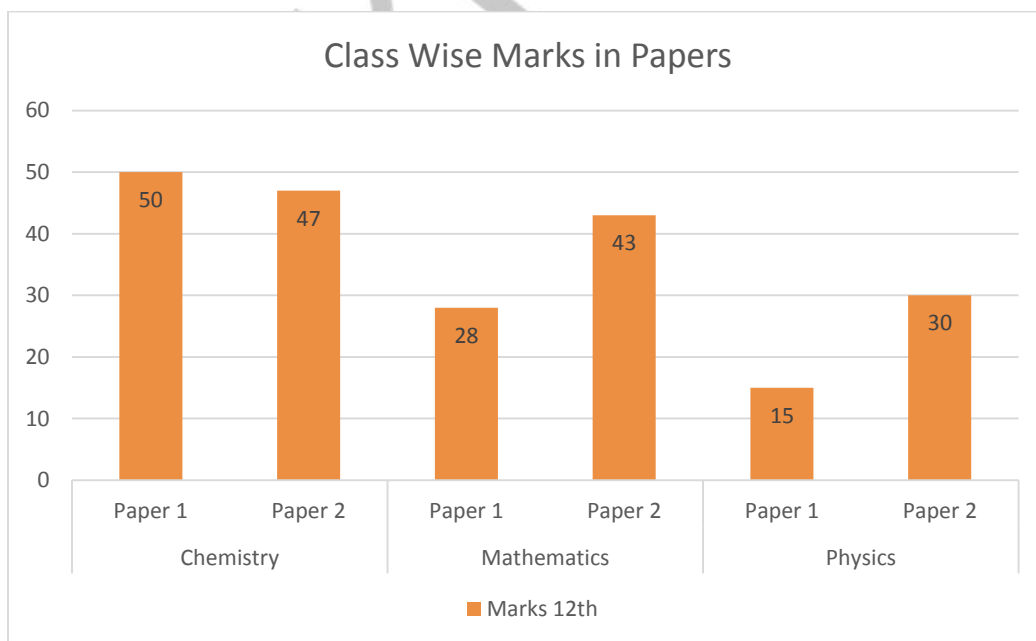
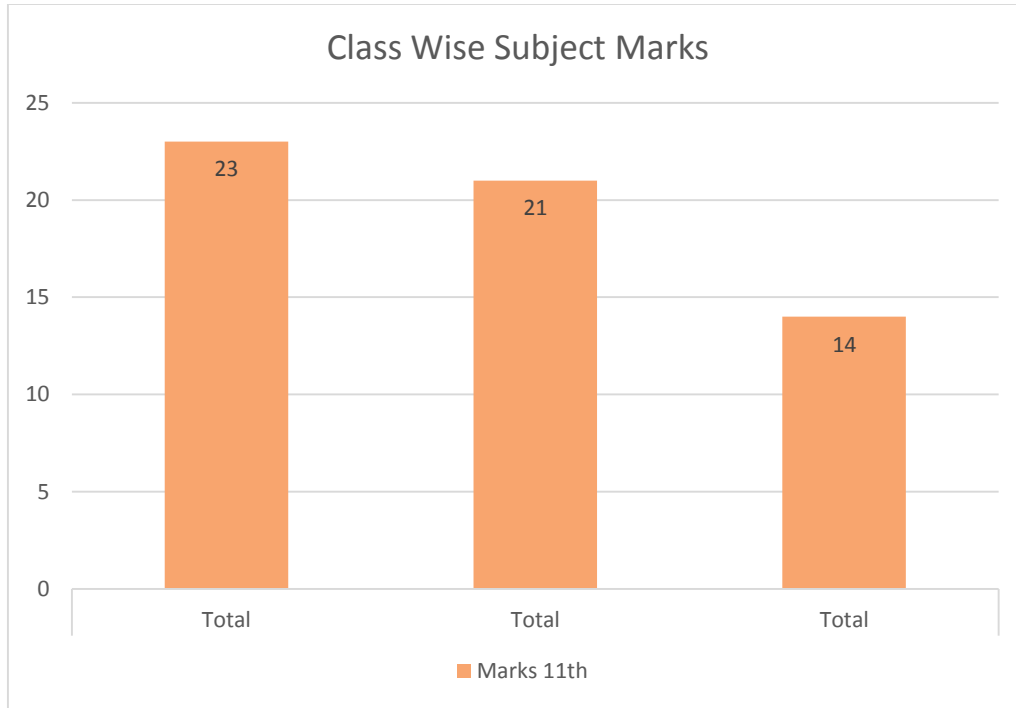
Brief Quantitative Analysis

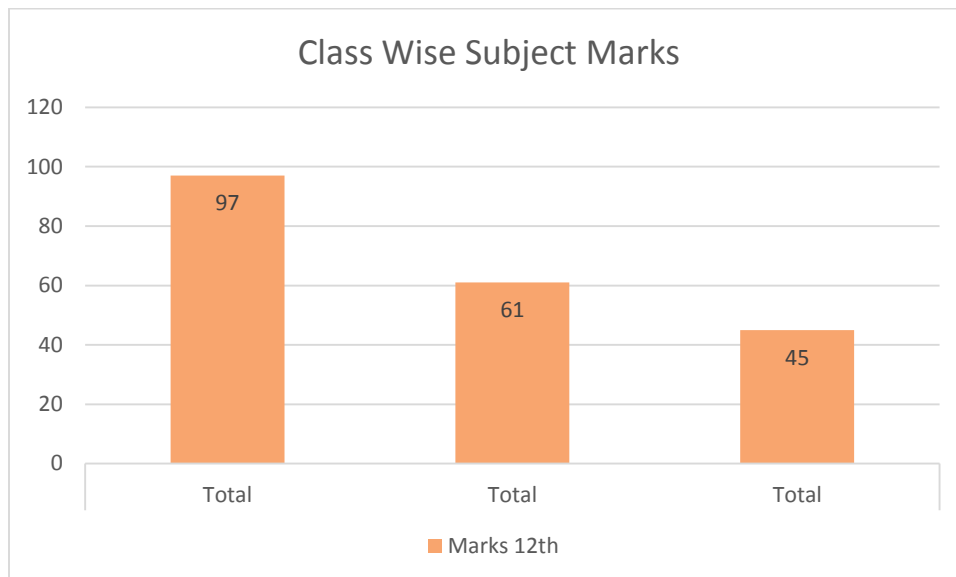
Total 108 questions were asked including both the papers 1 and 2. Individually each paper contained 54 questions. Out of which in paper 1, 6 were single correct, 7 were multi correct and 5 were integer type per subject. While in paper 2, 7 were single correct, 7 were multi correct and 4 were comprehension type questions. Total marks for both papers combined was 366.

Out of the total 108 questions, 45 questions were from 11th standard syllabus were as 63 questions were from 12th standard syllabus.

Subject	Paper	No of Questions		Marks		Percentage (Marks Wise)	
		11 th	12 th	11 th	12 th	11 th	12 th
Chemistry	Paper 1	3	15	10	50	17%	83%
	Paper 2	4	14	13	47	22%	78%
	Total	7	29	23	97	19%	81%
Mathematics	Paper 1	10	8	8	28	22%	78%
	Paper 2	5	13	13	43	23%	77%
	Total	15	21	21	61	26%	74%
Physics	Paper 1	13	5	5	15	25%	75%
	Paper 2	9	9	9	30	23%	77%
	Total	22	14	14	45	24%	76%
Total	Paper 1	27	27	91	92	50%	50%
	Paper 2	18	36	60	123	33%	67%
	Total	45	63	151	215	41%	59%







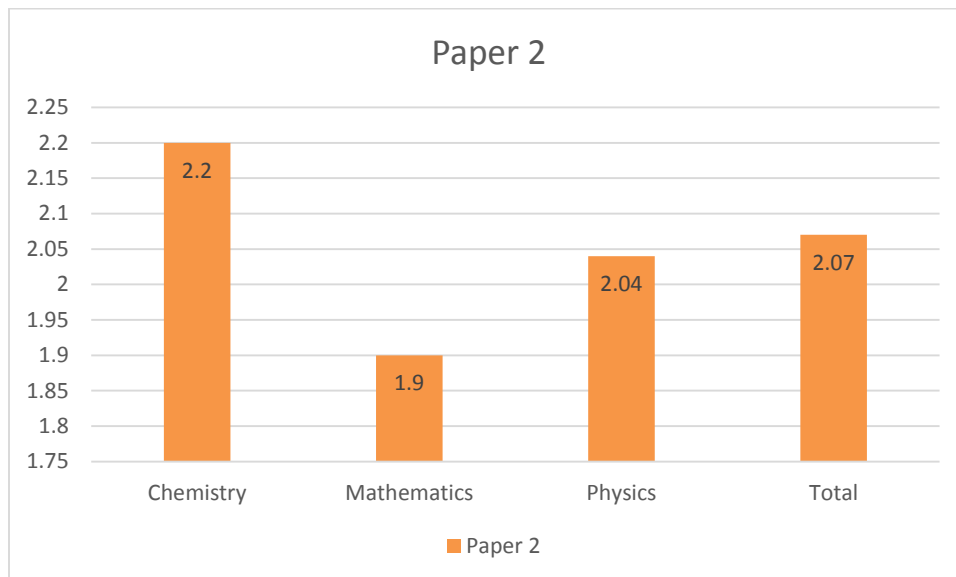
Overall Difficulty Level Analysis

While doing the analysis of the paper each question was rated from 1 to 3 by askITians experts depending on the difficulty level of question. Rating of each questions was done like

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

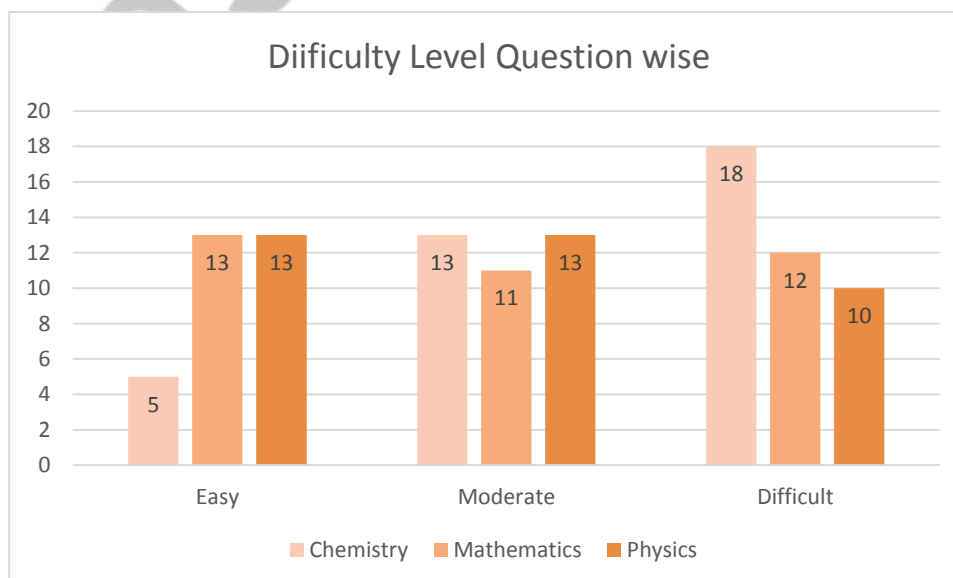
And finally, the average difficulty level was calculated by calculating the average of individual ratings.

Subject	Paper 1	Paper 2	Total
Chemistry	2.3	2.2	2.25
Mathematics	1.72	1.9	1.84
Physics	1.38	2.04	1.71
Total	1.8	2.07	1.93



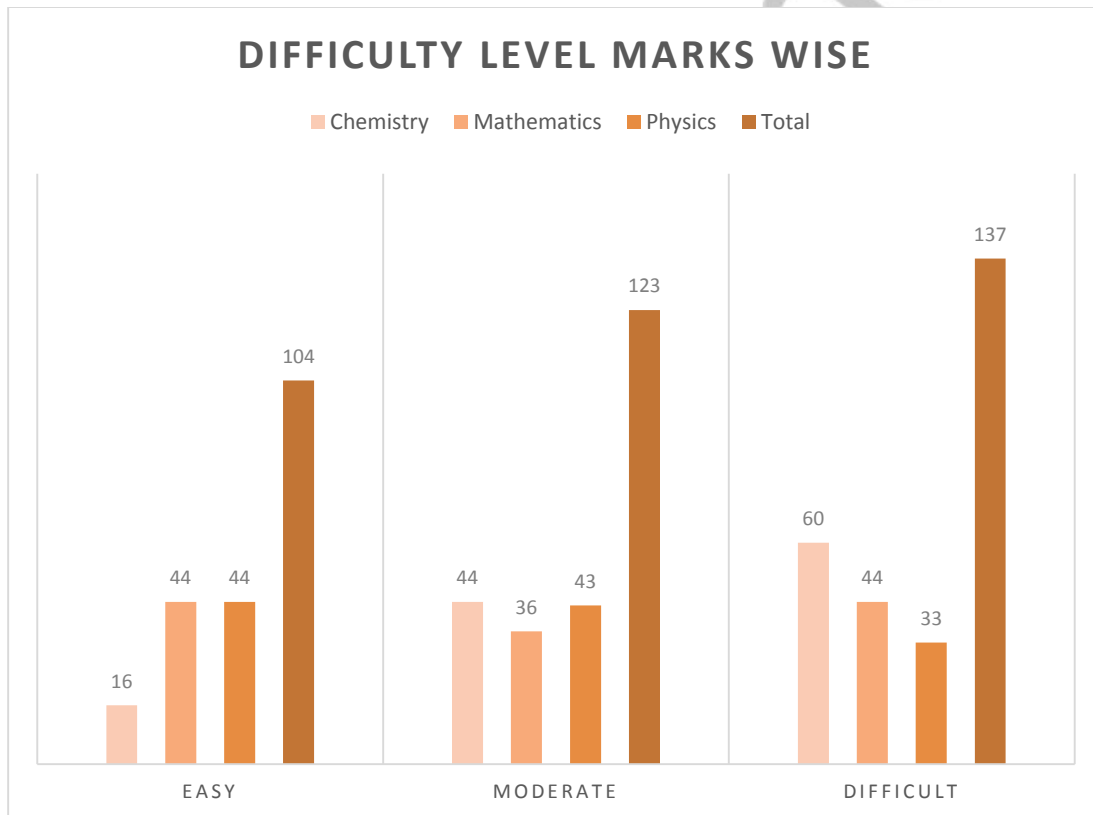
Difficulty Level Analysis: No of Questions

Subject	Easy	Moderate	Difficult	Total
Chemistry	5	13	18	36
Mathematics	13	11	12	36
Physics	13	13	10	36
Total	31	37	40	108



Difficulty Level Analysis: Marks Allocation

Subject	Easy	Moderate	Difficult	Total
Chemistry	16	44	60	120
Mathematics	44	36	44	124
Physics	44	43	33	120
Total	104	123	137	364



Student's Reactions - Paper I

According to askITians, candidates had the following reactions:

Candidates found the overall level of paper was moderate but not easy. According to some of the candidates, Maths was easy and Physics was relatively difficult. However, Chemistry has been reported of moderate level. No mistakes have been reported till now as Paper 2 is still going on.

Student's Reactions - Paper II

Candidates found the overall level of paper moderate level. Mathematics section was difficult compared to Physics & Chemistry. No mistakes reported till now as complete paper is yet to be analyzed. Total no. of questions (54 questions) remains same as last year however total marks of JEE Advanced Paper-2 has changed from 183 to 180 marks this year.

Overall Comparison:

Compared to Paper-1, students reported Paper-2 was relatively tough. Students feel this year's paper was tougher compared to 2017.

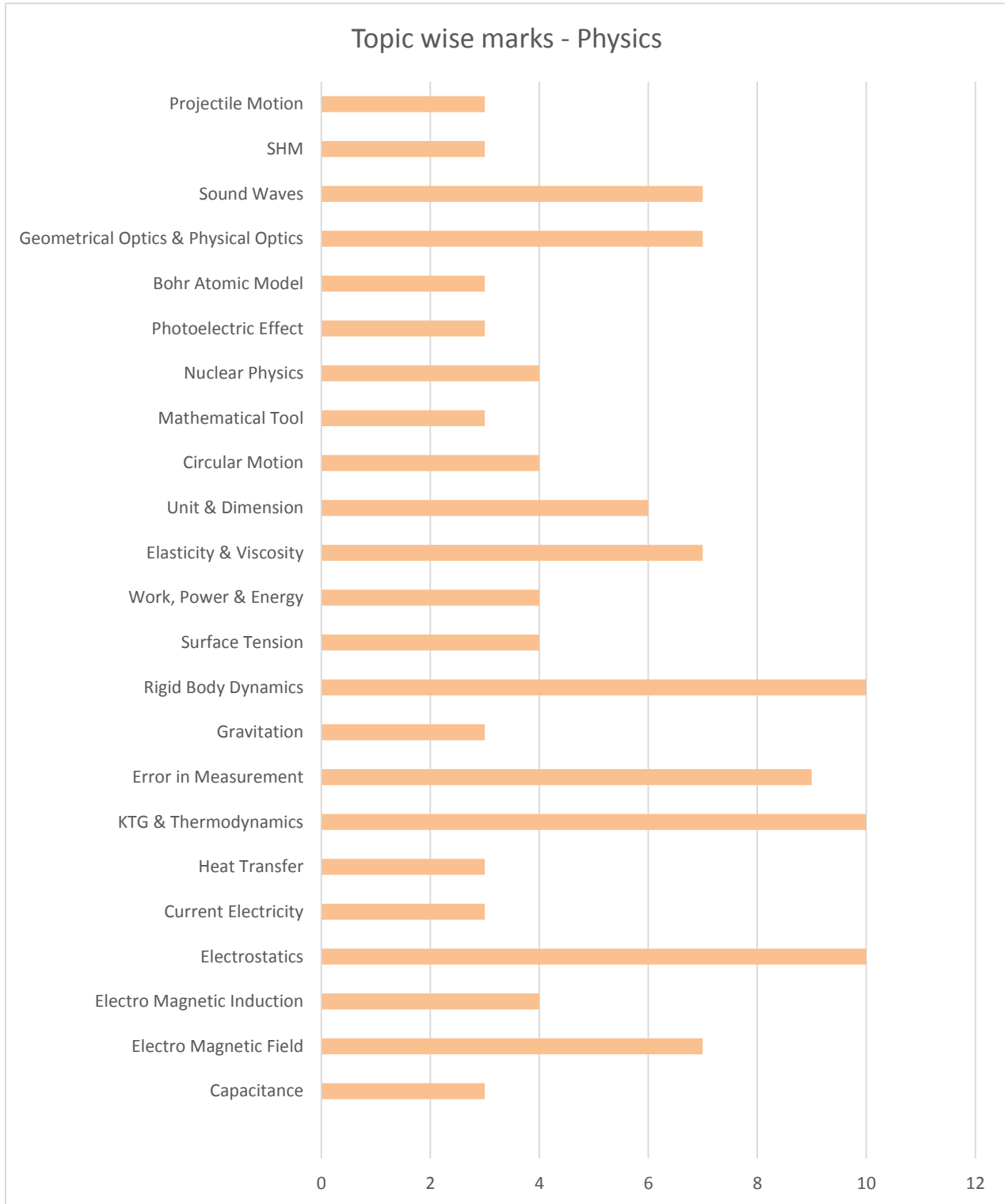
As per the difficulty level analysis done by us we have found that easy questions were of 104 marks, moderate of 123 marks and tough questions of 137 marks. As the paper was relatively tough than last year, students are expected to score low this year

Subject Wise Analysis

A - Physics

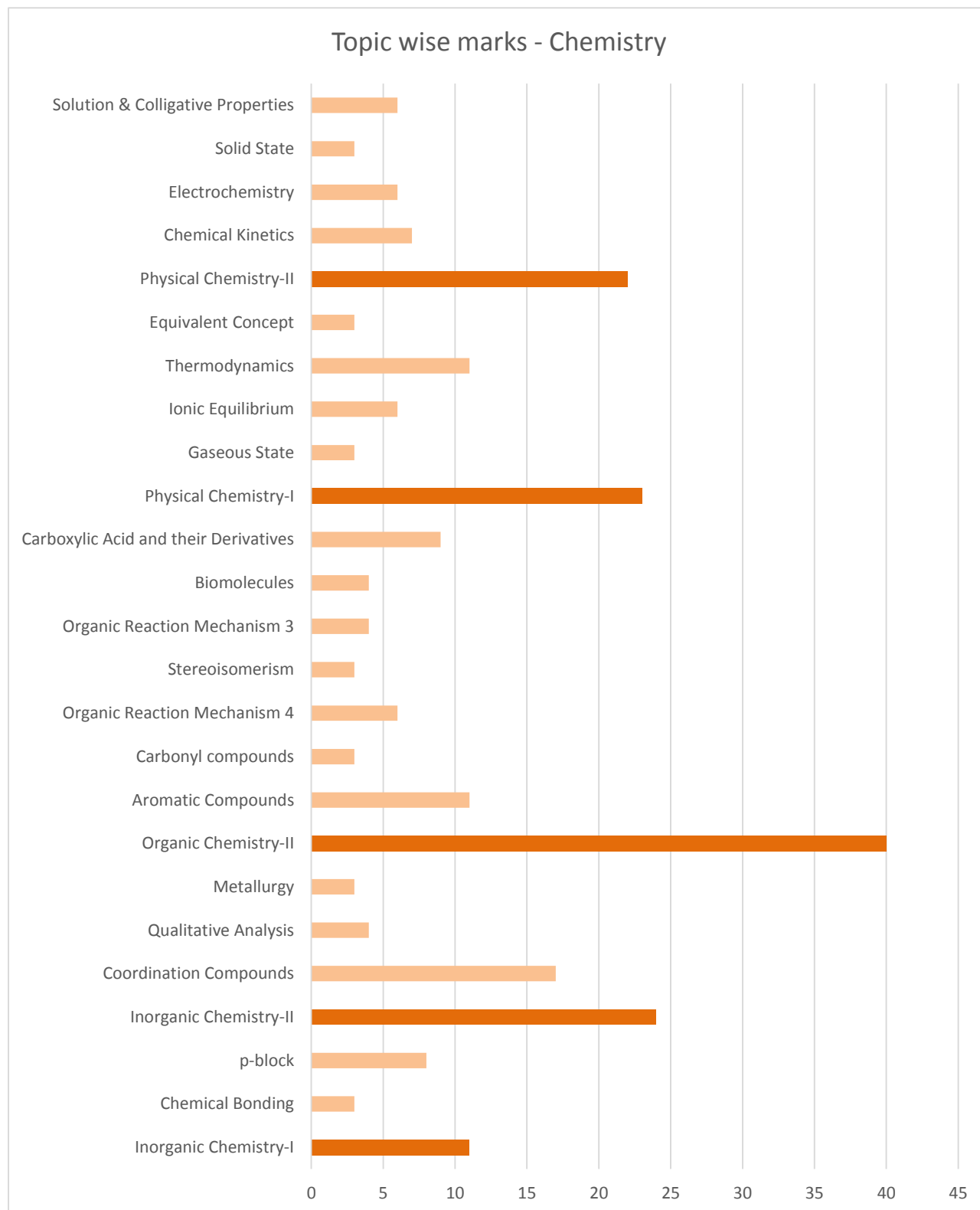
Topic wise allocation of # of Questions & Marks

Physics			
UNIT & TOPIC NAME	NO OF QUESTIONS	TOTAL MARKS	(%) WEIGHTAGE
Physics	36	120	100.00%
Electrodynamics	8	27	22.50%
Capacitance	1	3	2.50%
Electro Magnetic Field	2	7	5.83%
Electro Magnetic Induction	1	4	3.33%
Electrostatics	3	10	8.33%
Current Electricity	1	3	2.50%
Heat & Thermodynamics	4	13	10.83%
Heat Transfer	1	3	2.50%
KTG & Thermodynamics	3	10	8.33%
Mechanics	15	50	41.67%
Error in Measurement	3	9	7.50%
Gravitation	1	3	2.50%
Rigid Body Dynamics	3	10	8.33%
Surface Tension	1	4	3.33%
Work, Power & Energy	1	4	3.33%
Elasticity & Viscosity	2	7	5.83%
Unit & Dimension	2	6	5.00%
Circular Motion	1	4	3.33%
Mathematical Tool	1	3	2.50%
Modern Physics	3	10	8.33%
Nuclear Physics	1	4	3.33%
Photoelectric Effect	1	3	2.50%
Bohr Atomic Model	1	3	2.50%
Optics	2	7	5.83%
Geometrical Optics & Physical Optics	2	7	5.83%
SHM & Waves	3	10	8.33%
Sound Waves	2	7	5.83%
SHM	1	3	2.50%
Mathematical Tools	1	3	2.50%
Projectile Motion	1	3	2.50%
Grand Total	36	120	100.00%



B – Chemistry
Topic wise allocation of # of Questions & Marks

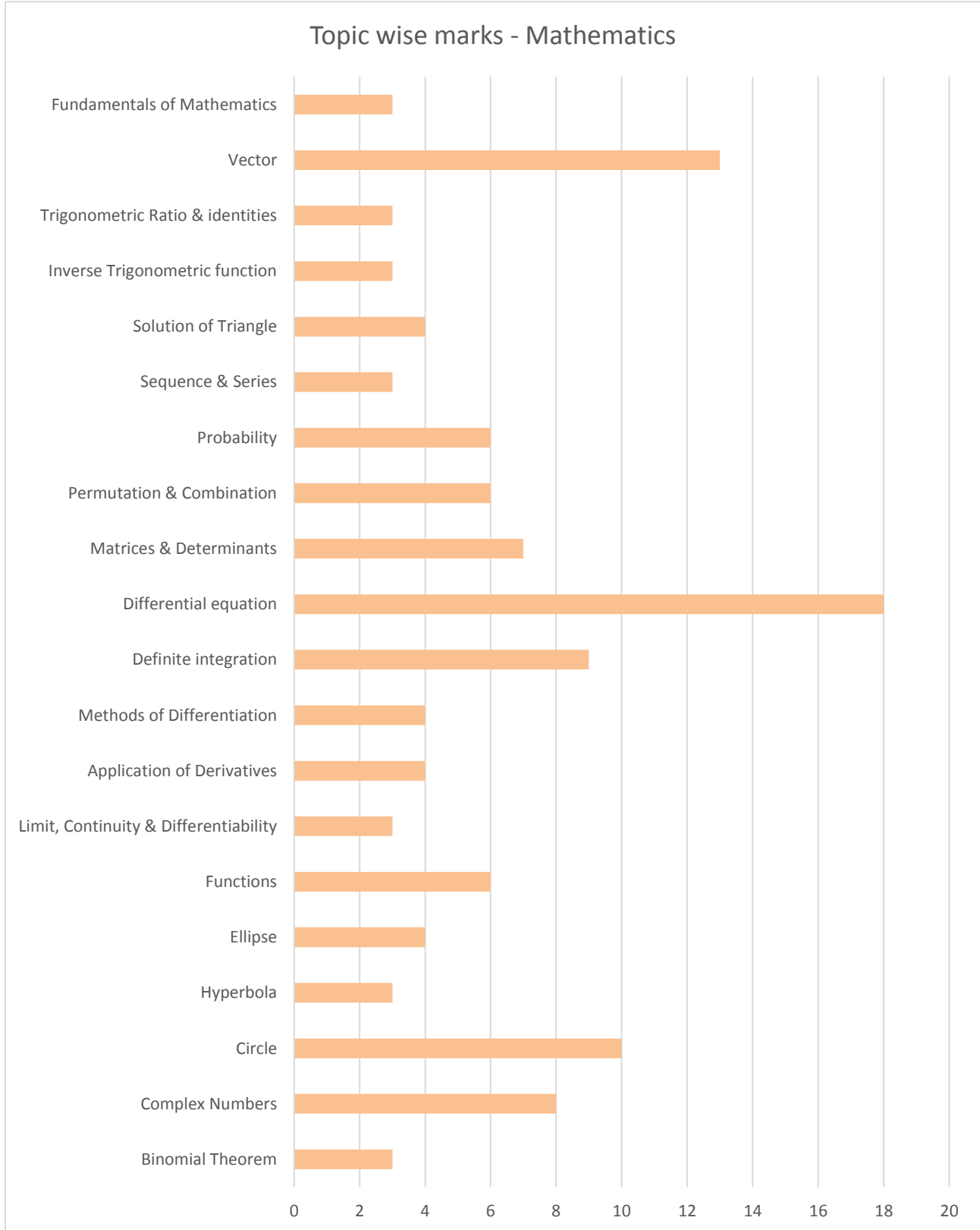
CHEMISTRY			
UNIT & TOPIC NAME	NO OF QUESTIONS	TOTAL MARKS	(%) WEIGHTAGE
Chemistry	36	120	100.00%
Inorganic Chemistry-I	3	11	9.17%
Chemical Bonding	1	3	2.50%
p-block	2	8	6.67%
Inorganic Chemistry-II	7	24	20.00%
Coordination Compounds	5	17	14.17%
Qualitative Analysis	1	4	3.33%
Metallurgy	1	3	2.50%
Organic Chemistry-II	12	40	33.33%
Aromatic Compounds	3	11	9.17%
Carbonyl compounds	1	3	2.50%
Organic Reaction Mechanism 4	2	6	5.00%
Stereoisomerism	1	3	2.50%
Organic Reaction Mechanism 3	1	4	3.33%
Biomolecules	1	4	3.33%
Carboxylic Acid and their Derivatives	3	9	7.50%
Physical Chemistry-I	7	23	19.17%
Gaseous State	1	3	2.50%
Ionic Equilibrium	2	6	5.00%
Thermodynamics	3	11	9.17%
Equivalent Concept	1	3	2.50%
Physical Chemistry-II	7	22	18.33%
Chemical Kinetics	2	7	5.83%
Electrochemistry	2	6	5.00%
Solid State	1	3	2.50%
Solution & Colligative Properties	2	6	5.00%
Grand Total	36	120	100.00%



C - Mathematics

Topic wise allocation of # of Questions & Marks

MATHEMATICS			
UNIT & TOPIC NAME	NO OF QUESTIONS	TOTAL MARKS	(%) WEIGHTAGE
Mathematics	36	120	100.00%
Algebra	1	3	2.50%
Binomial Theorem	1	3	2.50%
Complex Numbers	2	8	6.67%
Complex Numbers	2	8	6.67%
Coordinate Geometry	5	17	14.17%
Circle	3	10	8.33%
Hyperbola	1	3	2.50%
Ellipse	1	4	3.33%
Differential Calculus	5	17	14.17%
Functions	2	6	5.00%
Limit, Continuity & Differentiability	1	3	2.50%
Application of Derivatives	1	4	3.33%
Methods of Differentiation	1	4	3.33%
Integral Calculus	8	27	22.50%
Definite integration	3	9	7.50%
Differential equation	5	18	15.00%
Matrix & Determinants	2	7	5.83%
Matrices & Determinants	2	7	5.83%
Permutation & Combination	2	6	5.00%
Permutation & Combination	2	6	5.00%
Probability	2	6	5.00%
Probability	2	6	5.00%
Sequence & Series	1	3	2.50%
Sequence & Series	1	3	2.50%
Trigonometry	3	10	8.33%
Solution of Triangle	1	4	3.33%
Inverse Trigonometric function	1	3	2.50%
Trigonometric Ratio & identities	1	3	2.50%
Vector and 3D	4	13	10.83%
Vector	4	13	10.83%
Fundamentals of Mathematics	1	3	2.50%
Fundamentals of Mathematics	1	3	2.50%
Grand Total	36	120	100%



Reservation of Seats and Expected Cutoff

Category	% Reservation	Cut-off Marks*	% Cutoff
General	50.50%	126	35.00%
OBC	27.00%	113	31.50%
SC	15.00%	63	17.50%
ST	7.50%	63	17.50%
Total	100.00%		

*Cutoff is based on the estimation made by the askITians experts according to the difficulty level of paper. Actual cutoff might vary.

JEE (Advanced) 2018: Official Cut-off			
Category	% Reservation	Cut-off Marks	% Cutoff
General	50.50%	128	35.00%
OBC	27.00%	115	31.50%
SC	15.00%	64	17.50%
ST	7.50%	64	17.50%
Total	100.00%		