

# JEE (Main) 2018

## A Detailed Analysis by Resonance

On 8-April-2018, JEE (Main) 2018 was conducted for students opting to take this exam by offline mode. This is the sixth edition of this Exam after wide-ranging changes were introduced in year 2013 by CBSE and Ministry of HRD. Around 11.5 Lakh students are slated to appear for this exam in offline and online modes.

JEE (Main) 2018 was conducted in two parts (Paper 1 and Paper 2). Paper 1 was conducted from 9:30 am to 12:30 pm and Paper 2 for B. Arch. Aspirants was conducted from 2 pm to 5 pm.

Paper 1 was for students applying for engineering seats in engineering colleges, while paper 2 was for students applying for B. Arch degrees

The analysis below pertains to only Paper 1, which was for engineering aspirants.

### OVERALL MARKS DISTRIBUTION

The paper pattern was same as last year. The paper had 90 questions each worth 4 marks. All questions were objective type with single correct option. Subject wise each subject had 30 questions of 120 marks.

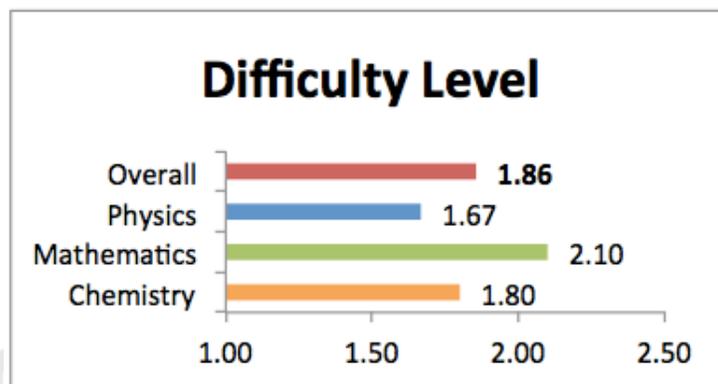
Subject	Class 11		Class 12		Total Percentage	
	No of Questions	Total Marks	No of Questions	Total Marks	Class 11	Class 12
<b>Chemistry</b>	15	60	15	60	50%	50%
<b>Mathematics</b>	15	60	15	60	50%	50%
<b>Physics</b>	13	52	17	68	43%	57%
<b>Grand Total</b>	43	172	47	188	47.78%	52.22%

### OVERALL DIFFICULTY LEVEL ANALYSIS

In this analysis we have rated every question on a scale of 1 to 3. The ratings are done by expert faculty of Resonance. The individual ratings are then averaged to calculate overall difficulty level.

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

Subject	Difficulty Level
Chemistry	1.80
Mathematics	2.10
Physics	1.67
<b>Overall</b>	<b>1.86</b>



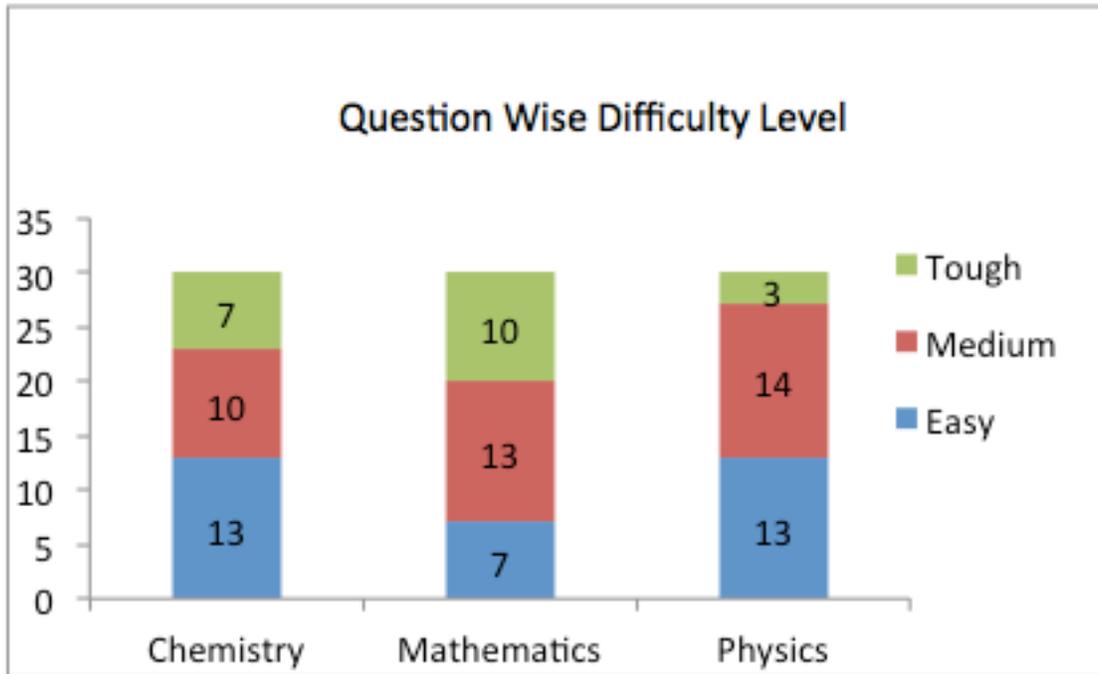
### Difficulty Level Analysis: No of Questions

Subject	Easy Level		Medium Level		Difficult Level	
	No of Questions	Total Marks	No of Questions	Total Marks	No of Questions	Total Marks
Chemistry	13	52	10	40	7	28
Mathematics	7	28	13	52	10	40
Physics	13	52	14	56	3	12
<b>Grand Total</b>	33	132	37	148	20	80

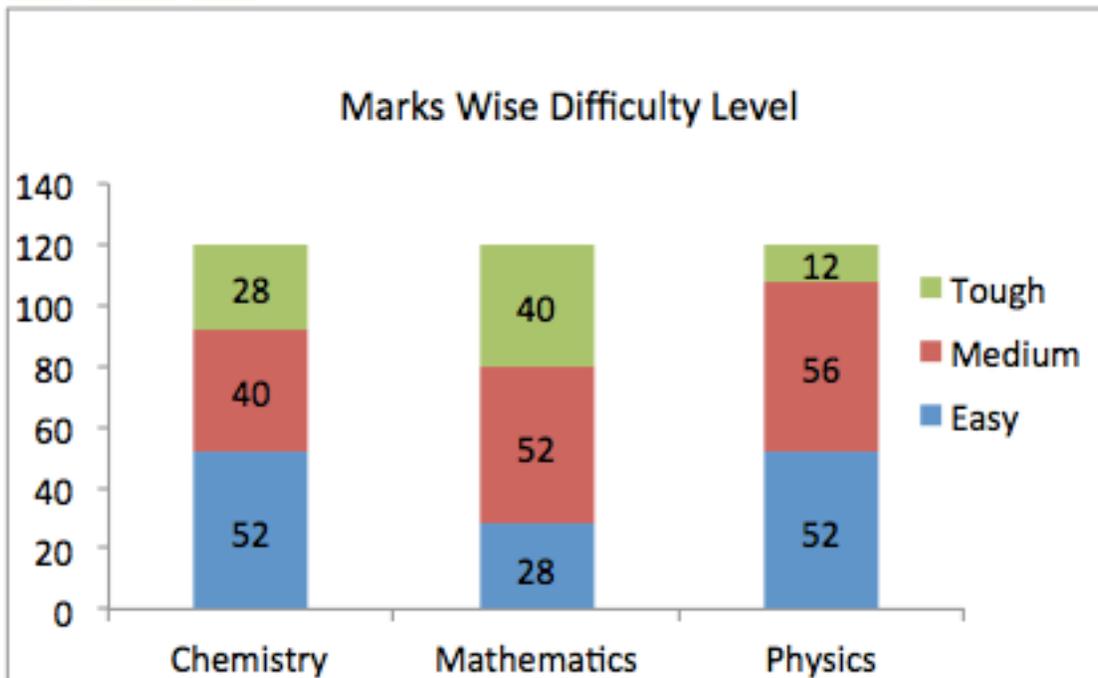
Resonance experts feel that all subjects were of similar difficulty level, while mathematics was on tougher side compared with chemistry & physics. Out of 360 marks, 132 marks can be considered of easy level, 148 marks can be considered of medium difficulty level and 80 marks can be considered to be of difficult level by Resonance Team.

Overall, it is felt that while paper is moderate, the cut-off would decrease compared to last year. Number of seats increased from 2,20,000 to 2,24,000 this year.

**Question Wise Difficulty Breakup**



**Marks Wise Difficulty Breakup**



## PHYSICS ANALYSIS

Physics			
UNIT & TOPIC NAME	NO OF QUESTIONS	TOTAL MARKS	(%) WEIGHTAGE
Physics	30	120	100.00%
Electrodynamics	9	36	30.00%
Capacitance	1	4	3.33%
Current Electricity	3	12	10.00%
Electro Magnetic Field	2	8	6.67%
Alternating Current	2	8	6.67%
Electrostatics	1	4	3.33%
Heat & Thermodynamics	2	8	6.67%
KTG & Thermodynamics	2	8	6.67%
Mechanics	10	40	33.33%
Circular Motion	1	4	3.33%
Elasticity & Viscosity	2	8	6.67%
Error in Measurement	1	4	3.33%
Rigid Body Dynamics	2	8	6.67%
Work, Power & Energy	1	4	3.33%
Friction	1	4	3.33%
Centre of Mass	1	4	3.33%
Rectilinear Motion & Vectors	1	4	3.33%
Modern Physics	6	24	20.00%
Nuclear Physics	1	4	3.33%
Atomic Physics	2	8	6.67%
Semiconductors	1	4	3.33%
Electromagnetic waves & communication	2	8	6.67%
Optics	2	8	6.67%
Wave Optics	2	8	6.67%
SHM & Waves	1	4	3.33%
SHM	1	4	3.33%
<b>Grand Total</b>	<b>30</b>	<b>120</b>	<b>100.00%</b>

## CHEMISTRY ANALYSIS

CHEMISTRY			
UNIT & TOPIC NAME	NO OF QUESTIONS	TOTAL MARKS	(%) WEIGHTAGE
Chemistry	30	120	100.00%
Inorganic Chemistry-I	6	24	20.00%
Chemical Bonding	4	16	13.33%
p-block	2	8	6.67%
Inorganic Chemistry-II	3	12	10.00%
Coordination Compounds	2	8	6.67%
Metallurgy	1	4	3.33%
Organic Chemistry-I	2	8	6.67%
General Organic Chemistry- II	2	8	6.67%
Organic Chemistry-II	8	32	26.67%
Alkyl Halide, Alcohol & Ether (Reaction Mechanism)	2	8	6.67%
Aromatic Compounds	2	8	6.67%
Biomolecules	1	4	3.33%
Grignard Reagent, Reduction, Oxidation & Hydrolysis	1	4	3.33%
Practical Organic Chemistry	1	4	3.33%
Environmental chemistry	1	4	3.33%
Physical Chemistry-I	7	28	23.33%
Chemical Equilibrium	1	4	3.33%
Gaseous State	1	4	3.33%
Ionic Equilibrium	4	16	13.33%
Thermodynamics and Thermochemistry	1	4	3.33%
Physical Chemistry-II	4	16	13.33%
Chemical Kinetics	1	4	3.33%
Electrochemistry	1	4	3.33%
Solid State	1	4	3.33%
Solution & Colligative Properties	1	4	3.33%
<b>Grand Total</b>	<b>30</b>	<b>120</b>	<b>100.00%</b>

## MATHEMATICS ANALYSIS

MATHEMATICS			
UNIT & TOPIC NAME	NO OF QUESTIONS	TOTAL MARKS	(%) WEIGHTAGE
Mathematics	30	120	100.00%
Binomial Theorem	1	4	3.33%
Binomial Theorem	1	4	3.33%
Complex Numbers	1	4	3.33%
Complex Numbers	1	4	3.33%
Coordinate Geometry	5	20	16.67%
Circle	1	4	3.33%
Parabola	2	8	6.67%
Hyperbola	1	4	3.33%
Straight Line	1	4	3.33%
Differential Calculus	5	20	16.67%
Limit, Continuity & Differentiability	2	8	6.67%
Maxima & Minima	1	4	3.33%
Sets & Relation	1	4	3.33%
Application of Derivatives	1	4	3.33%
Fundamentals of Mathematics	1	4	3.33%
Fundamentals of Mathematics	1	4	3.33%
Integral Calculus	4	16	13.33%
Definite integration	2	8	6.67%
Differential equation	1	4	3.33%
Indefinite integration	1	4	3.33%
Matrix & Determinants	2	8	6.67%
Matrices & Determinants	2	8	6.67%
Permutation & Combination	1	4	3.33%
Permutation & Combination	1	4	3.33%
Probability	1	4	3.33%
Probability	1	4	3.33%
Sequence & Series	2	8	6.67%
Sequence & Series	2	8	6.67%
Trigonometry	2	8	6.67%
Trigonometric equation	1	4	3.33%
Trigonometric Ratio & identities	1	4	3.33%
Vector and 3D	3	12	10.00%
Co-ordinate Geometry (3-D)	2	8	6.67%
Vector	1	4	3.33%
Mathematical Reasoning	1	4	3.33%
Mathematical Reasoning	1	4	3.33%
Statistics	1	4	3.33%
Statistics	1	4	3.33%

<b>Grand Total</b>	30	120	100.00%
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### EXPECTED CUTOFF

<b>JEE (Main) 2018: Tentative# Cutoff Table for JEE (Advanced) 2018</b>				
Category	% Reservation	Total Seats	Cut-off Marks*	% Cutoff
General	50.5%	1,13,120	70	19.44%
OBC-NCL	27.0%	60,480	38	10.55%
SC	15.0%	33,600	28	7.77%
ST	7.5%	16,800	25	6.94%
<b>Total</b>	<b>100.0%</b>	<b>2,24,000</b>	-	
<b>JEE (Main) 2018: Maximum Marks</b>				<b>360</b>
<p>* To Qualify in JEE (Advanced), student should be in Top-20% of all students or should have scored minimum 75% marks (GEN/OBC) and 65% marks (ST/SC) in class 12th</p> <p>* Within each of these four categories, 5% horizontal reservation is available for PwD candidates</p> <p># The Cut-off of JEE (Main) 2018 for qualifying JEE (Advanced) 2018 is estimated on the basis of Previous Year Data and Toughness Analysis of JEE (Main) 2018 Paper by Resonance Experts. These are not official data released by Authorities concerned.</p>				