

# **CRACK JEE**Deep JEE Analysis

"You can either **experience the pain** of **discipline or the pain of regret**.

The choice is yours"



JEE advanced number of appeared and seats status- last 5 years

| Stats      | 2023   | 2022   | 2021   | 2020   | 2019   |
|------------|--------|--------|--------|--------|--------|
| Eligible   | 250000 | 262175 | 260010 | 250681 | 245194 |
| Registered | 189744 | 160038 | 151209 | 160838 | 174432 |
| Appeared   | 180372 | 155538 | 141699 | 150838 | NA     |
| Qualified  | 43773  | 40712  | 41862  | 43204  | 38705  |
| Seats      | 17385  | 16598  | 16296  | 16053  | 12461  |

# Cut off for writing JEE (Adv) (in percentile) 2023 2022 Unreserved EWS OBC SC ST O 20 40 60 80 100 Percentile

### **TYPES OF QUESTION IN JEE ADV. 2023**

Numerical type 24

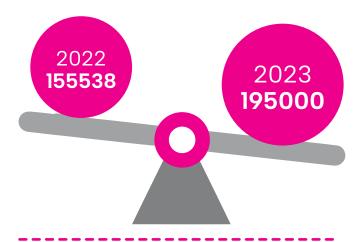
Multiple correct 36

Matrix Match Type 12

Integer Type 24

Single correct 12

# No. of appearing Candidates: 2022 vs 2023



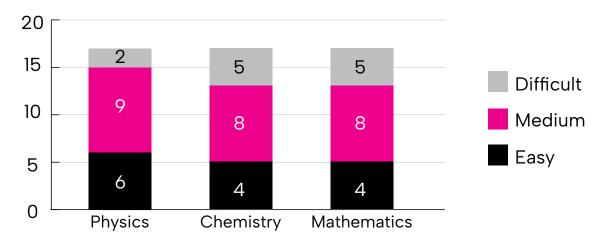
This Jump of **39,672** in the No. of Candidates directly affect candidates' **Rank & Percentile**.

### JEE Advanced RANK vs MARKS (in percentage): last 10 years

| Rank  | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 |
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | 90   | 87   | 97   | 89   | 93   | 94   | 93   | 86   | 84   | 87   | 86   |
| 100   | 79   | 66   | 79   | 70   | 73   | 76   | 83   | 69   | 70   | 78   | 76   |
| 500   | 67   | 53   | 66   | 59   | 61   | 65   | 76   | 55   | 60   | 69   | 67   |
| 1000  | 60   | 47   | 59   | 53   | 55   | 59   | 72   | 49   | 57   | 63   | 62   |
| 2000  | 53   | 41   | 52   | 46   | 50   | 53   | 67   | 44   | 49   | 57   | 56   |
| 3000  | 48   | 37   | 47   | 42   | 47   | 49   | 63   | 43   | 45   | 54   | 52   |
| 4000  | 45   | 34   | 43   | 39   | 44   | 46   | 60   | 38   | 43   | 51   | 49   |
| 5000  | 43   | 32   | 40   | 37   | 42   | 44   | 58   | 36   | 40   | 49   | 47   |
| 6000  | 40   | 30   | 38   | 35   | 40   | 42   | 56   | 34   | 39   | 47   | 46   |
| 7000  | 39   | 29   | 36   | 34   | 39   | 40   | 54   | 33   | 37   | 46   | 44   |
| 8000  | 38   | 28   | 34   | 32   | 37   | 39   | 52   | 32   | 36   | 44   | 43   |
| 9000  | 36   | 27   | 33   | 31   | 36   | 38   | 51   | 31   | 35   | 43   | 41   |
| 10000 | 34   | 26   | 31   | 30   | 35   | 36   | 50   | 30   | 33   | 42   | 40   |

### Subject-wise difficulty level analysis: no of questions

|             | Easy               |                | Mediu              | ım             | Difficu            | ılt            | Grand Total        |                |
|-------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|
| Subject     | No of<br>Questions | Total<br>Marks |
| Physics     | 6                  | 20             | 9                  | 33             | 2                  | 7              | 17                 | 60             |
| Chemistry   | 4                  | 13             | 8                  | 30             | 5                  | 17             | 17                 | 60             |
| Mathematics | 4                  | 14             | 8                  | 28             | 5                  | 18             | 17                 | 60             |
| Grand Total | 14                 | 47             | 25                 | 91             | 12                 | 42             | 51                 | 180            |



### Category-wise division of questions: last 7 years

| Types of Ques     | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 |
|-------------------|------|------|------|------|------|------|------|
| Numerical type    | 40%  | 40%  | 50%  | 29%  | 40%  | 52%  | 12%  |
| Multiple Correct  | 40%  | 40%  | 36%  | 52%  | 40%  | 46%  | 52%  |
| Matrix Match type | 10%  | 0%   | 0%   | 10%  | 10%  | 15%  | 0%   |
| Single Correct    | 10%  | 10%  | 14%  | 10%  | 0%   | 17%  | 27%  |
| Paragraph         | 0%   | 10%  | 0%   | 0%   | 10%  | 10%  | 10%  |

## **MATHEMATIS**

### Topic-wise weightage

| Units | Algebra | Calculus | Coordinate<br>Geometry | Vector | Trigonometry | Misc. |
|-------|---------|----------|------------------------|--------|--------------|-------|
| 2023  | 34%     | 24%      | 13%                    | 7%     | 15%          | 12%   |
| 2022  | 33%     | 25%      | 14%                    | 8%     | 17%          | 13%   |
| 2021  | 39%     | 29%      | 18%                    | 5%     | 8%           | 0%    |
| 2020  | 36%     | 42%      | 6%                     | 11%    | 6%           | 0%    |
| 2019  | 36%     | 25%      | 14%                    | 11%    | 14%          | 0%    |
| 2018  | 28%     | 36%      | 14%                    | 11%    | 8%           | 3%    |
| 2017  | 28%     | 42%      | 17%                    | 8%     | 6%           | 0%    |
| 2016  | 39%     | 33%      | 14%                    | 8%     | 6%           | 0%    |
| 2015  | 28%     | 40%      | 15%                    | 10%    | 8%           | 0%    |
| 2014  | 30%     | 40%      | 13%                    | 8%     | 10%          | 0%    |
| 2013  | 28%     | 28%      | 18%                    | 18%    | 8%           | 3%    |

### Chapter-wise weightage

| Chapter                             | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Complex Numbers                     | 8%   | 6%   | 5%   | 5%   | 7%   | 3%   | 3%   | 4%   | 3%   | 4%   |
| Definite Integration                | 8%   | 10%  | 6%   | 5%   | 6%   | 9%   | 2%   | 17%  | 13%  | 3%   |
| Three Dimensional geometery         | 7%   | 0%   | 6%   | 9%   | 6%   | 2%   | 6%   | 5%   | 3%   | 10%  |
| Trigonometric<br>Equations          | 6%   | 0%   | 3%   | 5%   | 0%   | 3%   | 2%   | 2%   | 3%   | 0%   |
| Differential Equations              | 6%   | 3%   | 3%   | 3%   | 9%   | 6%   | 6%   | 5%   | 5%   | 3%   |
| Sequence and Series                 | 6%   | 5%   | 6%   | 2%   | 3%   | 2%   | 5%   | 4%   | 3%   | 7%   |
| Trigonometric Ratios and Identities | 6%   | 0%   | 0%   | 6%   | 3%   | 0%   | 0%   | 0%   | 0%   | 0%   |
| Limits                              | 5%   | 0%   | 5%   | 6%   | 3%   | 3%   | 9%   | 5%   | 3%   | 0%   |
| Permutation and Combination         | 5%   | 3%   | 6%   | 2%   | 5%   | 2%   | 2%   | 2%   | 13%  | 0%   |
| Probabilty                          | 5%   | 13%  | 8%   | 8%   | 5%   | 6%   | 7%   | 7%   | 35%  | 10%  |
| Matrices                            | 5%   | 7%   | 5%   | 9%   | 0%   | 2%   | 8%   | 2%   | 3%   | 6%   |
| Circle                              | 3%   | 0%   | 0%   | 7%   | 8%   | 2%   | 6%   | 0%   | 5%   | 3%   |
| Vector Algebra                      | 3%   | 7%   | 6%   | 2%   | 5%   | 5%   | 3%   | 7%   | 8%   | 8%   |
| Parabola                            | 3%   | 7%   | 0%   | 0%   | 0%   | 6%   | 3%   | 7%   | 3%   | 5%   |
| Straight Lines                      | 3%   | 6%   | 2%   | 2%   | 0%   | 0%   | 2%   | 2%   | 0%   | 7%   |
| Determinants                        | 3%   | 3%   | 0%   | 3%   | 6%   | 6%   | 6%   | 2%   | 0%   | 0%   |
| Ellipse                             | 3%   | 3%   | 0%   | 3%   | 3%   | 5%   | 2%   | 2%   | 0%   | 3%   |
| Hyperbola                           | 3%   | 0%   | 3%   | 0%   | 3%   | 3%   | 0%   | 2%   | 0%   | 0%   |

### Question distribution as per Class, Chapter, Topic & Difficulty

| Q.<br>No | Class | Chapter                               | Topic   | Difficulty<br>Level | Section | Question type                           | Marks per Question |
|----------|-------|---------------------------------------|---|---------------------|---------|---|--------------------|
| 1        | 12th  | Continuity and<br>Differentiability   | Continuity and Differentiability                        | Medium              | 1       | MCQs more<br>than one correct<br>answer | 4                  |
| 2        | 11th  | Conics Section II                     | Common<br>tangents to<br>Parabola and<br>Eclipse        | Easy                | 1       | MCQs more<br>than one correct<br>answer | 4                  |
| 3        | 12th  | Application of<br>Intergrals          | Area Under<br>curve                                     | Difficult           | 1       | MCQs more<br>than one correct<br>answer | 4                  |
| 4        | llth  | Limits &<br>Derivatives               | Limits  | Difficult           | 2       | MCQs with one correct answer            | 3                  |
| 5        | 12th  | Three<br>Dimensional<br>Geometry      | Shortest<br>distance<br>between two<br>skew lines       | Medium              | 2       | MCQs with one correct answer            | 3                  |
| 6        | 12th  | Probability                           | Geometrical<br>Probability                              | Difficult           | 2       | MCQs with one correct answer            | 3                  |
| 7        | llth  | Conics Section II                     | Parabola  | Easy                | 2       | MCQs with one correct answer            | 3                  |
| 8        | 12th  | Inverse<br>Trigonometric<br>functions | Properties of<br>ITF                                    | Medium              | 3       | Non-negative<br>integer type            | 4                  |
| 9        | llth  | Straight line                         | Area of triangle  | Medium              | 3       | Non-negative integer type               | 4                  |
| 10       | llth  | Sequence and series                   | Special series  | Difficult           | 3       | Non-negative integer type               | 4                  |
| 11       | llth  | Complex<br>Numbers                    | Conjugate   | Medium              | 3       | Non-negative integer type               | 4                  |
| 12       | 12th  | Three<br>Dimensional<br>Geometry      | 3D  | Difficult           | 3       | Non-negative<br>integer type            | 4                  |
| 13       | 12th  | Binomial<br>Theorem                   | FInding coefficients                                    | Easy                | 3       | Non-negative integer type               | 4                  |
| 14       | 12th  | Matrices and<br>Determinants          | System of<br>Equation                                   | Medium              | 4       | Match List                              | 3                  |
| 15       | 12th  | Statistics                            | Mean deviation  | Easy                | 4       | Match List                              | 3                  |
| 16       | 12th  | Three<br>Dimensional<br>Geometry      | Perpendicular<br>distance of a<br>point from a<br>plane | Medium              | 4       | Match List                              | 3                  |
| 17       | 12th  | Complex<br>Numbers                    | Geometry of<br>Complex<br>numbers                       | Medium              | 4       | Match List                              | 3                  |