TABLE OF SPECIFICAITONS MATHEMATICS 9TH

S. No	SLO	Item Type	Item Number	Ability Level			Difficulty Level		
				K	U	A	E	M	D
1	Define and identify identity matrix, scalar matrix, diagonal matrix, null matrix, transpose of matrix, symmetric and skew-symmetric matrix.	MCQ	Q1(i)	*			*		
2	Recall the set of real numbers as union of rational and irrational numbers	MCQ	Q1(ii)	*				*	
3	Define conjugate of a complex number	MCQ	Q1(iii)		*			*	
4	Define common logarithm characteristics and mantissa of a log number	MCQ	Q1(iv)	*			*		
5	Define and identify identity matrix, scalar matrix, diagonal matrix, null matrix, transpose of matrix, symmetric and skew-symmetric matrix.	MCQ	Q1(v)	*				*	
6	Know the properties of real number	MCQ	Q1(vi)		*			*	
7	Know the properties of real number	MCQ	Q1(vii)	*				*	
8	Apply the laws of exponent	MCQ	Q1(vii)			*		*	
9	Know the formula	MCQ	Q1(ix)		*			*	
10	Know the relationship between HCF and LCM	MCQ	Q1(x)		*				*
11	Reduce equations involving radicals to simple linear form to find their solution	MCQ	Q1(xi)			*			*
12	Recognize an ordered pair as a point in rectangular plane	MCQ	Q1(xii)		*			*	
13	Know the properties of real number	MCQ	Q1(xiii)	*				*	
14	Factorize the expression	MCQ	Q1(xiv)			*			*
15	Evaluate the determinant of a matrix	MCQ	Q1(xv)			*			*
16	Verify commutative law under addition in matrices	Sec B	Q1(i)			**		*	
17	Know the formula $a^3 \pm b^3 = (a \pm b)(a^2 \pm ab + b^2)$	Sec B	Q1(ii)			*			*
18	Factorize the expressions of the type $a^4 + a^2b^2 + b^4$ or $a^4 + 4b^4$	Sec B	Q1(iii)			*			*
19	Carry out basic operation addition, subtraction, multiplication and division on complex numbers	Sec B	Q1(iv)			*			*
20	Use basic operations on surds of second order to rationalize the denominator and evaluate it	Sec B	Q1(v)			*		*	
21	Find the HCF and LCM of algebraic expressions	Sec B	Q1(vi)			*			*
22	Solve linear equations with rational coefficients	Sec B	Q1(vii)			*			*
23	Solve linear equations with rational coefficients	Sec B	Q1(viii)			*		*	
24	Use distance formula to show that the given three non-collinear points form: • A scalene triangle	Sec B	Q1(ix)			*			*
25	Prove laws of logarithm	Sec B	Q1(x)			*			*
26	If two angles of a triangle are congruent then the sides opposite to them are also congruent	Sec B	Q1(xi)			*			*
27	Prove that each diagonal of parallelogram	Sec B	Q1(xii)			*			*

	Divides it into two congruent triangles								
28	The bisectors of angles of triangle are concurrent	Sec C	Q2			*			*
29	The sum of length of any two sides of triangle is greater than the length of third side.	Sec C	Q3			*			*
30	If a line segment intersects the two sides of a triangle in the same ratio then it is parallel to third side.	Sec C	Q4			*			*
31	In a right angle triangle the square of length of hypotenuse is equal to the sum of square of length of the other two sides.	Sec C	Q5			*			*
32	Construct a triangle having given two sides and the included angle.	Sec C	Q6			*			*
33	Parallelogram on the same base and line between the same parallel lines (or of the Same altitude) are equal in area	Sec C	Q7			*			*