

9TH CLASS KHYBER PAKHTOON KHAWA BOARD SCHEME – 2023**KHYBER PAKHTWAN KHAWA ALL BOARD****9TH CLASS****MATHEMATICS****Q.1 Choose the correct option.****Allowed time: 20 minutes****Marks: 15**

S.NO	SLO'S	MCQ'S	QUESTION NO. PART
1.	Define and identify, identity matrix, scalar matrix, diagonal matrix, null matrix, and transpose of matrix, symmetric and skew-symmetric matrix.	MCQ'S	Q.1 (i)
2.	Recall the set of real numbers as union of rational and irrational numbers.	MCQ'S	Q.1 (ii)
3.	Define conjugate of complex number	MCQ'S	Q. 1(iii)
4.	Define common logarithm characteristics and mantissa of a log number	MCQ'S	Q.1(iv)
5.	Define identify, identity matrix, scalar matrix, diagonal matrix, null matrix, transpose of matrix, symmetric and skew-symmetric matrix	MCQ'S	Q.1 (v)
6.	Know the properties of real number	MCQ'S	Q.1 (vi)
7.	Know the properties of real number	MCQ'S	Q.1 (vii)
8.	Apply the laws of exponent	MCQ'S	Q.1 (vii)
9.	Know the formula	MCQ'S	Q.1 (ix)
10.	Know the relationship between HCF and LCM	MCQ'S	Q.1 (x)
11.	Reduce equations involving radicals to simple linear form to find their solution.	MCQ'S	Q.1 (xi)
12.	Recognize an ordered pair as a point in rectangular plane	MCQ'S	Q.1 (xii)
13.	Know the properties of real number.	MCQ'S	Q.1 (xiii)
14.	Factorize the expression	MCQ'S	Q. 1(xiv)
15.	Evaluate the determinant of a matrix	MCQ'S	Q.1(xv)

SECTION – B**Q.1 Attempt any any 9 of the following****Allowed time 2 hours 40 minutes****Maximum Marks: 36****PRQ'S (SHORT QUESTIONS)**

S.NO	SLO'S	PRQ'S	QUESTION NO. PART
1.	Verify commutative law under addition in matrices.	Sec- B	Q.1(i)
2.	Know the formula	Sec- B	Q.1(ii)
3.	Factorize the expressions of the type.	Sec- B	Q.1(iii)
4.	Carry out basic operation addition, subtraction, multiplication and division on complex numbers	Sec- B	Q.1(iv)
5.	Use basic operations on surds of second order to rationalize the denominator and evaluate it.	Sec- B	Q.1(v)
6.	Find the HCF and LCM of algebraic expressions	Sec – B	Q.1(vi)
7.	Solve linear equations with rational coefficients.	Sec – B	Q.1(vii)
8.	Solve linear equations with rational coefficients.	Sec – B	Q.1(viii)
9.	Use distance formula to show that the given three non-collinear points form: A scalene triangle	Sec – B	Q.1(ix)
10.	Prove laws of logarithm	Sec – B	Q.1(x)
11.	If two angles of a triangle are congruent than the sides opposite to them are also congruent	Sec – B	Q.1(xi)
12.	Prove that each diagonal of parallelogram divides it into two congruent triangles.	Sec – B	Q.1(xii)

SECTION – C

**Attempt any 4 of the following.
LONG QUESTIONS.**

Maximum Marks: 24

S.NO	SLO's	PRQ'S	QUESTION NO. PART
1.	The bisectors of angles of triangles are concurrent	Sec – C	Q. 2
2.	The sum of length of any two sides of triangle is greater than the length of third side.	Sec – C	Q. 3
3.	If a line segment intersects the two sides of triangle in the same ratio then it is parallel to third side.	Sec – C	Q. 4
4.	In a right angle triangle the square of length of hypotenuse is equal to the sum of square of length of the other two side	Sec – C	Q. 5
5.	Construct a triangle having given two sides and the included angle	Sec – C	Q. 6
6.	Parallelogram on the same base and line between the same parallel line(or of the same altitude) are equal in area	Sec – C	Q. 7