JEE Advanced 2018 Paper

Exam Conducting Body	IIT Kanpur
Exam Date	20th May, 2018
Exam Mode	Computer-Based Online Test
Exam Paper and Duration	2 papers (Paper 1 and Paper 2) of 3 hours each
Subjects or Sections	Physics, Chemistry, Maths
Total Marks	360 (180+180)
Question Type	MCQs, Numerical Problems, Comprehension, list match sets

JEE Advanced 2018 Paper Marking Scheme

Each of the papers in JEE Advanced is divided in **three parts** with **three sections** each.

- Number of Parts (One for each Subject): **3**
- Number of Sections per Part: **3**

Paper I and Paper II				
Sections	Question Pattern	Marking Scheme	No. of Q.	Total Marks
1	Multiple Answers Correct Type	+4 for correct, +1 for Partial correct, -2 for wrong	6	24
2	Numerical Answer Type	+3 for Correct, No Negative Marking	8	24
3	Comprehension / Column matching	+3 for correct, -1 for wrong	4	12

JEE Advanced 2018 Paper: Distribution of Questions

The distribution of questions in both Paper I and Paper II was as follows:

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
Mathematics	15	49	21	71	36	120
Physics	22	73	14	47	36	120
Grand Total	44	145	64	215	108	360

JEE Advanced 2018: Expert's Viewpoint

- Here is what the experts had to say about the difficulty level of the two papers..

| Subjects	Difficulty Level
Physics	Relatively on a moderate level.
Chemistry	On the difficult side with tricky and new questions..
Maths	Questions were on a moderate level.
Overall	The papers were relatively tough than 2017. Students should be able to obtain comparatively lower score in 2018 paper.

JEE Advanced 2018 Overall Difficulty Analysis

Subject	Easy		Moderate		Tough	
	No. of Questions	Total Marks	No. of Questions	Total Marks	No. of Questions	Total Marks
Physics	13	44	13	43	10	33
Chemistry	5	16	13	44	18	60
Maths	13	40	11	36	12	44
Grand Total	31	100	37	123	40	137
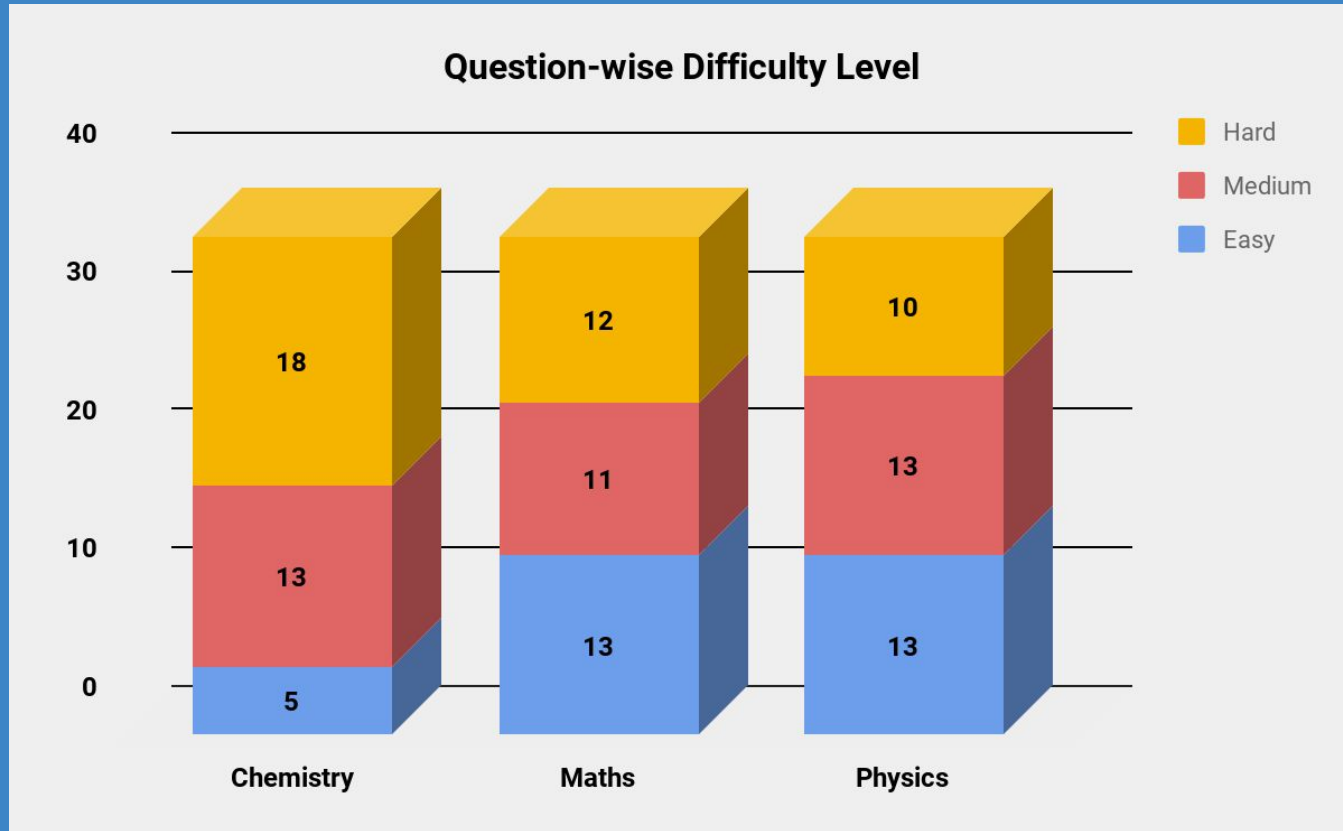
JEE Advanced 2018 Marks-wise Difficulty Level

Marks-wise Difficulty Level

	Easy	Medium	Hard
Chemistry	16	44	60
Maths	40	36	44
Physics	44	43	33
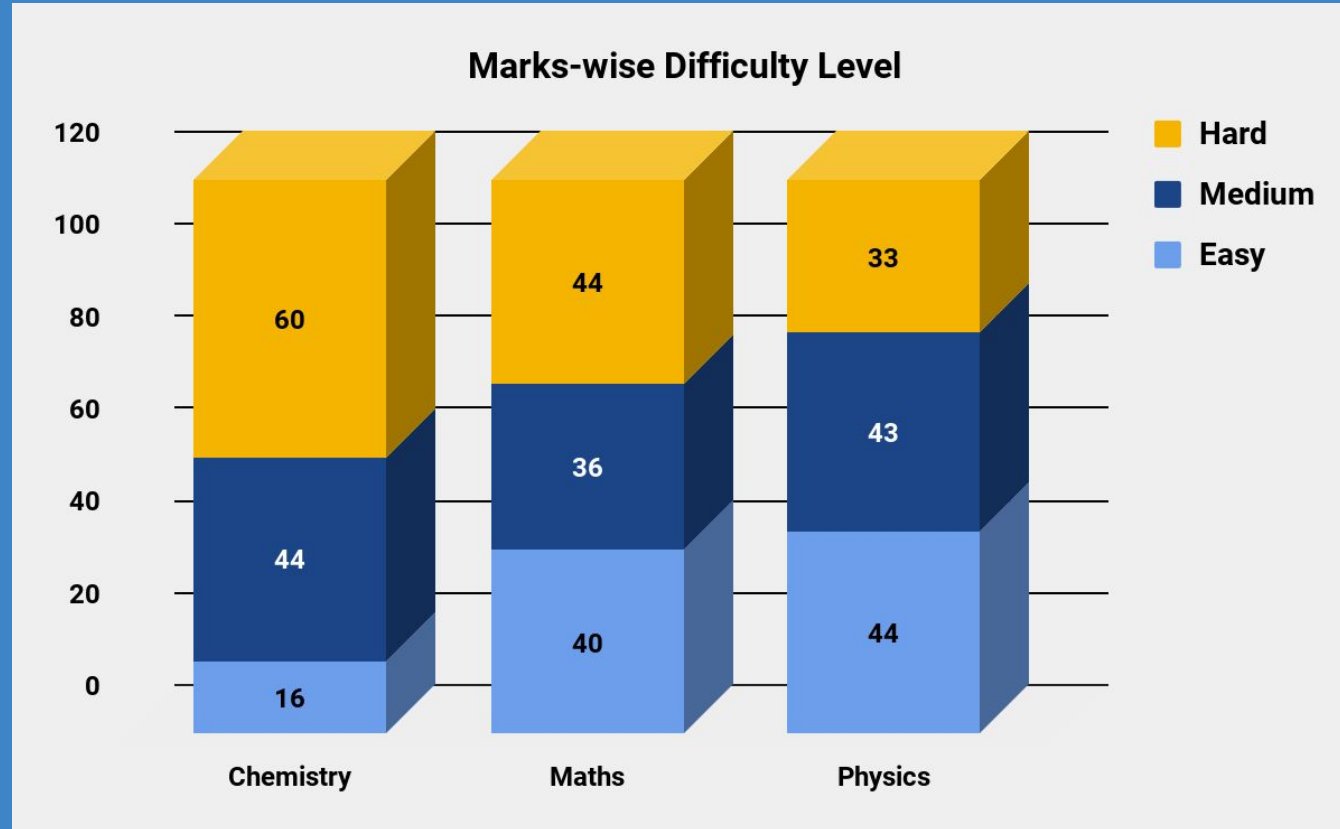
JEE Advanced 2018 Paper Analysis: Physics

- The physics section in both paper 1 and paper 2 were on a moderate level.
- The physics questions were mostly analytical and application based.
- There were fewer calculation based questions..
- Physics was comparatively easier than Chemistry and Maths.
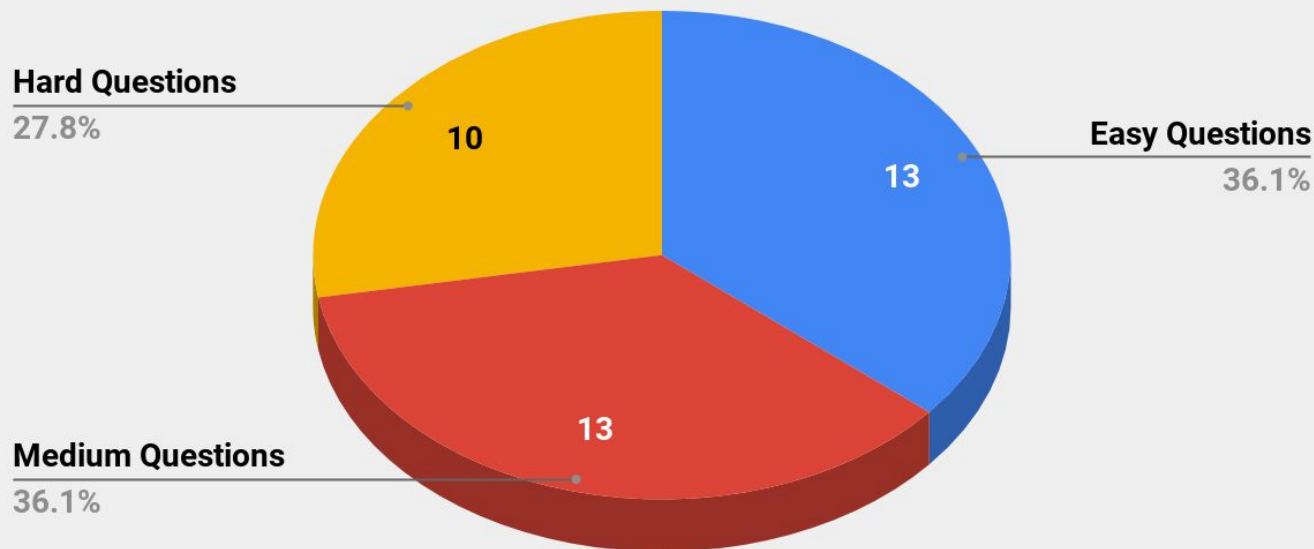
Subject	Class 11		Class 12		Total	
	No. of Questions	Total Marks	No. of Questions	Total Marks	Total Questions	Total Marks
Physics	22	73	14	47	36	120

Topic wise Question Breakup in Physics		
Topics	No of Questions	Weightage of Marks
Electrodynamics	**8**	**22.50%**
Capacitance	1	2.50%
Electromagnetic Field	2	5.83%
Electromagnetic Induction	1	3.33%
Electrostatics	3	8.33%
Current Electricity	1	2.50%
Heat & Thermodynamics	**4**	**10.83%**
Heat Transfer	1	2.50%
KTG & Thermodynamics	3	8.33%
Mechanics	**15**	**41.67%**
Error in Measurement	3	7.50%
Gravitation	1	2.50%
Rigid Body Dynamics	3	8.33%
Surface Tension	1	3.33%
Work, Power & Energy	1	3.33%

Topic wise Question Breakup in Physics		
Topics	No of Questions	Weightage of Marks
Elasticity & Viscosity	2	5.83%
Unit & Dimension	2	5.00%
Circular Motion	1	3.33%
Mathematical Tool	1	2.50%
Modern Physics	**3**	**8.33%**
Nuclear Physics	1	3.33%
Photoelectric Effect	1	2.50%
Bohr Atomic Model	1	2.50%
Optics	**2**	**5.83%**
Geometrical Optics & Physical Optics	2	5.83%
SHM & Waves	**3**	**8.33%**
Sound Waves	2	5.83%
SHM	1	2.50%
Mathematical Tools	**1**	**2.50%**
Projectile Motion	1	2.50%

JEE Advanced 2018 Paper Analysis: Physics Section

No of Questions and Difficulty Percentage

Hard Questions
27.8%

10

Easy Questions
36.1%

13

Medium Questions
36.1%

13

JEE Advanced 2018 Paper Analysis: Chemistry

- Chemistry section surprisingly was on the difficult side.

- In terms of weightage, Physical and Organic chemistry were given more importance in comparison to Inorganic Chemistry.

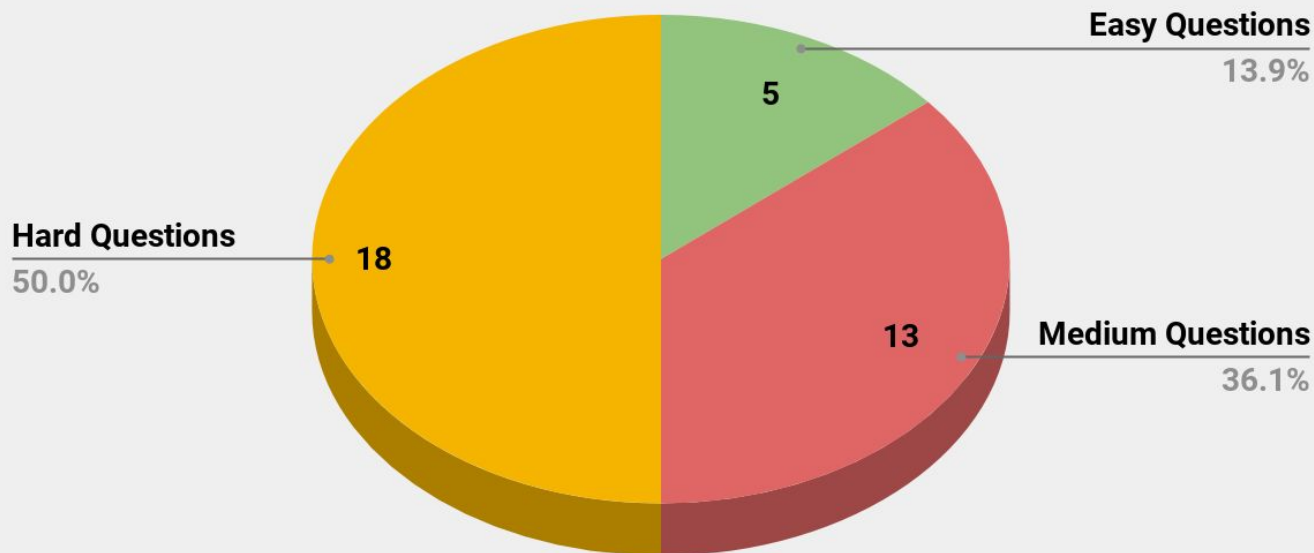- Some questions were asked outside of the NCERT books or syllabus.

Subject	Class 11		Class 12		Total	
	No. of Questions	Total Marks	No. of Questions	Total Marks	Total Questions	Total Marks
Chemistry	7	23	29	97	36	120

Topic wise Question Breakup in Chemistry		
Topics	No of Questions	Weightage of Marks
Inorganic Chemistry-I	**3**	**9.17%**
Chemical Bonding	1	2.50%
p-block	2	6.67%
Inorganic Chemistry-II	**7**	**20.00%**
Coordination Compounds	5	14.17%
Qualitative Analysis	1	3.33%
Metallurgy	1	2.50%
Organic Chemistry-II	**12**	**33.33%**
Aromatic Compounds	3	9.17%
Carbonyl compounds	1	2.50%
Organic Reaction Mechanism 4	2	5.00%
Stereoisomerism	1	2.50%
Organic Reaction Mechanism 3	1	3.33%
Biomolecules	1	3.33%
Carboxylic Acid and their Derivatives	3	7.50%

Topic wise Question Breakup in Chemistry		
Topics	No of Questions	Weightage of Marks
Physical Chemistry-I	**7**	**19.17%**
Gaseous State	1	2.50%
Ionic Equilibrium	2	5.00%
Thermodynamics	3	9.17%
Equivalent Concept	1	2.50%
Physical Chemistry-II	**7**	**18.33%**
Chemical Kinetics	2	5.83%
Electrochemistry	2	5.00%
Solid State	1	2.50%
Solution & Colligative Properties	2	5.00%

JEE Advanced 2018 Paper Analysis: Chemistry Section

No of Questions and Difficulty Percentage

Easy Questions 13.9%

5

Hard Questions 50.0%

18

13

Medium Questions 36.1%
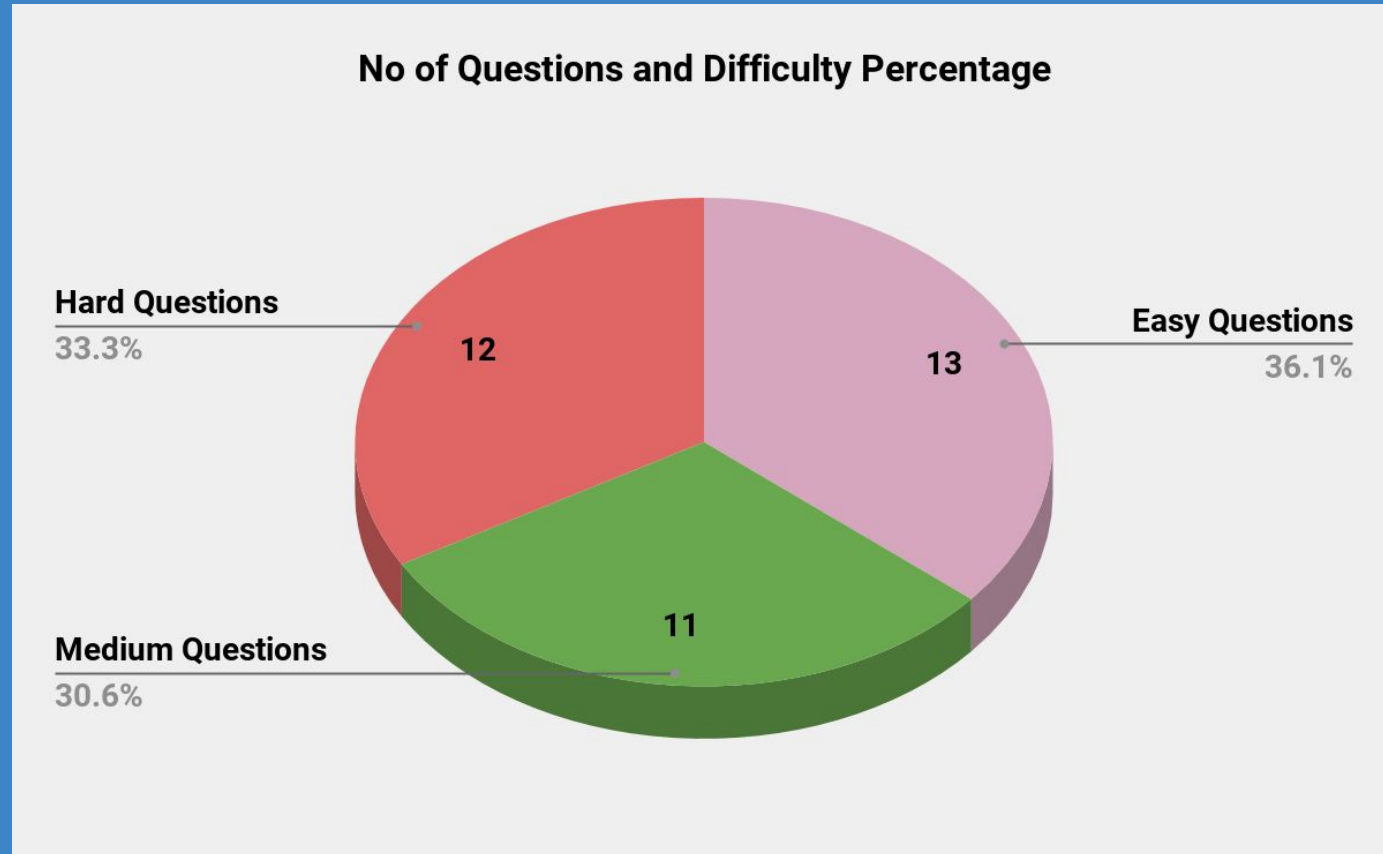
JEE Advanced 2018 Paper Analysis: Maths Section

- The mathematics questions in paper 1 and paper 2 were on a moderate level.
- However, some questions were new and challenging as well as lengthy.
- There were few conceptual questions as well.
- Comparatively this section was easier with regards to Physics and Chemistry.

Subject	Class 11		Class 12		Total	
	No. of Questions	Total Marks	No. of Questions	Total Marks	Total Questions	Total Marks
Maths	15	49	21	71	36	120

Topic wise Question Breakup in Maths		
Topics	No of Questions	Weightage of Marks
Algebra	**1**	**2.50%**
Binomial Theorem	1	2.50%
Complex Numbers	**2**	**6.67%**
Complex Numbers	2	6.67%
Coordinate Geometry	**5**	**14.17%**
Circle	3	8.33%
Hyperbola	1	2.50%
Ellipse	1	3.33%
Differential Calculus	**5**	**14.17%**
Functions	2	5.00%
Limit, Continuity & Differentiability	1	2.50%
Application of Derivatives	1	3.33%
Methods of Differentiation	1	3.33%
Integral Calculus	**8**	**22.50%**
Definite integration	3	7.50%

Topic wise Question Breakup in Maths		
Topics	No of Questions	Weightage of Marks
Differential equation	5	15.00%
Matrix & Determinants	**2**	**5.83%**
Matrices & Determinants	2	5.83%
Permutation & Combination	**2**	**5.00%**
Probability	**2**	**5.00%**
Probability	2	5.00%
Sequence & Series	**1**	**2.50%**
Sequence & Series	1	2.50%
Trigonometry	**3**	**8.33%**
Solution of Triangle	1	3.33%
Inverse Trigonometric function	1	2.50%
Trigonometric Ratio & identities	1	2.50%
Vector and 3D	**4**	**10.83%**
Vector	4	10.83%
Fundamentals of Mathematics	**1**	**2.50%**

JEE Advanced 2018 Paper Analysis: Maths Section

No of Questions and Difficulty Percentage

Hard Questions
33.3%

12

Easy Questions
36.1%

13

Medium Questions
30.6%

11

Important Topics Asked in JEE Advanced 2018 Paper: Physics

- ❑ Capacitance
- ❑ Electromagnetic Field
- ❑ Electrostatics
- ❑ Heat Transfer
- ❑ KTG & Thermodynamics
- ❑ Error in Measurement
- ❑ Rigid Body Dynamics
- ❑ Work, Power & Energy

- ❑ Elasticity & Viscosity
- ❑ Unit & Dimension
- ❑ Modern Physics
- ❑ Geometrical Optics & Physical Optics
- ❑ SHM & Waves
- ❑ Sound Waves
- ❑ Mathematical Tools
- ❑ Projectile Motion

Chemistry

- ❏ Inorganic Chemistry-I
- ❏ Organic Chemistry-II
- ❏ Physical Chemistry-I
- ❏ Inorganic Chemistry-II
- ❏ Atomic Structure & Nuclear Chemistry
- ❏ Physical Chemistry-II
- ❏ p-block

- ❏ Stereoisomerism
- ❏ Carboxylic Acid and their Derivatives
- ❏ Ionic Equilibrium
- ❏ Thermodynamics
- ❏ Chemical Kinetics
- ❏ Electrochemistry
- ❏ Solution & Colligative Peroperties

Maths

- Complex Numbers
- Circle
- Hyperbola
- Functions
- Application of Derivatives
- Methods of Differentiation
- Differential equation

- Matrices & Determinants
- Permutation & Combination
- Probability
- Sequence & Series
- Trigonometry
- Vector
- Fundamentals of Mathematics

JEE Advanced 2018 Cutoff

Category	Minimum Percentage of Marks in Each Subject	Minimum Percentage of Aggregate Marks
Common rank list (CRL)	10	25
OBC-NCL rank list	9	22.5
SC rank list	5	12.5
ST	5	12.5
Common-PwD rank list (CRL)	5	12.5
OBC-NCL-PwD rank list	5	12.5
SC-PwD rank list	5	12.5
ST-PwD rank list	5	12.5
Preparatory course rank lists	2.5	6.25

Thank You!

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