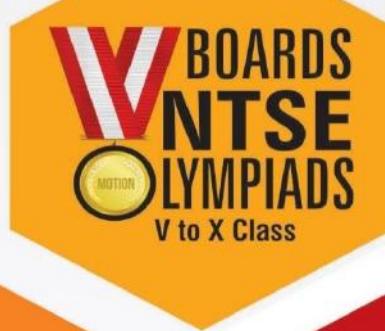


हमारा विश्वास
हर एक
विद्यार्थी है खास



PAPER
ANALYSIS

JEE
ADVANCED
2018

JEE Advanced 2018 Paper Analysis

The Joint Entrance Examination (JEE) Advanced 2018 was conducted on 20th of May 2018. Over 150000 students who had aced the JEE Main Examination appeared in JEE Advanced 2018. This exam is conducted in the seven zonal IITs under the guidance of the Joint Admission Board (JAB). The performance of a candidate in this examination forms the basis for admission to the bachelor's, integrated master's and dual degree programs (entry at the 10+2 level) in Indian School of Mines (ISM), Dhanbad and in all the Indian Institutes of Technology (IITs) across the country. The examination consists of two papers, Paper 1 and Paper 2, each of three hours duration. While Paper 1 is scheduled to be from 9 am to 12 pm, Paper 2 is conducted from 2 pm to 5 pm.

The paper conducting method as well as the format has changed significantly compared to last year. This is the first time this paper is conducted on a computer, which became a challenge for many students. The changes in paper format are discussed below in detail.

Paper Format Analysis - Paper 1:

The Paper-1 of JEE Advanced 2018 was conducted from 9am to 12pm. In terms of paper format, Paper 1 of JEE Advanced 2018 differed significantly from its counterpart last year both in term of sections as well as the weights of each of the sections. While the total number of questions in the entire paper remained the same as last year at 18, there are differences in section wise distribution of these questions and nature of questions asked in various sections as well. The maximum marks achievable in this paper are 60 in each subject when compared to 61 marks in each subject last year. We present a section wise analysis in the following pages.

19100+
SELECTIONS SINCE 2007

JEE (Advanced)	JEE (Main)	NEET / AIIMS	NTSE / OLYMPIADS
4042 (Under 50000 Rank)	13953 (since 2016)	197 (5th to 10th class)	1066

Paper 1: Section 1

SECTION 1 (Maximum Marks: 24)

- This section contains **SIX (06)** questions.
- Each question has **FOUR** options for correct answer(s). **ONE OR MORE THAN ONE** of these four option(s) is (are) correct option(s).
- For each question, choose the correct option(s) to answer the question.
- Answer to each question will be evaluated according to the following marking scheme:
 - Full Marks* : +4 If only (all) the correct option(s) is (are) chosen.
 - Partial Marks* : +3 If all the four options are correct but ONLY three options are chosen.
 - Partial Marks* : +2 If three or more options are correct but ONLY two options are chosen, both of which are correct options.
 - Partial Marks* : +1 If two or more options are correct but ONLY one option is chosen and it is a correct option.
 - Zero Marks* : 0 If none of the options is chosen (i.e. the question is unanswered).
 - Negative Marks* : -2 In all other cases.
- **For Example:** If first, third and fourth are the ONLY three correct options for a question with second option being an incorrect option; selecting only all the three correct options will result in +4 marks. Selecting only two of the three correct options (e.g. the first and fourth options), without selecting any incorrect option (second option in this case), will result in +2 marks. Selecting only one of the three correct options (either first or third or fourth option) , without selecting any incorrect option (second option in this case), will result in +1 marks. Selecting any incorrect option(s) (second option in this case), with or without selection of any correct option(s) will result in -2 marks.

Section 1 of JEE Advanced 2018 Paper-1 corresponded to the same section of JEE Advanced 2017 Paper-1. It is a **multiple correct answer** section with full marks of +4, partial marks of +1 for each correct option and negative marking of -2 on selection of wrong option regardless of selecting a correct option also. There were **seven** such questions in JEE Advanced 2017's section 1, while there are **six** such this year in section 1. This is a high risk high reward category of questions. While there is a temptation to mark all correct answers to get full marks, the penalty is very high on wrong answers so there is no reason to guess answers in this section. Of a total of 60 marks, 40% of total weight was given to this section, numerically 24. This implies that maximum time was to be devoted to this section for each subject.

19100+
SELECTIONS SINCE 2007

JEE (Advanced)	JEE (Main)	NEET / AIIMS	NTSE / OLYMPIADS
4042	13953	197	1066

(Under 50000 Rank)

(since 2016)

(5th to 10th class)

Paper 1: Section 2**SECTION 2 (Maximum Marks: 24)**

- This section contains **EIGHT (08)** questions. The answer to each question is a **NUMERICAL VALUE**.
- For each question, enter the correct numerical value (in decimal notation, truncated/rounded-off to the second decimal place; e.g. 6.25, 7.00, -0.33, -.30, 30.27, -127.30) using the mouse and the on-screen virtual numeric keypad in the place designated to enter the answer.
- Answer to each question will be evaluated according to the following marking scheme:
Full Marks : +3 If ONLY the correct numerical value is entered as answer.
Zero Marks : 0 In all other cases.

Section 2 of JEE Advanced 2018 Paper-1 is the first of its kind, but can be considered to be a modified and more difficult version of section 2 of JEE Advanced 2017 Paper-1. It is a **numerical value UPTO SECOND DECIMAL PLACE** section with no partial or negative marking and full marks of +3. Compared to the single digit integer type section last year, this section can be considered more difficult. There were **eight** such questions in this category, compared to only **five** integer type questions last year. There is no use in guessing the answer, and this type of questions very closely resembles the subjective type questions in their nature. Of a total of 60 marks, 40% of the total weight was given to this section, numerically 24. This implies that this section deserved as much amount of time as section 1.

19100+
SELECTIONS SINCE 2007

JEE (Advanced)	JEE (Main)	NEET / AIIMS	NTSE / OLYMPIADS
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Paper 1: Section 3

SECTION 3 (Maximum Marks: 12)

- This section contains **TWO (02)** paragraphs. Based on each paragraph, there are **TWO (02)** questions.
- Each question has **FOUR** options. **ONLY ONE** of these four options corresponds to the correct answer.
- For each question, choose the option corresponding to the correct answer.
- Answer to each question will be evaluated according to the following marking scheme:
 - Full Marks** : +3 If ONLY the correct option is chosen.
 - Zero Marks** : 0 If none of the options is chosen (i.e. the question is unanswered).
 - Negative Marks** : -1 In all other cases.

Section 3 of JEE Advanced 2018 Paper-1 is nearly to Section 3 of JEE Advanced 2017 Paper-2, except for negative marking being introduced this year. It is a **paragraph style single correct answer** section with full marks of +3 and penalty of -1 for incorrect answers. There were **four** such questions in JEE Advanced in both last year and this year. This is a moderate risk moderate reward category of questions. The penalty for wrong answer is not high enough to deter guessing, and 1 correct guess out of 4 can settle the account. Of a total of 60 marks, the minimum weight was in this section, numerically 12. This implies that this section was to be devoted least amount of time.

Paper Format Analysis - Paper 2:

The Paper-2 of JEE Advanced 2018 was conducted from 2pm to 5pm. In terms of paper format, Paper 2 of JEE Advanced 2018 differed heavily from its counterpart last year. The total number of questions as well as the various sections remained the same as last year namely 18 questions and 3 sections, but the sections had nearly no resemblance with those of last year. The maximum marks achievable in this paper are 60 in each subject when compared to 61 marks in each subject last year. We present a section wise analysis in the following pages.

19100+
SELECTIONS SINCE 2007

JEE (Advanced)	JEE (Main)	NEET / AIIMS	NTSE / OLYMPIADS
4042	13953 (Under 50000 Rank)	197 (since 2016)	1066 (5th to 10th class)

Paper 2: Section 1

SECTION 1 (Maximum Marks: 24)

- This section contains **SIX (06)** questions.
- Each question has **FOUR** options for correct answer(s). **ONE OR MORE THAN ONE** of these four option(s) is (are) correct option(s).
- For each question, choose the correct option(s) to answer the question.
- Answer to each question will be evaluated according to the following marking scheme:
 - Full Marks** : +4 If only (all) the correct option(s) is (are) chosen.
 - Partial Marks** : +3 If all the four options are correct but ONLY three options are chosen.
 - Partial Marks** : +2 If three or more options are correct but ONLY two options are chosen, both of which are correct options.
 - Partial Marks** : +1 If two or more options are correct but ONLY one option is chosen and it is a correct option.
 - Zero Marks** : 0 If none of the options is chosen (i.e. the question is unanswered).
 - Negative Marks** : -2 In all other cases.
- **For Example:** If first, third and fourth are the ONLY three correct options for a question with second option being an incorrect option; selecting only all the three correct options will result in +4 marks. Selecting only two of the three correct options (e.g. the first and fourth options), without selecting any incorrect option (second option in this case), will result in +2 marks. Selecting only one of the three correct options (either first or third or fourth option) , without selecting any incorrect option (second option in this case), will result in +1 marks. Selecting any incorrect option(s) (second option in this case), with or without selection of any correct option(s) will result in -2 marks.

Section 1 of JEE Advanced 2018 Paper-2 is completely opposite to its counterpart last year and is identical to section 1 of Paper 1 of this year in every way. Last year, this section was a single correct answer section, which was completely missing from the paper this year. This year, it is a **multiple correct answer** section with full marks of +4, partial marks of +1 for each correct option and negative marking of -2 on selection of wrong option regardless of selecting a correct option also. Just like Paper-1, there were **six** such questions. Of a total of 60 marks, 40% of total weight was given to this section, numerically 24. This implies that maximum time was to be devoted to this section for each subject.

19100+
SELECTIONS SINCE 2007

JEE (Advanced)	JEE (Main)	NEET / AIIMS	NTSE / OLYMPIADS
4042	13953 (Under 50000 Rank)	197 (since 2016)	1066 (5th to 10th class)

Paper 2: Section 2**SECTION 2 (Maximum Marks: 24)**

- This section contains **EIGHT (08)** questions. The answer to each question is a **NUMERICAL VALUE**.
- For each question, enter the correct numerical value (in decimal notation, truncated/rounded-off to the second decimal place; e.g. 6.25, 7.00, -0.33, -.30, 30.27, -127.30) using the mouse and the on-screen virtual numeric keypad in the place designated to enter the answer.
- Answer to each question will be evaluated according to the following marking scheme:
Full Marks : +3 If ONLY the correct numerical value is entered as answer.
Zero Marks : 0 In all other cases.

Just like Section 1, Section 2 of JEE Advanced 2018 Paper-2 is identical to its counterpart in Paper 1. It is a **numerical value UPTO SECOND DECIMAL PLACE** section with no partial or negative marking and full marks of +3. There were **eight** such questions in this category. Again, there is no use in guessing the answer because these questions very closely resemble the subjective type questions in their nature. Of a total of 60 marks, 40% of the total weight was given to this section, numerically 24. This implies that this section deserved as much amount of time as section 1.

19100+
SELECTIONS SINCE 2007

JEE (Advanced)

4042

JEE (Main)

13953

NEET / AIIMS

197

NTSE / OLYMPIADS

1066

(Under 50000 Rank)

(since 2016)

(5th to 10th class)

Paper 2: Section 3

SECTION 3 (Maximum Marks: 12)

- This section contains **FOUR (04)** questions.
- Each question has **TWO (02)** matching lists: LIST-I and LIST-II.
- **FOUR** options are given representing matching of elements from LIST-I and LIST-II. **ONLY ONE** of these four options corresponds to a correct matching.
- For each question, choose the option corresponding to the correct matching.
- For each question, marks will be awarded according to the following marking scheme:
Full Marks : +3 If ONLY the option corresponding to the correct matching is chosen.
Zero Marks : 0 If none of the options is chosen (i.e. the question is unanswered).
Negative Marks : -1 In all other cases.

Section 3 of JEE Advanced 2018 Paper-2 closely resembles the section 3 of JEE Advanced 2017 Paper-1. It is a **matching type** section where based on situations described in two tables, two questions each were asked with +3 marks for correct answer and a penalty of -1 for incorrect answers. There are total **four** questions in this category compared to **six** in last year's exam. This is a moderate risk moderate reward category of questions. The penalty for wrong answer is not high enough to deter guessing, and 1 correct guess out of 4 can settle the account. Of a total of 60 marks this section had a weight of 12. This implies that this section was to be devoted least amount of time.

19100+
SELECTIONS SINCE 2007

JEE (Advanced)	JEE (Main)	NEET / AIIMS	NTSE / OLYMPIADS
4042	13953 (Under 50000 Rank)	197 (since 2016)	1066 (5th to 10th class)

Class-wise Distribution Analysis

Following table illustrates the distribution of questions across class 11th and 12th for the three subjects. It is apparent from the numbers, class 12th had a bigger chunk of questions overall, but Physics subject had more questions from class 11th topics.

Subject / Level	Physics	Chemistry	Maths	Total
11 th	22	10	16	48
12 th	14	26	20	60

Overall Difficulty Analysis

We divide the questions in 3 categories: easy, medium and difficult to analyze the overall difficulty level of the paper and come up with a selection probability analysis.

Subject / Level	Easy	Medium	Difficult	Total
Physics	12	22	2	36
Chemistry	3	16	17	36
Mathematics	2	29	5	36
Total	17	67	24	108

Physics and Mathematics can be considered easier compared to Chemistry, which had a higher percentage of questions in the difficult category. Overall, our experts feel that the paper was more difficult compared to last year and hence we should expect an overall decrease in marks which will be scored by aspirants.

19100+
SELECTIONS SINCE 2007

JEE (Advanced) 4042 <small>(Under 50000 Rank)</small>	JEE (Main) 13953 <small>(since 2016)</small>	NEET / AIIMS 197 <small>(since 2016)</small>	NTSE / OLYMPIADS 1066 <small>(5th to 10th class)</small>
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Jee Advanced cutoff across years

Category / Year	2015	2016	2017	2018*
General	24.5%	20%	35%	35%
OBC	22.05%	18%	31.5%	31.5%
SC	12.25%	10%	17.5%	17.5%
ST	12.25%	10%	17.5%	17.5%

* Data for 2018 as per the brochure, not actual numbers

Even though the cutoff according to the brochure is the same as the one that we saw last year, it is our opinion that the cutoff will be revised lower this year because of difficulty level as well as change in exam conduction method.

Expected ranks at different marks

Rank	1	10	100	500	1000	2500	5000	10000
Approx Marks	325	315	270	245	225	200	175	155

Subject wise analysis

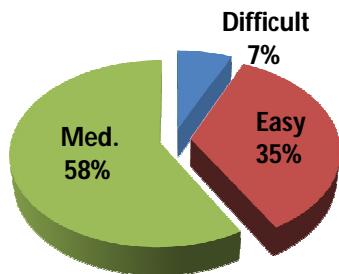
We present in the following pages a break up of questions for each of the subjects across topics, classes and difficulty.

19100+
SELECTIONS SINCE 2007

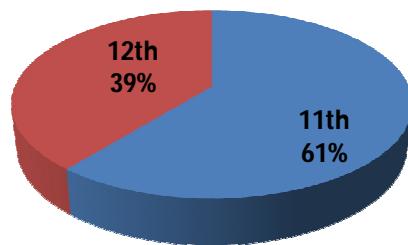
JEE (Advanced)	JEE (Main)	NEET / AIIMS	NTSE / OLYMPIADS
4042	13953	197	1066
(Under 50000 Rank)	(since 2016)	(5th to 10th class)	

Physics

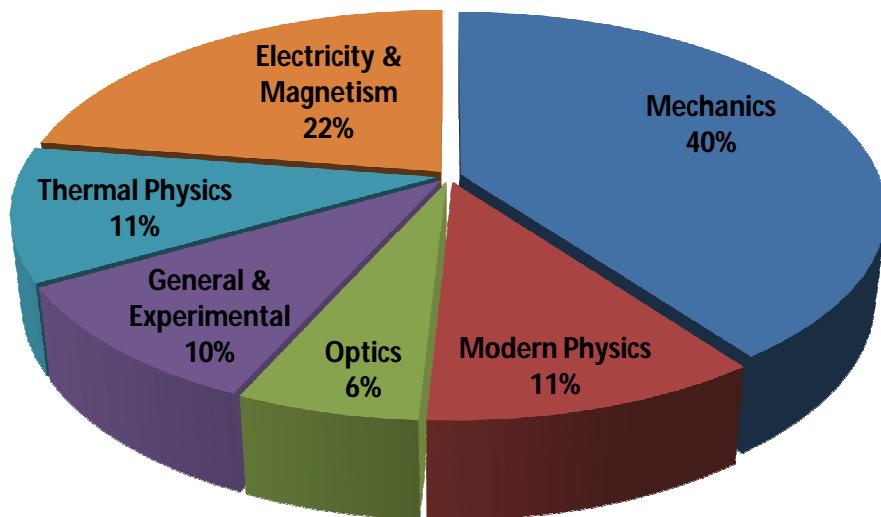
Physics Difficulty Wise Distribution



Physics Class Wise Distribution



Physics Topic Wise Distribution



19100+
SELECTIONS SINCE 2007

JEE (Advanced)

4042

JEE (Main)

13953

NEET / AIIMS

197

NTSE / OLYMPIADS

1066

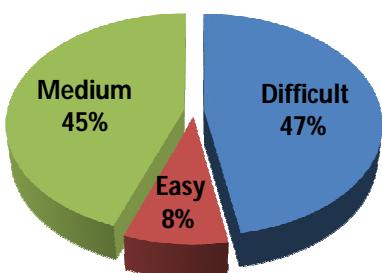
(Under 50000 Rank)

(since 2016)

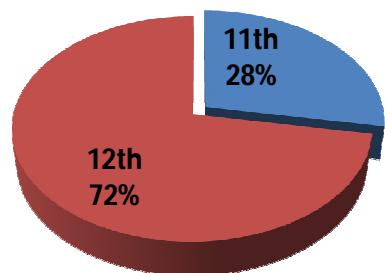
(5th to 10th class)

Chemistry

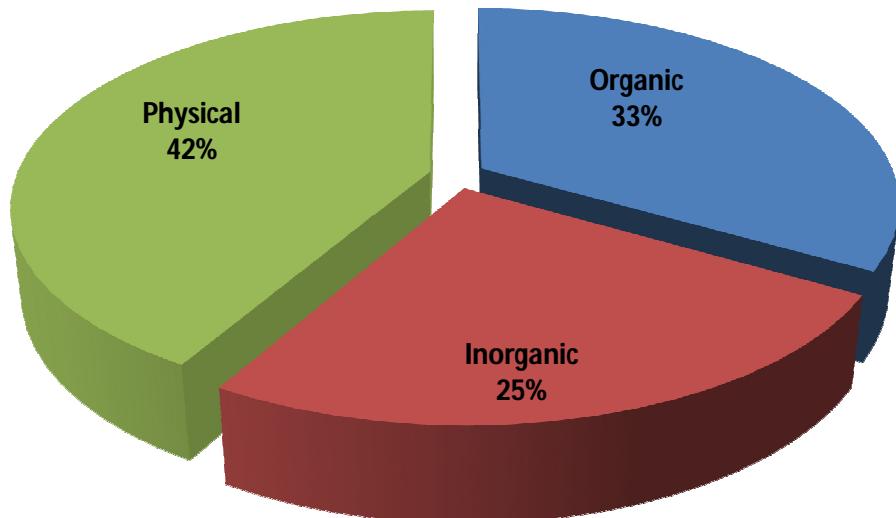
Chemistry Difficulty Wise Distribution



Chemistry Class Wise Distribution



Chemistry Topic Wise Distribution



19100+
SELECTIONS SINCE 2007

JEE (Advanced)

4042

JEE (Main)

13953

NEET / AIIMS

197

NTSE / OLYMPIADS

1066

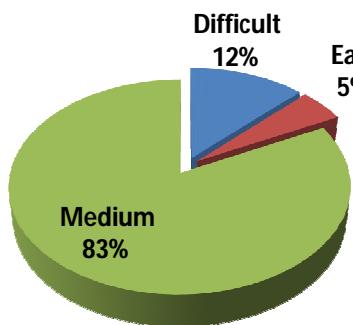
(Under 50000 Rank)

(since 2016)

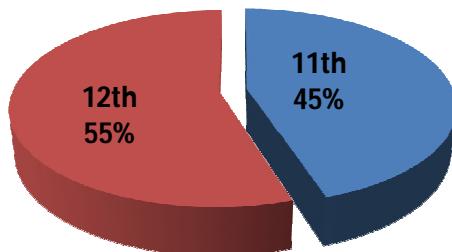
(5th to 10th class)

Mathematics

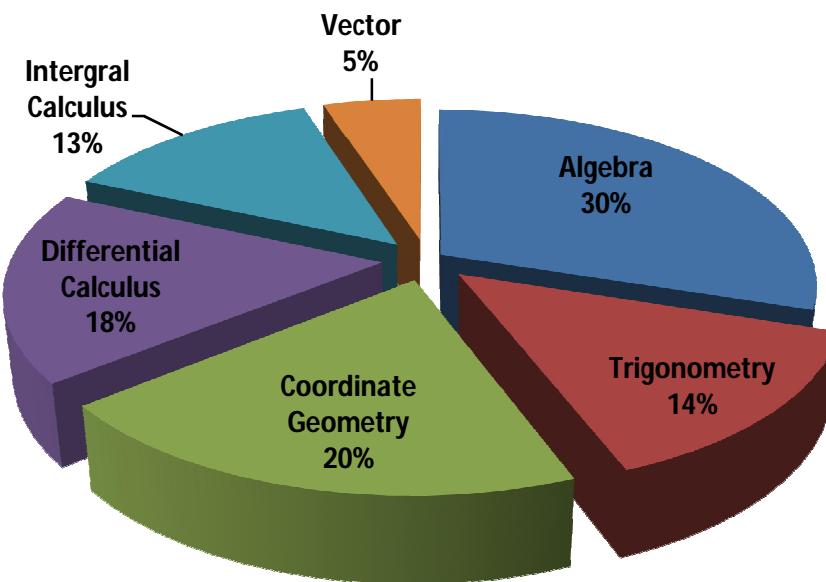
Maths Difficulty Wise Distribution



Maths Class Wise Distribution



Maths Topic Wise Distribution



19100+
SELECTIONS SINCE 2007

JEE (Advanced)

4042

JEE (Main)

13953

NEET / AIIMS

197

(Under 50000 Rank)

NTSE / OLYMPIADS

1066

(since 2016) (5th to 10th class)



AIR-71
Punit Shyamsukha
Roll No. : 12210844

JEE Main Result 2018

कोटा का सर्वश्रेष्ठ रिजल्ट (रिपीटर्स बैच) 12th पास

Total Selection $\frac{2161}{3212} = 67.3\%$



AIR-81
Harkanwar Singh

JEE (Main+Advanced) Result 2017

Total Selection $\frac{678}{2042} = 33.2\%$

19100+
SELECTIONS SINCE 2007

JEE (Advanced) JEE (Main)

4042 **13953**

(Under 50000 Rank)

NEET / AIIMS NTSE / OLYMPIADS

197 **1066**

(since 2016) (5th to 10th class)

Scholarship on the Basis of JEE MAIN 2018 Score

Score	Scholarship	Fee After Scholarship
220 and above	100%	NIL
190 to 219	90%	₹ 13,200
160 to 189	75%	₹ 33,000
140 to 159	55%	₹ 59,400
85 to 139	50%	₹ 66,000
50 to 84	30%	₹ 92,400
35 to 49	25%	₹ 99,000
20 to 34	20%	₹ 1,05,600
15 to 19	10%	₹ 1,18,800

Scholarship on the Basis of JEE ADVANCED 2018 Score

Score	Scholarship	Fee After Scholarship
175 & above	100%	NIL
160-174	100%	NIL
150-159	80%	₹ 26,400
130-149	60%	₹ 52,800
80-129	50%	₹ 66,000
40-79	40%	₹ 79,200

Special Stipend of ₹ 14000 per month for Students having marks above 175 in JEE Advanced 2018 in the form of accommodation, fooding & transport facility. Limited Seats.

New Batches for Class 11th to 12th Pass From

30th & 13th June 2018

हिन्दी माध्यम के लिए पृथक बैच