

TREND ANALYSIS FOR JEE MAIN YEAR 2010-2019

JEE Main Entrance Exam for admission into various engineering courses in different engineering colleges and institutes in the country has hit the imagination of the school-going students more than any other entrance test conducted at this level. Without argument, you need to be well-versed with the pattern as well as the level of the questions asked in the exam. A Chapterwise analysis of previous years' questions is called for here, with this objective in mind, we are giving below the chapter-wise analysis (break-up) of the questions asked in last 10 years' of JEE Main



PHYSICS

Ch. No.	Chapter Name	Number of Question(s) in										
		2010	2011	2012	2013	2014	2015	2016	Ph-1	2017	2018	2019 (with chapter wise distribution of questions)
												9-Jan (M) 9-April (M)
1	Physical World, Units and Measurements	1	1	2	1	2	1	2	1	1	–	1 (Q. 1)
2	Motion in a Straight Line	–	1	–	–	1	–	–	1	1	–	–
3	Motion in a Plane	3	1	2	1	–	1	–	–	–	1 (Q. 26)	1 (Q. 2)
4	Laws of Motion	1	–	1	2	2	1	–	–	1	1 (Q. 19)	1 (Q. 3)
5	Work, Energy and Power	2	–	1	1	1	1	2	2	4	2 (Q. 11, 29)	2 (Q. 4, 5)
6	System of Particles and Rotational Motion	1	2	–	3	1	2	2	2	3	2 (Q. 5, 14)	2 (Q. 6, 7)
7	Gravitation	–	1	1	1	1	1	1	1	–	1 (Q. 18)	1 (Q. 8)
8	Mechanical Properties of Solids	–	–	–	–	1	–	–	–	1	–	–
9	Mechanical Properties of Fluids	1	2	1	–	3	–	–	1	–	–	1 (Q. 9)
10	Thermal Properties of Matter	–	1	2	1	1	1	1	2	–	2 (Q. 10, 20)	–
11	Thermodynamics	1	1	2	1	1	1	2	–	–	1 (Q. 2)	1 (Q. 10)
12	Kinetic Theory	–	1	–	–	1	1	–	2	1	1 (Q. 6)	2 (Q. 11, 12)
13	Oscillations	–	2	2	2	1	2	1	1	1	–	1 (Q. 13)
14	Waves	1	1	1	1	1	1	2	–	1	1 (Q. 21)	2 (Q. 14, 15)
15	Electric Charges and Fields	2	2	1	1	–	1	1	1	–	2 (Q. 12, 28)	–
16	Electrostatic Potential and Capacitance	2	–	1	–	2	2	1	1	2	1 (Q. 16)	3 (Q. 16, 17, 18)
17	Current Electricity	2	1	1	2	1	2	1	2	3	4 (Q. 7, 8, 15, 30)	1 (Q. 19)
18	Moving Charges and Magnetism	1	1	1	1	1	2	2	1	2	1 (Q. 1)	3 (Q. 20, 21, 22)
19	Magnetism and Matter	–	–	–	1	1	1	1	1	–	2 (Q. 9, 24)	–
20	Electromagnetic Induction	1	1	2	1	–	–	–	1	–	1 (Q. 13)	1 (Q. 23)
21	Alternating Current	2	2	–	1	1	2	1	1	2	–	–
22	Electromagnetic Waves	–	–	1	1	2	–	1	–	1	1 (Q. 3)	1 (Q. 24)
23	Ray Optics and Optical Instruments	–	2	2	2	1	2	2	1	–	1 (Q. 27)	1 (Q. 26)
24	Wave Optics	3	1	1	2	1	1	1	2	2	2 (Q. 4, 23)	1 (Q. 27)
25	Dual Nature of Radiation and Matter	2	1	1	1	1	1	1	2	–	1 (Q. 25)	1 (Q. 28)
26	Atoms	–	1	1	1	1	1	–	1	2	–	1 (Q. 29)
27	Nuclei	3	2	1	–	–	–	1	1	–	1 (Q. 22)	–
28	Semiconductor Electronics : Materials, Devices and Simple Circuits	1	1	1	1	1	1	3	1	1	1 (Q. 17)	1 (Q. 30)
29	Communication Systems	–	1	1	1	–	1	1	1	1	–	1 (Q. 25)
Total Questions		30	30	30	30	30	30	30	30	30	30	30

Note : Number in brackets indicating serial number of questions asked in JEE Main 2019 Question Paper.

CHEMISTRY

Ch. No.	Chapter Name	Number of Question(s) in										2019 (with chapter wise distribution of questions)	
		2010	2011	2012	2013	2014	2015	2016	Ph-1	2017	2018	9-Jan (M)	9-April (M)
1	Some Basic Concepts of Chemistry		1		2		1	1	2	1		–	1 (Q. 60)
2	Structure of Atom	2	1	2	1	1	1	1	2	0		1 (Q. 52)	1 (Q. 46)
3	Classification of Elements and Periodicity in Properties	1	1		1		1	1		0		1 (Q. 39)	1 (Q. 31)
4	Chemical Bonding and Molecular Structure		1	2	3	1		1	1	3		1 (Q. 54)	1 (Q. 39)
5	States of Matter	1	2	1	1	2	1	1		0		1 (Q. 35)	1 (Q. 33)
6	Thermodynamics	2	2	1	1	1	1	1	2	2		1 (Q. 58)	1 (Q. 35)
7	Equilibrium	4	2	2	1	1	1	1	1	3		2 (Q. 48, 50)	–
8	Redox Reactions				1		1		1	1		–	–
9	Hydrogen			1		1	1	2		1		1 (Q. 53)	1 (Q. 43)
10	The s-Block Elements		2	1	2		1	1	1	0		1 (Q. 47)	1 (Q. 54)
11	The p-Block Elements (Group 13 & 14)		1							2		2 (Q. 37, 56)	1 (Q. 48)
12	Organic Chemistry : Some Basic Principles and Techniques	2	2		2	1	2	2	1	0		–	2 (Q. 32, 51)
13	Hydrocarbons	1	1	2			1	2	1	1		–	1 (Q. 56)
14	Environmental Chemistry		1	1	1				1	1		1 (Q. 42)	1 (Q. 37)
15	The Solid State	2	1	1	1	2	1		1	1		1 (Q. 36)	–
16	Solutions	2	1	2	1	1	1	1	1	1		2 (Q. 40, 44)	2 (Q. 41, 42)
17	Electrochemistry	2	1	1	2	3	1		1	1		1 (Q. 43)	1 (Q. 44)
18	Chemical Kinetics	2	1	1	1	1	1	1	1	1		1 (Q. 45)	1 (Q. 34)
19	Surface Chemistry			1	1			1	1	0		1 (Q. 49)	1 (Q. 59)
20	General Principles and Processes of Isolation of Elements			1		1	1	1		0		1 (Q. 51)	1 (Q. 36)
21	The p-Block Elements (Group 15, 16, 17 and 18)		1	1			3	2	1	1		–	1 (Q. 40)
22	The d and f-Block Elements			1	1	2	2	1	1	0		1 (Q. 34)	1 (Q. 52)
23	Coordination Compounds	2	1	1	1	1	2	2	1	1		1 (Q. 31)	2 (Q. 50, 58)
24	Haloalkanes and Haloarenes	1		1	1	3	1	2	2	1		–	1 (Q. 55)
25	Alcohols, Phenols and Ethers	2	3	2	2	2			1	3		1 (Q. 38)	–
26	Aldehydes, Ketones and Carboxylic Acids			2	1	1	1	1	3	0		3 (Q. 32, 33, 55)	2 (Q. 45, 57)
27	Amines	1	1		1	2	1	1	1	1		2 (Q. 59, 60)	1 (Q. 38)
28	Biomolecules	1	1	1	1	1	1	1	1	2		1 (Q. 57)	1 (Q. 53)
29	Polymers	1	1	1		1	1	1	1	0		1 (Q. 46)	1 (Q. 49)
30	Chemistry in Everyday Life		1				1	1		0		–	–
31	Practical Chemistry	1				1				2		1 (Q. 41)	1 (Q. 47)
Total Questions		30	30	30	30	30	30	30	35	30			

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MATHEMATICS

Ch. No.	Chapter Name	Number of Question(s) in												2019 (with chapter wise distribution of questions)	
		2010	2011	2012	2013	2014	2015	2016 Ph-1	2016 Ph-2	2017	2018			9-Jan (M)	9-April (M)
1	Sets	0	0	1	0	0	0	1	0	1	1	–	–	–	–
2	Relations and Functions	0	1	0	0	0	0	0	0	1	0	–	–	–	–
3	Trigonometric Functions	1	1	1	2	1	1	2	1	1	1	1 (Q. 82)	2 (Q. 69, 79)		
4	Principle of Mathematical Induction	0	0	0	0	0	0	0	0	4	0	–	–		
5	Complex Numbers and Quadratic Equations	2	2	1	2	2	2	2	1	0	1	2 (Q. 86, 88)	1 (Q. 80)		
6	Linear Inequality	0	0	0	0	0	0	0	0	2	0	–	–		
7	Permutations and Combinations	1	1	0	1	1	2	1	1	3	1	1 (Q. 87)	1 (Q. 88)		
8	Binomial Theorem	1	1	1	2	0	2	2	1	0	1	1 (Q. 73)	1 (Q. 74)		
9	Sequence and Series	1	2	2	2	2	2	2	2	0	2	2 (Q. 69, 84)	2 (Q. 78, 87)		
10	Straight Lines & Pair of Straight Lines	0	1	2	2	2	0	1	0	3	2	1 (Q. 75)	1 (Q. 61)		
11	Conic Sections	2	3	3	3	3	4	4	2	1	4	4 (Q. 65, 66, 71, 89)	4 (Q. 70, 73, 83, 90)		
12	Limits and Derivatives	1	1	0	1	1	0	0	1	3	1	1 (Q. 76)	–		
13	Mathematical Reasoning	1	1	1	1	1	1	1	1	3	1	1 (Q. 80)	1 (Q. 72)		
14	Statistics	1	1	1	1	1	1	1	0	1	1	1 (Q. 81)	1 (Q. 62)		
15	Probability	1	0	1	0	0	0	0	1	1	0	–	–		
16	Relations and Functions	1	1	0	0	1	1	0	2	1	0	1 (Q. 67)	–		
17	Inverse Trigonometric Functions	0	0	0	0	0	1	0	1	1	0	1 (Q. 70)	–		
18	Matrices	1	1	0	0	0	1	2	1	2	0	–	–		
19	Determinants	2	1	2	2	2	1	1	3	1	2	1 (Q. 79)	2 (Q. 86, 89)		
20	Continuity and Differentiability	1	2	2	1	1	1	1	1	1	1	1 (Q. 85)	2 (Q. 75, 81)		
21	Application of Derivatives	3	0	1	1	1	2	3	3	2	2	2 (Q. 62, 78)	3 (Q. 67, 76, 82)		
22	Integrals	1	1	2	3	2	2	1	2	2	2	2 (Q. 61, 63)	3 (Q. 63, 64, 68)		
23	Applications of Integrals	1	1	1	1	1	2	1	2	4	1	1 (Q. 83)	1 (Q. 85)		
24	Differential Equations	1	2	1	1	1	1	1	0	0	1	1 (Q. 64)	1 (Q. 71)		
25	Vector Algebra	2	2	2	1	1	1	1	1	3	1	1 (Q. 68)	1 (Q. 84)		
26	Three Dimensional Geometry	3	2	2	2	2	2	2	2	2	2	3 (Q. 72, 74, 77)	2 (Q. 66, 77)		
27	Probability	1	2	1	1	3	0	0	0	2	1	1 (Q. 90)	1 (Q. 65)		
28	Properties of Triangles	1	0	2	0	1	0	0	1	1	1	–	–		
Total Questions		30	30	30	30	30	30	30	30	30	30				

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