

Paper Analysis - JEE (Advanced) 2016

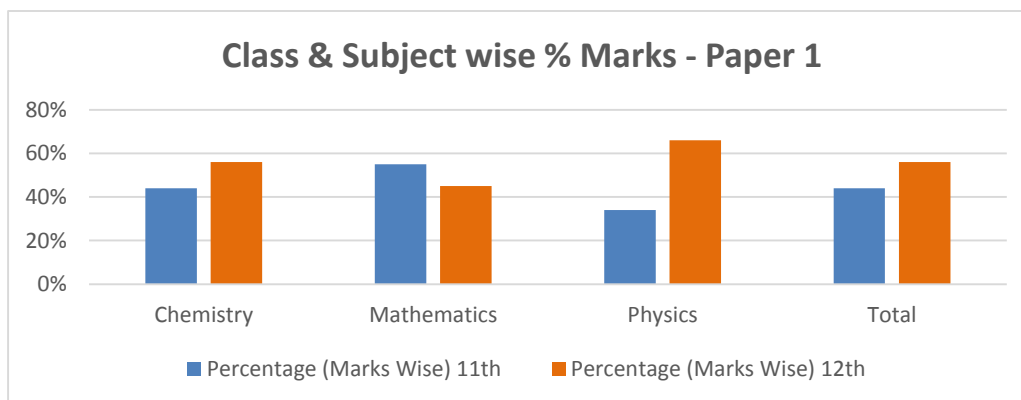
After any exam, every student is curious to know about the paper analysis that he/she attempts and askITians fulfills this requirement with detailed analysis of paper after every exam. On 22nd May 2016 i.e. Sunday, Exam of JEE Advanced was conducted and students came out with mixed reaction. Here is the summary of their mixed reaction in the form of Paper Analysis.

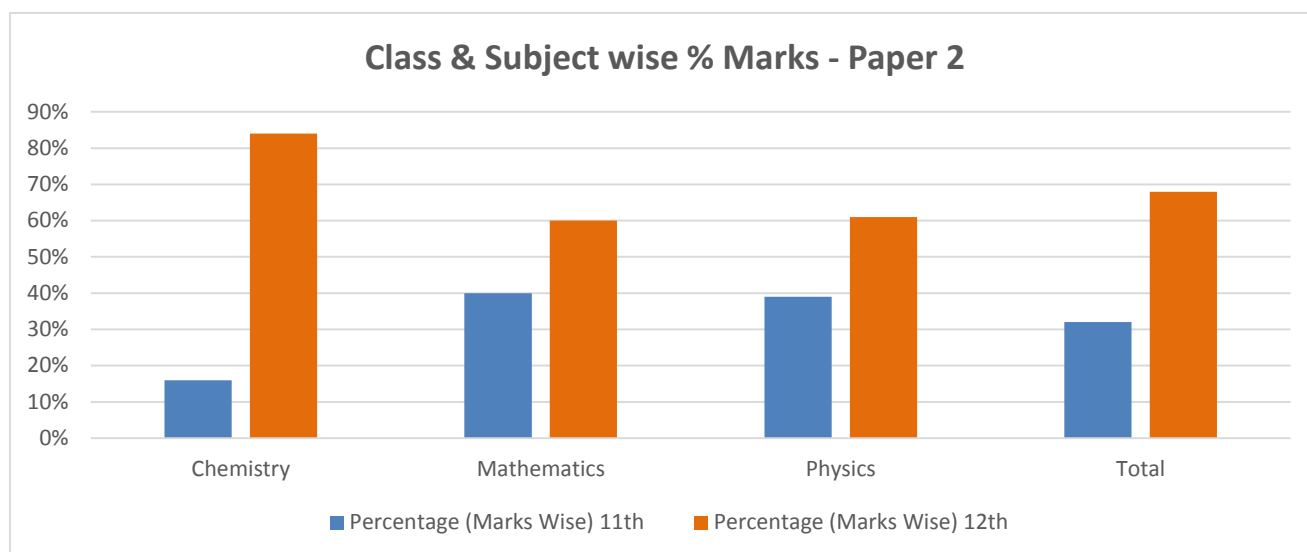
JEE Advanced 2016 was conducted in two parts (Paper 1 & Paper 2) by IIT Guwahati. Paper 1 was conducted from 9 AM to 12 PM and Paper 2 was conducted from 2 PM to 5 PM.

Overall Marks Distribution

In Paper I & II both, there were 54 Questions asked - 18 Questions from each subject (PCM). Both the papers were of 186 marks and each subject was of 124 marks. Total marks for Paper 1 & 2 combined were 372. From class 11th syllabus, questions carried 141 marks and that from class 12th syllabus; it was 231 marks combining both the papers

Subject	Paper	No of Questions		Marks		Percentage (Marks Wise)	
		11th	12th	11th	12th	11th	12th
Chemistry	Paper 1	8	10	27	35	44%	56%
	Paper 2	3	15	10	52	16%	84%
	Total	11	25	37	87	30%	70%
Mathematics	Paper 1	10	8	34	28	55%	45%
	Paper 2	8	10	25	37	40%	60%
	Total	18	18	59	65	48%	52%
Physics	Paper 1	6	12	21	41	34%	66%
	Paper 2	7	11	24	38	39%	61%
	Total	13	23	45	79	36%	64%
Total	Paper 1	24	30	82	104	44%	56%
	Paper 2	18	36	59	127	32%	68%
	Total	42	66	141	231	38%	62%





Brief Quantitative Analysis

Here, we provide brief pattern description of both the papers of JEE (Advanced) 2016.

Question Pattern for Each Subject in Paper 1				
	Single Choice Correct	One or More Option Correct	Single Digit Integer	Total
Questions/Subject	5	8	5	20
Marks / Question	3	4	3	N.A
Partial Marking	0	1*	0	N.A
Negative Marking	-1	-2	0	N.A
Marks/Subject	15	32	15	62
Total Questions	15	24	15	54
Total Marks	45	96	45	186

* For Darkening a bubble corresponding to each correct question, provided no incorrect option is darkened.

Question Pattern for Each Subject in Paper 2				
	Only One option correct	One or More Option Correct	Comprehension MCQ	Total
Questions/Subject	6	8	4	18
Marks / Question	3	4	3	N.A
Partial Marking	0	1*	0	N.A
Negative Marking	-1	-2	0	N.A
Marks/Subject	18	32	12	62
Total Questions	18	24	12	54
Total Marks	54	96	36	186

Overall Difficulty Level Analysis

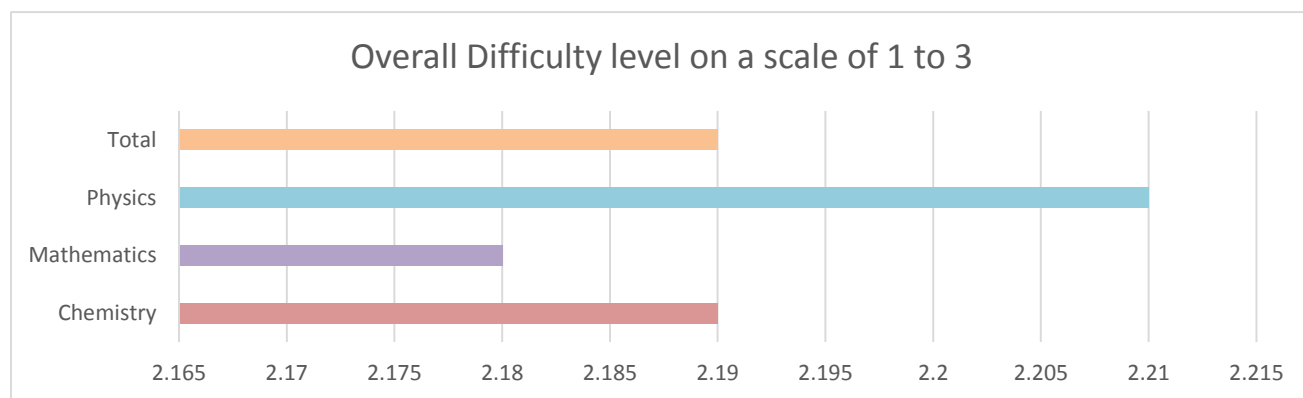
In this analysis, every question is rated on a scale of 1 to 3. The individual ratings are then averaged to calculate overall difficulty level.

1 – Easy

2 – Moderate

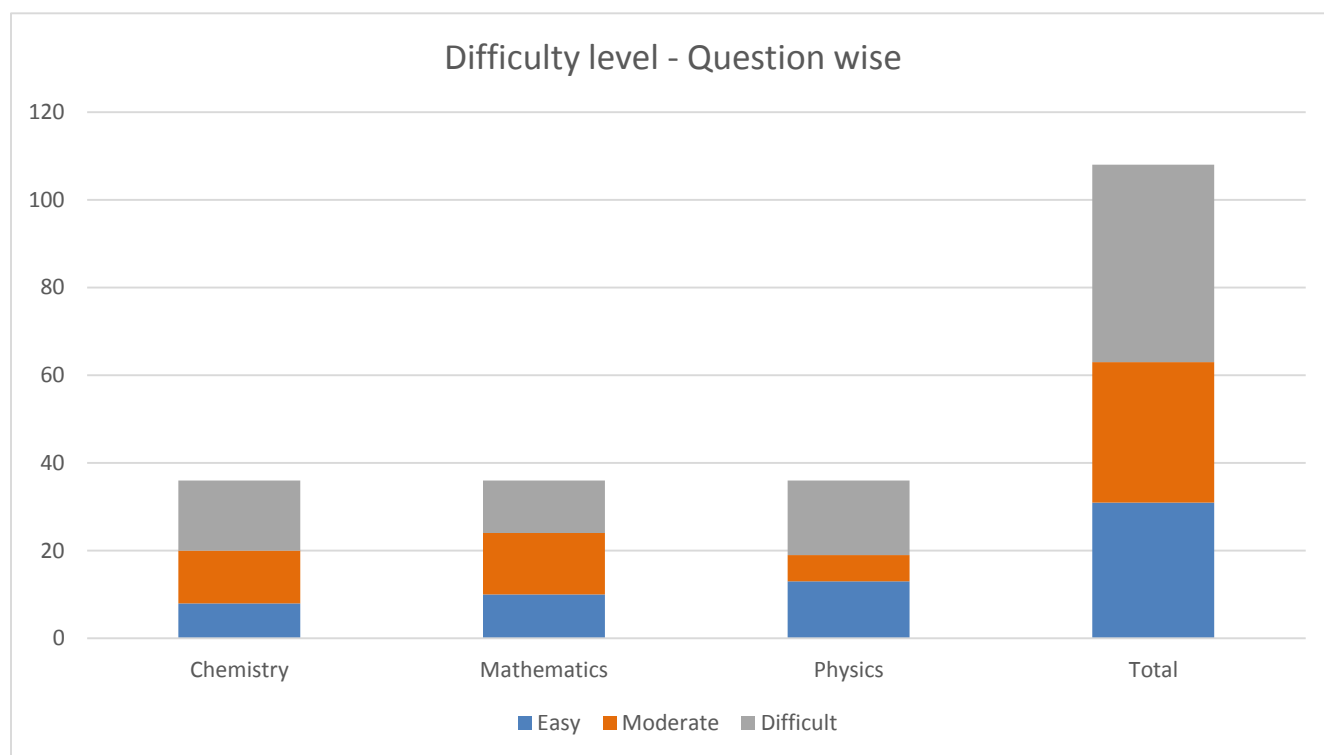
3 - Difficult

Subject	Paper 1	Paper 2	Total
Chemistry	2.15	2.23	2.19
Mathematics	2.25	2.11	2.18
Physics	1.86	2.55	2.21
Total	2.09	2.30	2.19



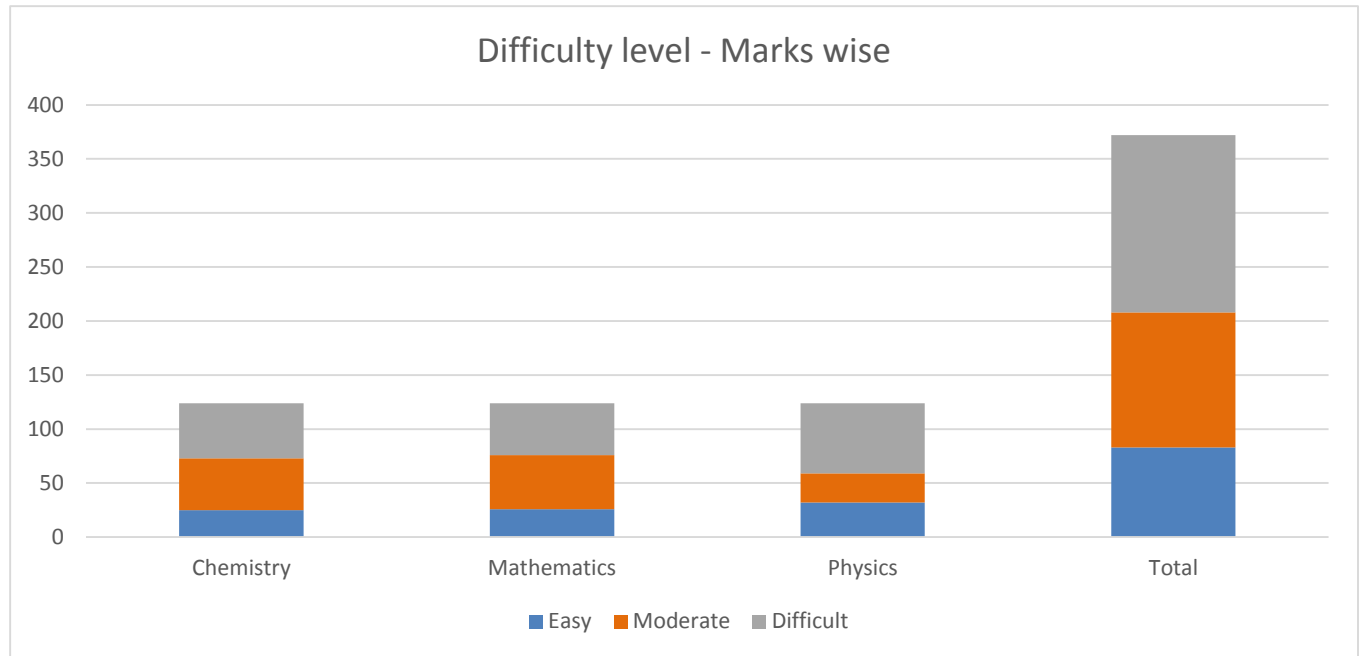
Difficulty Level Analysis: No of Questions

Subject	Easy	Moderate	Difficult	Total
Chemistry	8	12	16	36
Mathematics	10	14	12	36
Physics	13	6	17	36
Total	31	32	45	108



Difficulty Level Analysis: Marks Allocation

Subject	Easy	Moderate	Difficult	Total
Chemistry	25	48	51	124
Mathematics	26	50	48	124
Physics	32	27	65	124
Total	83	125	164	372



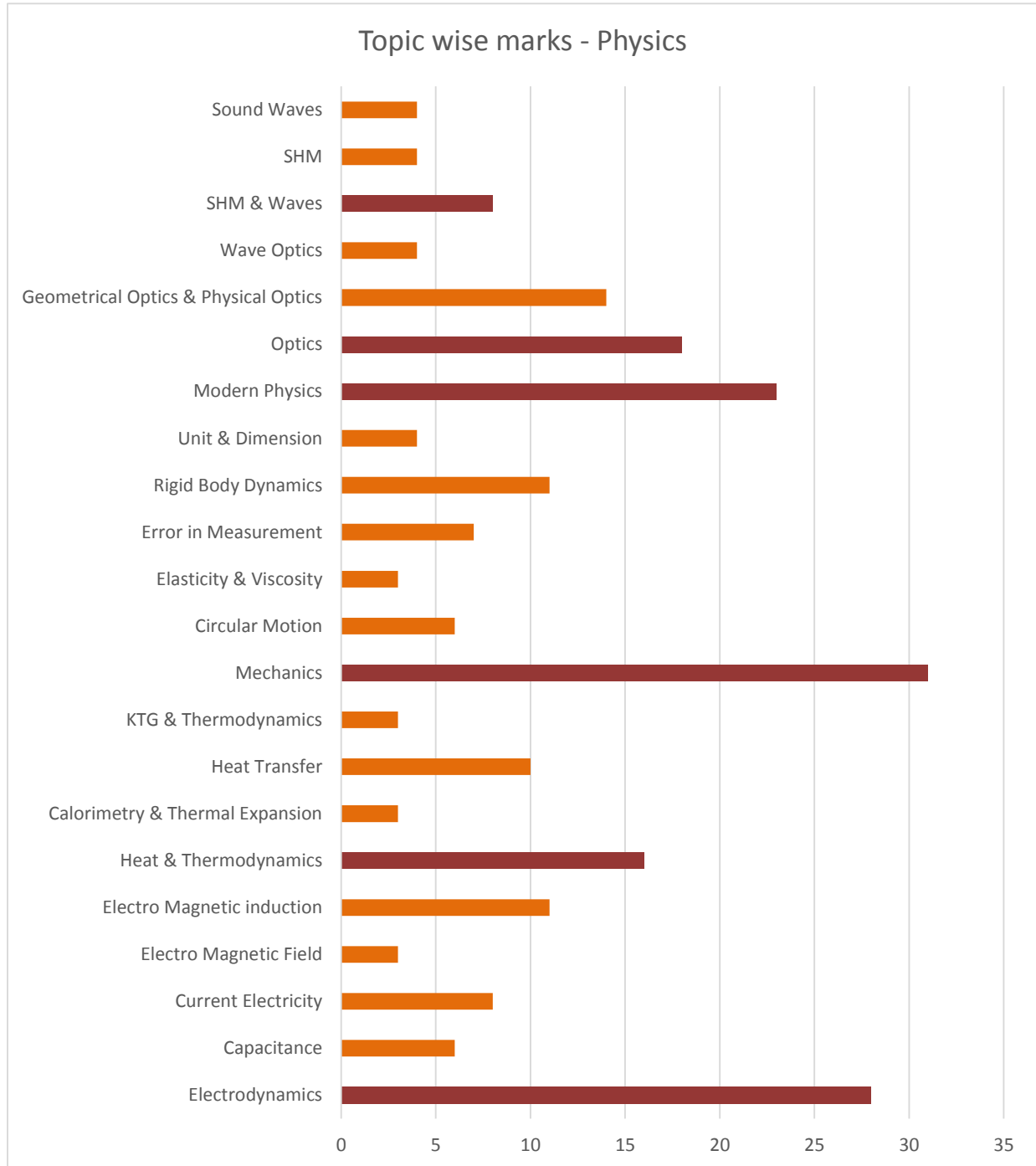
If we look at subject wise, Chemistry of Paper 1 & Physics of Paper 2 were most difficult. However, difficulty level of Math was somewhere between medium to difficult. Needless to say that Physics of Paper 1 & Chemistry of Paper 2 were easier of the three subjects.

Subject Wise Analysis

A - Physics

Topic wise allocation of # of Questions & Marks

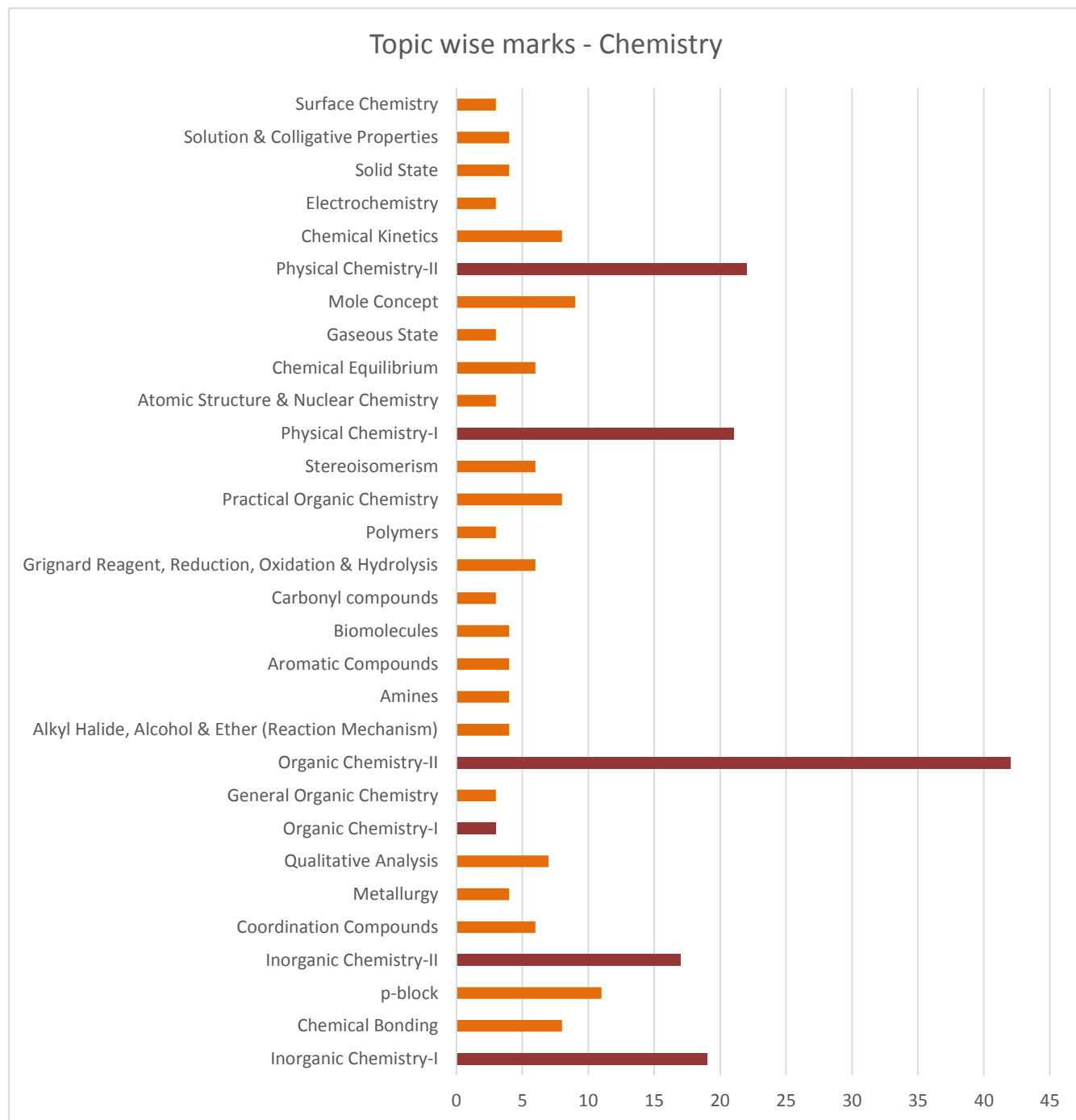
Physics			
UNIT & TOPIC NAME	NO OF QUESTIONS	TOTAL MARKS	(%) WEIGHTAGE
Electrodynamics	8	28	22.58%
Capacitance	2	6	4.84%
Current Electricity	2	8	6.45%
Electro Magnetic Field	1	3	2.42%
Electro Magnetic induction	3	11	8.87%
Heat & Thermodynamics	5	16	12.90%
Calorimetry & Thermal Expansion	1	3	2.42%
Heat Transfer	3	10	8.06%
KTG & Thermodynamics	1	3	2.42%
Mechanics	9	31	25.00%
Circular Motion	2	6	4.84%
Elasticity & Viscosity	1	3	2.42%
Error in Measurement	2	7	5.65%
Rigid Body Dynamics	3	11	8.87%
Unit & Dimension	1	4	3.23%
Modern Physics	7	23	18.55%
Optics	5	18	14.52%
Geometrical Optics & Physical Optics	4	14	11.29%
Wave Optics	1	4	3.23%
SHM & Waves	2	8	6.45%
SHM	1	4	3.23%
Sound Waves	1	4	3.23%
Grand Total	36	124	100.00%



B - Chemistry

Topic wise allocation of # of Questions & Marks

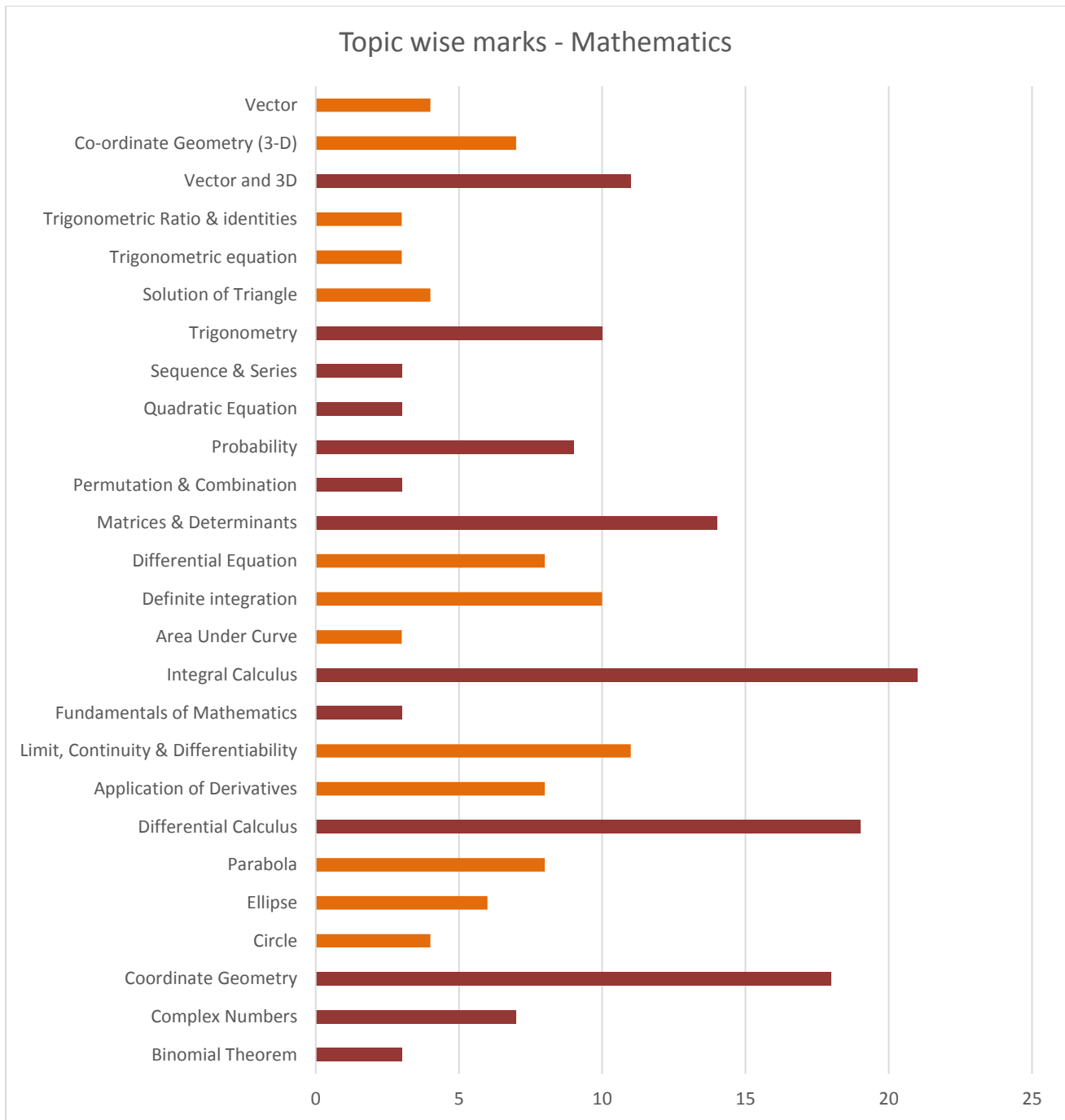
CHEMISTRY			
UNIT & TOPIC NAME	NO OF QUESTIONS	TOTAL MARKS	(%) WEIGHTAGE
Inorganic Chemistry-I	5	19	15.32%
Chemical Bonding	2	8	6.45%
p-block	3	11	8.87%
Inorganic Chemistry-II	5	17	13.71%
Coordination Compounds	2	6	4.84%
Metallurgy	1	4	3.23%
Qualitative Analysis	2	7	5.65%
Organic Chemistry-I	1	3	2.42%
General Organic Chemistry	1	3	2.42%
Organic Chemistry-II	12	42	33.87%
Alkyl Halide, Alcohol & Ether (Reaction Mechanism)	1	4	3.23%
Amines	1	4	3.23%
Aromatic Compounds	1	4	3.23%
Biomolecules	1	4	3.23%
Carbonyl compounds	1	3	2.42%
Grignard Reagent, Reduction, Oxidation & Hydrolysis	2	6	4.84%
Polymers	1	3	2.42%
Practical Organic Chemistry	2	8	6.45%
Stereoisomerism	2	6	4.84%
Physical Chemistry-I	7	21	16.94%
Atomic Structure & Nuclear Chemistry	1	3	2.42%
Chemical Equilibrium	2	6	4.84%
Gaseous State	1	3	2.42%
Mole Concept	3	9	7.26%
Physical Chemistry-II	6	22	17.74%
Chemical Kinetics	2	8	6.45%
Electrochemistry	1	3	2.42%
Solid State	1	4	3.23%
Solution & Colligative Properties	1	4	3.23%
Surface Chemistry	1	3	2.42%
Grand Total	36	124	100.00%



C - Mathematics

Topic wise allocation of # of Questions & Marks

MATHEMATICS			
UNIT & TOPIC NAME	NO OF QUESTIONS	TOTAL MARKS	(%) WEIGHTAGE
Binomial Theorem	1	3	2.42%
Complex Numbers	2	7	5.65%
Coordinate Geometry	5	18	14.52%
Circle	1	4	3.23%
Ellipse	2	6	4.84%
Parabola	2	8	6.45%
Differential Calculus	5	19	15.32%
Application of Derivatives	2	8	6.45%
Limit, Continuity & Differentiability	3	11	8.87%
Fundamentals of Mathematics	1	3	2.42%
Integral Calculus	6	21	16.94%
Area Under Curve	1	3	2.42%
Definite integration	3	10	8.06%
Differential Equation	2	8	6.45%
Matrices & Determinants	4	14	11.29%
Permutation & Combination	1	3	2.42%
Probability	3	9	7.26%
Quadratic Equation	1	3	2.42%
Sequence & Series	1	3	2.42%
Trigonometry	3	10	8.06%
Solution of Triangle	1	4	3.23%
Trigonometric equation	1	3	2.42%
Trigonometric Ratio & identities	1	3	2.42%
Vector and 3D	3	11	8.87%
Co-ordinate Geometry (3-D)	2	7	5.65%
Vector	1	4	3.23%
Grand Total	36	124	100.00%



Reservation of Seats and Expected Cutoff

JEE (Advanced) 2016: Official Cut-off			
Category	% Reservation	Cut-off Marks*	% Cutoff
Open	50.50%	130	35.00%
OBC	27.00%	117	31.50%
SC	15.00%	65	17.50%
ST	7.50%	65	17.50%
Total	100.00%		

Note:

1. Persons with Disability (PwD)

3% of seats in each of OPEN, OBC-NCL, SC and ST category seats.

Benefit would be given to those who have at least 40% impairment irrespective of the type of disability i.e., locomotor, visual or dyslexic.

Leprosy-cured candidates who are otherwise fit to pursue the courses are also included in this sub-category.

2. De-reservation

Unfilled seats reserved under OBC-NCL category will be de-reserved to OPEN category seats.

Whereas, seats remaining vacant under the SC and ST categories shall NOT be de-reserved to any category. The reservation for PwD candidates is horizontal and hence, unfilled seats will be de-reserved to the respective categories i.e., unfilled SC-PwD seats will be converted to the SC category seats and so on.

The category of a candidate as entered in the database, which will be made available by the JEE Apex Board [which conducts JEE (Main) 2016 examination], will be final and requests for change of category will NOT be entertained.

3. Preferential Allotment for Defence Service Candidates

Defence Service (DS) candidates are children of defence / paramilitary personnel killed or permanently disabled in action during war or peacetime operations. **Two seats** are available for preferential allotment in each Institute for DS candidates. To avail of this preferential allotment, a DS candidate must be in the Common Rank List of JEE (Advanced) 2016.

4. Foreign Nationals

Candidates who are NOT citizens of India (by birth or naturalized), at the time of registering for JEE (Advanced) 2016 are treated as foreign nationals. Seats allotted to foreign nationals are

supernumerary with a cap of 10% of total number of seats in every course. However, the seats allotted to OCI/PIO card holders will be under OPEN category, but not supernumerary.

Foreign nationals are outside the ambit of reservation of seats under the OBC-NCL, SC, ST and PwD categories as specified herein.