

Paper Analysis - JEE (Main) 2016

On 3-April-2016, JEE (Main) 2016 was conducted for those students who opted to take this exam by offline mode. After major changes introduced in year 2013 by CBSE and Ministry of HRD, this was the fourth edition of the exam. Around 12 Lac students were selected to appear for this exam in offline and online modes both.

These exams were conducted in two parts - Paper 1 and Paper 2. Timings of Paper 1 was from 9:30 am to 12:30 pm and that of Paper 2 for B. Arch. aspirants was from 2 pm to 5 pm. Paper 1 was for those students who applied for seats in engineering colleges, while paper 2 was for those who applied for B. Arch degree.

Here is the analysis of Paper 1 only, which was conducted for engineering students.

Overall Marks Distribution

The paper pattern of JEE Main Paper 1 was same as that of last year. This paper had 90 questions in all, each worth 4 marks. All questions were of objective type with single correct option. If we talk of subject wise each, then each subject had 30 questions of 120 marks in total.

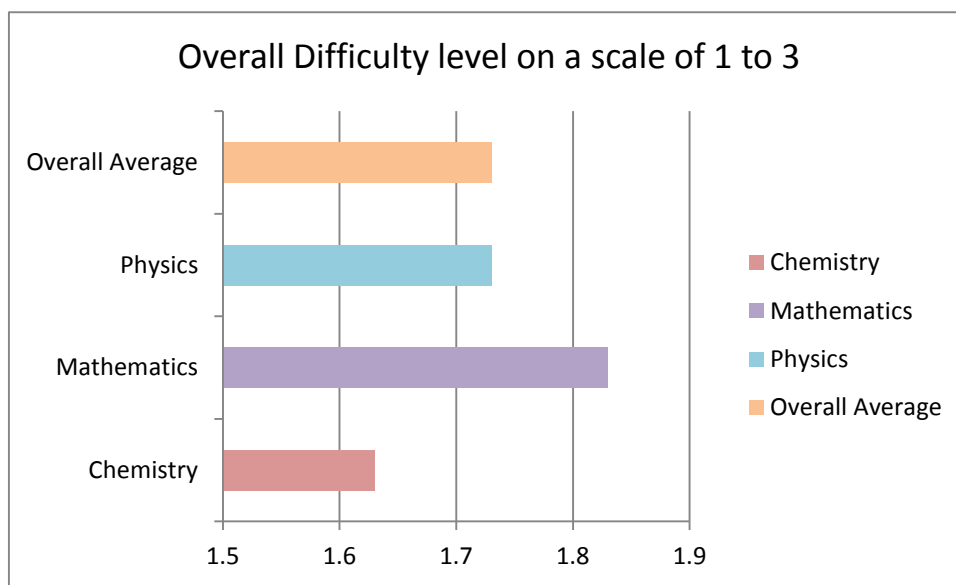
Subject	Class XI no. of Questions	Sum of Marks	Class XII no. of Questions	Sum of Marks	Total Count of Question No.	Total Sum of Marks
Chemistry	15	60	15	60	30	120
Mathematics	17	68	13	52	30	120
Physics	13	56	16	64	30	120
Grand Total	46	184	44	176	90	360

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

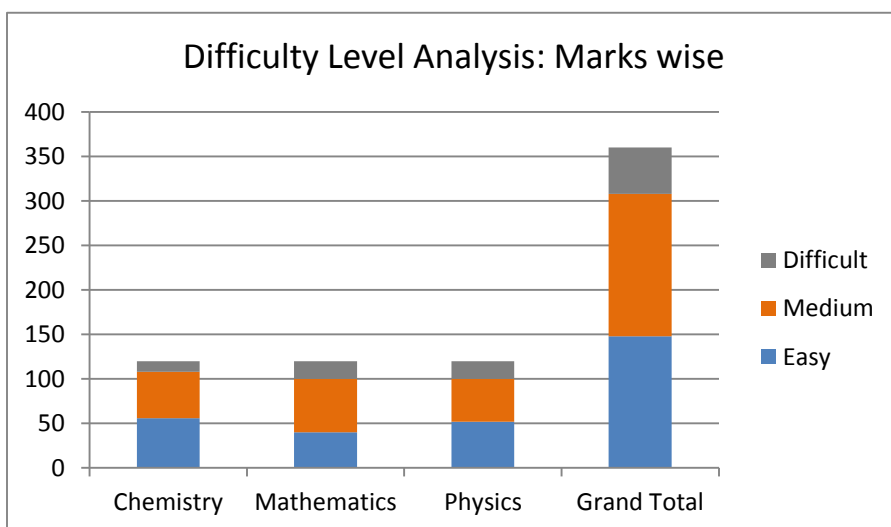
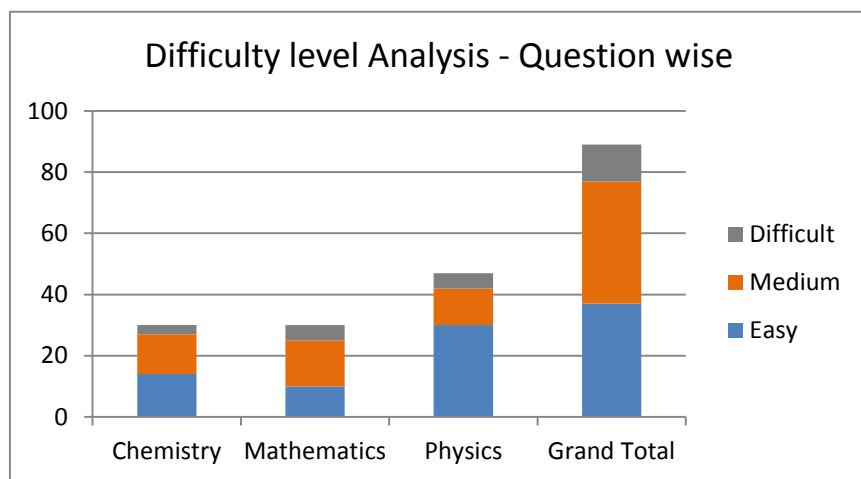
Subject	Difficulty Level
Chemistry	1.63
Mathematics	1.83
Physics	1.73
Overall Average	1.73



Difficulty Level Analysis: Question wise & Mark wise

Subject	Easy		Medium		Difficult	
	No of Questions	Total Marks	No of Questions	Total Marks	No of Questions	Total Marks
Chemistry	14	56	13	52	3	12
Mathematics	10	40	15	60	5	20
Physics	30	52	12	48	5	20
Grand Total	37	148	40	160	12	52

askITians experts feel that although all subjects had similar difficulty level but mathematics was on tougher side when compared to Chemistry & Physics. Overall, it is felt that while paper was moderate, the cut-off may decrease this year as there is increase in number of seats from 1.5 lac to 2 lacs.

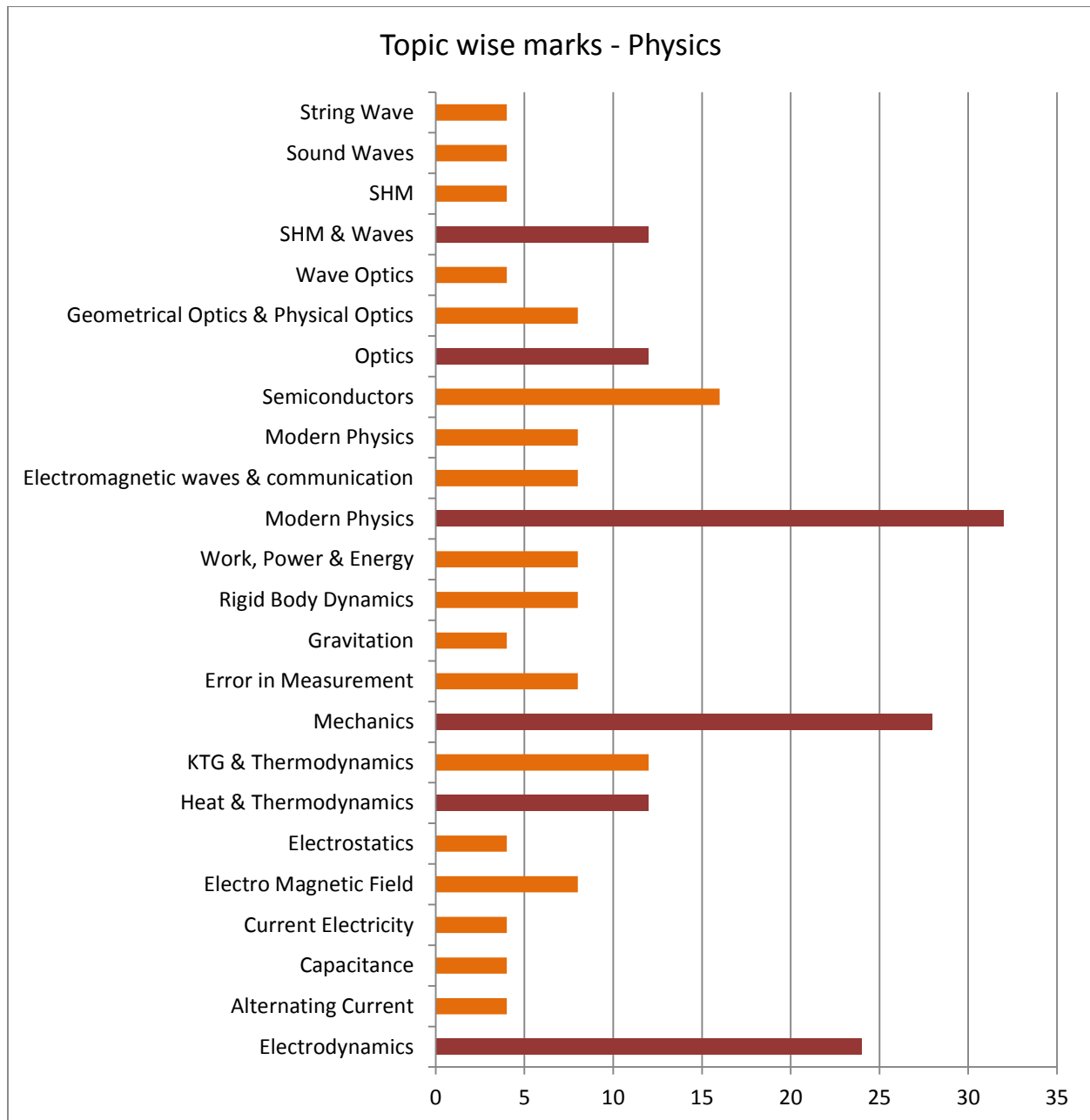


Subject Wise Analysis

A - Physics

Topic wise allocation of # of Questions & Marks

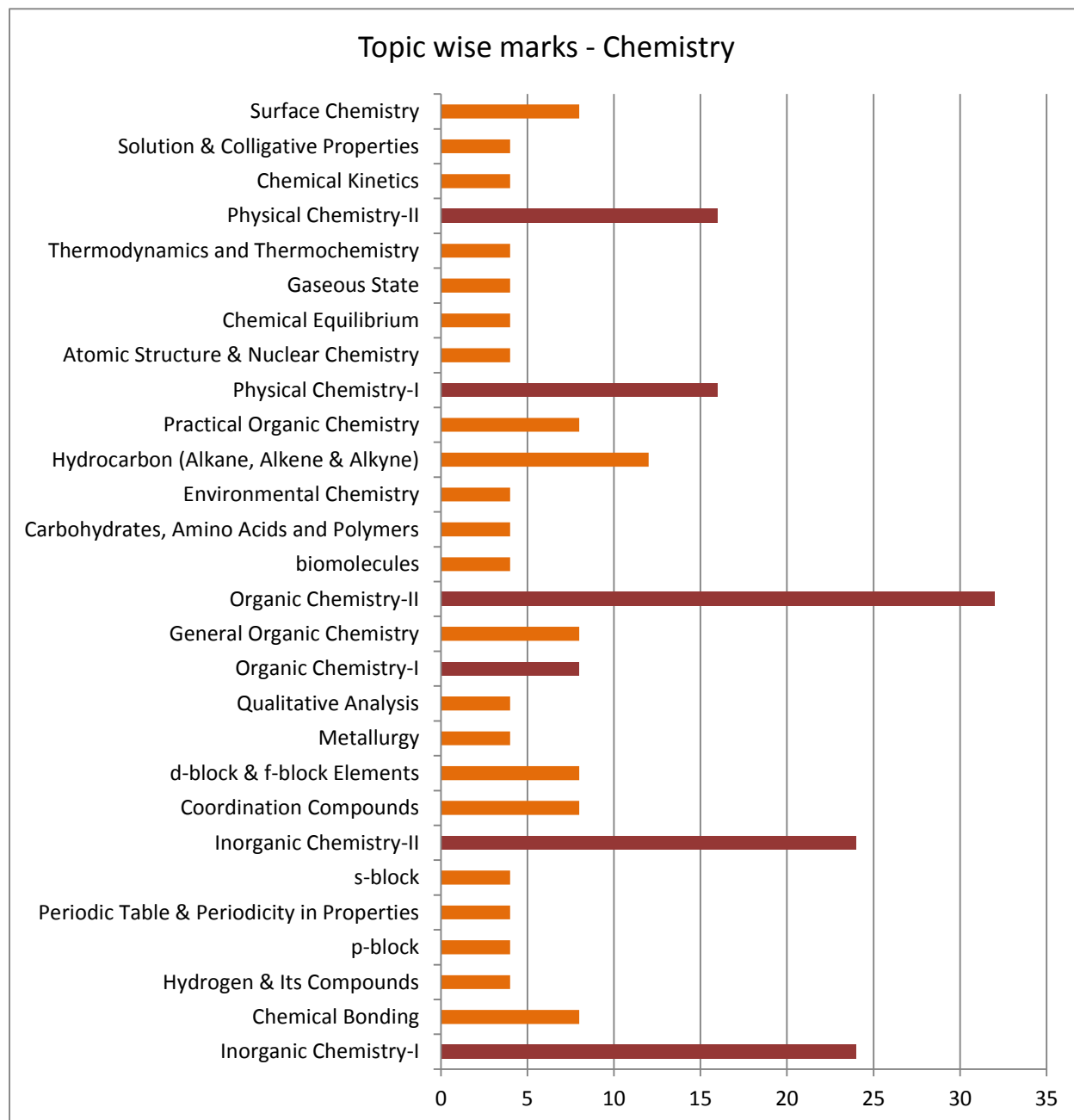
Physics			
UNIT & TOPIC NAME	NO OF QUESTION	TOTAL MARKS	% WEIGHTAGE
Electrodynamics	6	24	20.00%
Alternating Current	1	4	3.33%
Capacitance	1	4	3.33%
Current Electricity	1	4	3.33%
Electro Magnetic Field	2	8	6.67%
Electrostatics	1	4	3.33%
Heat & Thermodynamics	3	12	10.00%
KTG & Thermodynamics	3	12	10.00%
Mechanics	7	28	23.33%
Error in Measurement	2	8	6.67%
Gravitation	1	4	3.33%
Rigid Body Dynamics	2	8	6.67%
Work, Power & Energy	2	8	6.67%
Modern Physics	8	32	26.67%
Electromagnetic waves & communication	2	8	6.67%
Modern Physics	2	8	6.67%
Semiconductors	4	16	13.33%
Optics	3	12	10.00%
Geometrical Optics & Physical Optics	2	8	6.67%
Wave Optics	1	4	3.33%
SHM & Waves	3	12	10.00%
SHM	1	4	3.33%
Sound Waves	1	4	3.33%
String Wave	1	4	3.33%
Grand Total	30	120	100.00%



B – Chemistry

Topic wise allocation of # of Questions & Marks

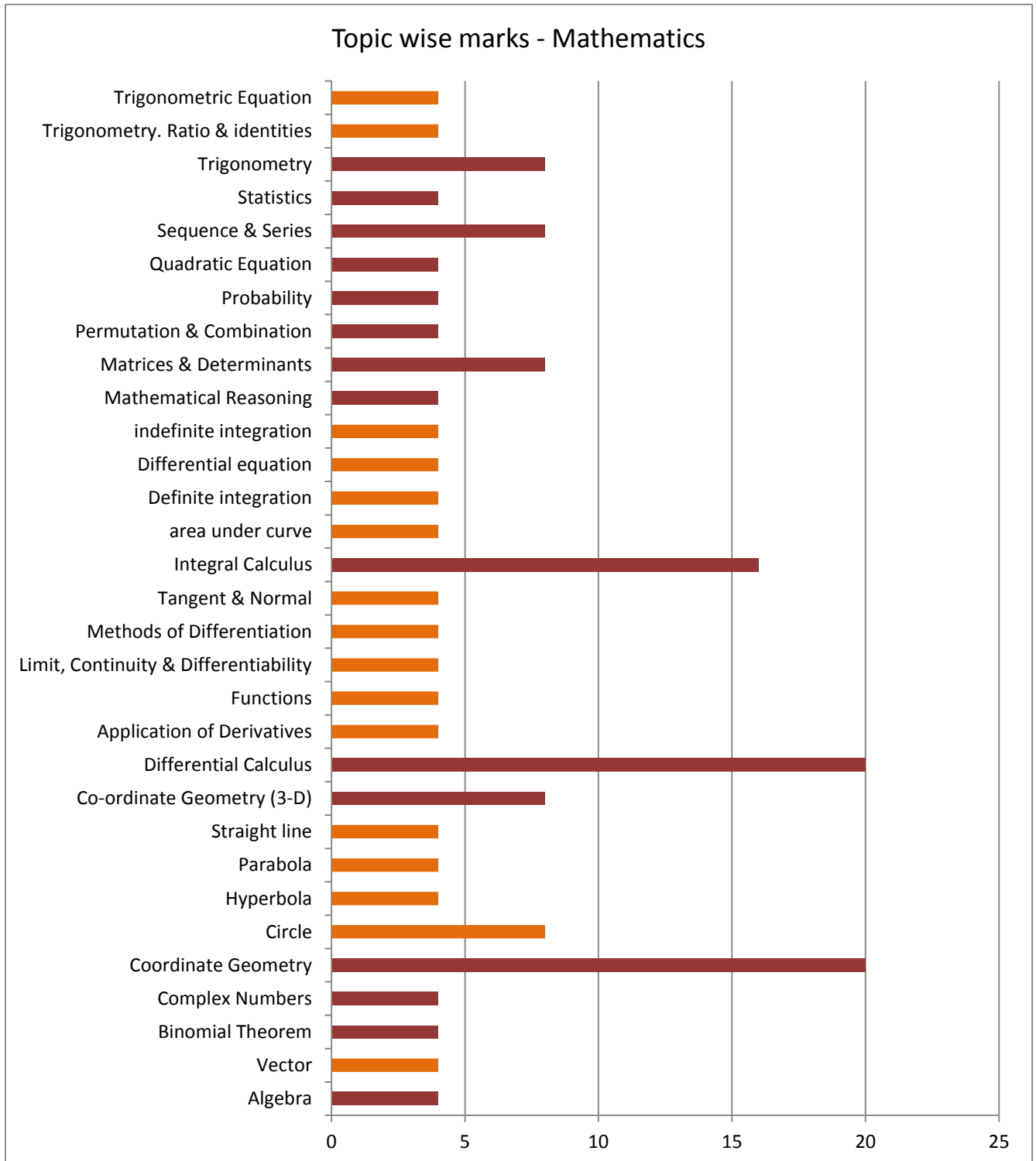
CHEMISTRY			
UNIT & TOPIC NAME	NO OF QUES.	TOTAL MARKS	% WEIGHTAGE
Inorganic Chemistry-I	6	24	20.00%
Chemical Bonding	2	8	6.67%
Hydrogen & Its Compounds	1	4	3.33%
p-block	1	4	3.33%
Periodic Table & Periodicity in Properties	1	4	3.33%
s-block	1	4	3.33%
Inorganic Chemistry-II	6	24	20.00%
Coordination Compounds	2	8	6.67%
d-block & f-block Elements	2	8	6.67%
Metallurgy	1	4	3.33%
Qualitative Analysis	1	4	3.33%
Organic Chemistry-I	2	8	6.67%
General Organic Chemistry	2	8	6.67%
Organic Chemistry-II	8	32	26.67%
biomolecules	1	4	3.33%
Carbohydrates, Amino Acids and Polymers	1	4	3.33%
Environmental Chemistry	1	4	3.33%
Hydrocarbon (Alkane, Alkene & Alkyne)	3	12	10.00%
Practical Organic Chemistry	2	8	6.67%
Physical Chemistry-I	4	16	13.33%
Atomic Structure & Nuclear Chemistry	1	4	3.33%
Chemical Equilibrium	1	4	3.33%
Gaseous State	1	4	3.33%
Thermodynamics and Thermochemistry	1	4	3.33%
Physical Chemistry-II	4	16	13.33%
Chemical Kinetics	1	4	3.33%
Solution & Colligative Properties	1	4	3.33%
Surface Chemistry	2	8	6.67%
Grand Total	30	120	100.00%



C – Mathematics

Topic wise allocation of # of Questions & Marks

MATHEMATICS			
UNIT & TOPIC NAME	NO OF QUES.	TOTAL	% WEIGHTAGE
Algebra	1	4	3.33%
Vector	1	4	3.33%
Binomial Theorem	1	4	3.33%
Complex Numbers	1	4	3.33%
Coordinate Geomtrv	5	20	16.67%
Circle	2	8	6.67%
Hyperbola	1	4	3.33%
Parabola	1	4	3.33%
Straight line	1	4	3.33%
Co-ordinate Geometry (3-D)	2	8	6.67%
Differential Calculus	5	20	16.67%
Application of Derivatives	1	4	3.33%
Functions	1	4	3.33%
Limit, Continuity & Differentiability	1	4	3.33%
Methods of Differentiation	1	4	3.33%
Tangent & Normal	1	4	3.33%
Integral Calculus	4	16	13.33%
area under curve	1	4	3.33%
Definite integration	1	4	3.33%
Differential equation	1	4	3.33%
indefinite integration	1	4	3.33%
Mathematical Reasoning	1	4	3.33%
Matrices & Determinants	2	8	6.67%
Permutation & Combination	1	4	3.33%
Probability	1	4	3.33%
Quadratic Equation	1	4	3.33%
Sequence & Series	2	8	6.67%
Statistics	1	4	3.33%
Trigonometry	2	8	6.67%
Trigonometry. Ratio & identities	1	4	3.33%
Trigonometric Equation	1	4	3.33%
Grand Total	30	120	100.00%



Expected Cutoff

JEE (Main) 2016: Tentative*				
Category	% Reservation	Total Seats	Cut-off Marks	% Cutoff
General	50.50%	1,01,000	100	27.78%
OBC	27.00%	54,000	70	19.44%
SC	15.00%	30,000	52	14.44%
ST	7.50%	15,000	48	13.33%
Total	100.00%	2,00,000		
JEE (Main) 2016: Maximum Marks				360

* The Cut-off of JEE (Main) 2016 is estimated on the basis of previous year data and paper analysis of this year. This is not an official data released by concerned authorities and just an estimation.