

MATHEMATICS**Questions Easy Average Difficult****CLASS 11 NCERT Chapters**

1	Sets	1	0	1	0
2	Relations & functions	0	0	0	0
3	Trigonometric functions	2	0	2	0
4	Principle of mathematical induction	0	0	0	0
5	Complex numbers & quadratic equations	3	2	0	1
6	Linear inequalities	0	0	0	0
7	Permutations & combinations	0	0	0	0
8	Binomial theorem	1	1	0	0
9	Sequence & series	2	1	1	0
10	Straight lines	2	0	2	0
11	Conic sections	3	0	2	1
12	Introduction to 3-dimensional Geometry	0	0	0	0
13	Limits & derivatives	2	1	1	0
14	Mathematical Reasoning	1	1	0	0
15	Statistics	1	1	0	0
16	Probability	0	0	0	0
	Class 11 Total	18	7	9	2

CLASS 12 NCERT Chapters

17	Relations & Functions	0	0	0	0
18	Inverse Trigonometric Functions	0	0	0	0
19	Matrices	1	1	0	0
20	Determinants	1	0	1	0
21	Continuity & Differentiability	0	0	0	0
22	Application Of Derivatives	2	2	0	0
23	Integrals	2	0	2	0
24	Application Of Integrals	1	0	1	0
25	Differential Equation	1	1	0	0
26	Vector Algebra	1	0	1	0
27	Three Dimensional Geometry	2	1	1	0
28	Linear Programming	0	0	0	0
29	Probability	1	1	0	0
	Class 12 Total	12	6	6	0
	Total Class 11 & 12	30	13	15	2

Question-by-Question Analysis**(Test Booklet – 5)**

The Questions are arranged Chapter-wise hence the numbering is shuffled.

61 UNION OF TWO SETS (SETS)

An average application based question based on union of two sets involving binomial theorem and multiples of numbers.

62 MINIMUM VALUE OF COMPLEX NUMBER (COMPLEX NUMBER & QUADRATIC EQN)

An easy conceptual question based on minimum value of modulus of complex numbers involving property of modulus of complex number.

64 VALUE OF ROOTS (COMPLEX NUMBERS & QUADRATIC EQN)

An average application based question which involves relation between roots & coefficients and A.P to find the difference of roots of the given quadratic equation.

68 DIFFERENCE OF SERIES (SEQUENCE & SERIES)

An average application based question involves difference of series & sum of G.P to find the value of unknown.

69 A.P & G.P (SEQUENCE & SERIES)

An easy conceptual based question which involves middle term and common ratio of G.P & numbers in A.P to find the common ratio of G.P.

70 LIMIT OF TRIGONOMETRIC FUNCTION (LIMITS & DERIVATIVES)

An easy conceptual question based on limits of trigonometric function involving trigonometric identities & relations.

71 DERIVATIVE OF A FUNCTION (LIMITS & DERIVATIVES)

An average based question which involves inverse and derivative of given function to find the derivative of other function.

72 ROLLE'S THEOREM (APPLICATION OF DERIVATIVE)

An easy formula based question which involves ROLLE'S THM to find the relation between derivatives of functions for some constant "c".

73 COEFFICIENTS OF QUAD EQN (APPLICATION OF DERIVATIVES)

An easy conceptual question involving derivation method to find the coefficients of equation when extreme points are given.

82 SLOPE OF COMMON TANGENT OF PARABOLA (APPLICATION OF DERIVATIVE)

An easy conceptual question involves equation of tangent to parabola to find the slope of line which touches the parabolas.

65 PROPERTIES OF DETERMINANT (DETERMINANT)

A difficult application based question involving properties of determinants to find the value of unknown which is present in the value of given determinant equation.

66 INVERSE & TRANSPOSE OF MATRICES (MATRICES)

An easy conceptual question which involves inverse & transpose properties of matrices to find the product of matrix with its transpose.

67 COEFFICIENT OF TERMS IN BINOMIAL EXPANSION (BINOMIAL THM)

An easy conceptual question which involves expansion of binomial them to find the value of coefficients of terms present in expansion.

74 INTEGRATION BY PARTS (INTEGRALS)

An easy conceptual questions based on "BY PARTS" method of integration involving exponential term to find the value of integral.

75 PROPERTIES OF DEFINITE INTEGRAL (INTEGRAL)

An average application based question which involves modulus property of definite integral to calculate the integral of sq. root of trigonometric function in an interval.

76 AREA BETWEEN TWO CURVES (APPLICATION OF INTEGRAL)

An average conceptual question based on integration of two curves by finding the region bounded by the two curves to calculate the area between them.

77 PARTICULAR SOLUTION (DIFFERENTIAL EQUATION)

An easy conceptual question based on variable separable method of differential equation to find a particular solution of diff. eqn.

78 EQUATION OF LINE WHICH PASSES THROUGH A POINT (STRAIGHT LINE)

An easy conceptual question based on median of triangle and slope of two perpendicular lines involving calculation to find equation of line in slope-point form.

79 RELATION BETWEEN COEFFICIENTS OF TWO STRAIGHT LINES (STRAIGHT LINE)

An easy calculation based question involving point of intersection of two lines, equidistant from axes and position of point in quadrants to find the relation between coefficients.

80 LOCUS OF FOOT OF PERPENDICULAR (CONIC SECTION)

An average application based question involving equation of tangent to ellipse and eqn of perpendicular drawn from centre to find the locus of the foot of perpendicular.

81 TWO CIRCLE TOUCHES EXTERNALLY (CONIC SECTION)

A difficult question based on centre and radius of given circle and distance formula between two points to find the radius of other circle when both touch each other externally and radius of the other one is given.

83 IMAGE OF LINE (3-DIMENSIONAL GEOMETRY)

An average concept based question which involves calculations on lines and plane to find the image of a line in the plane.

84 ANGLE BETWEEN TWO LINES (3-DIMENSIONAL GEOMETRY)

An easy concept based question involving direction cosine of lines to find the angle between the two lines.

85 SCALAR TRIPLE PRODUCT (VECTOR ALGEBRA)

An easy conceptual question based on dot product, cross product of vectors to find the scalar triple product.

86 INDEPENDENT EVENT (PROBABILITY)

An easy conceptual based question involving addition theorem, complement of the event to check the events are independent or not.

87 VARIANCE (STATISTIC)

An easy conceptual formula based question which involves mean of discrete data.

88 IDENTITIES OF TRIGONOMETRIC FUNCTIONS (TRIGONOMETRIC FUNCTIONS)

An average application based question involving identities of trigonometric functions to find the value of difference of two functions.

89 HEIGHT & DISTANCE (TRIGONOMETRIC FUNCTIONS)

An average conceptual question based on angle of elevation to find the speed of object.

90 IMPLICATIONS & NEGATIONS (MATHEMATICAL REASONING)

An easy conceptual question based on implication and negation of a statement to find an equivalent statement of the given statement.

63 INTERVALS (RELATIONS & FUNCTION)

A difficult application based question involving knowledge of greatest integer function to find the interval in which value of unknown lies.