

BOARD OF SECONDARY EDUCATION KARACHI.
KARACHI, HYDERABAD, SUKKAR, LARKANA, MIR PUR KHAS BOARD.
S.S.C I (ANNUAL) EXAMINATIONS 2023
MATHEMATICS (CLASS IX) PAPER I

Time: 3 Hours

(SCIENCE GROUP)

Marks: 75

SECTION "A" (20%)

MULTIPLE CHOICE QUESTIONS (MCQs)

(15 Marks)

Q.1 FIFTEEN(15) MCQs WILL BE GIVEN FROM THE WHOLE BOOK.

Each question carries 1 mark.

SECTION "B" (40%)

(SHORT ANSWERS QUESTIONS)

(30 marks)

NOTE: Attempt any (06) questions from given 10 questions of this section. All questions carry equal marks.

UNIT NO – 1 **REAL AND COMPLEX NUMBERS**

<u>EXERCISE NO.</u>	<u>PAGE NO.</u>	<u>BOARD</u>	<u>QUESTIONS.</u>
Exercise NO. 1.3	Page No. 5	S.T.B.B	Q. 1(ii,iii) Q.2 (ii) Q.3 (i, ii,iii) Q. 4 (ii,iii,iv, v)
Exercise No. 1.4	Page No: 17	S.T.B.B	Q.1 (iii), Q. 2 (i,iii,vii, viii, xii) Q. 3 (vi,viii)
Exercise No. 1.5	Page No. 19	S.T.B.B	Q.1 (iii, v) Q. 2 (v,vi) Q.3 (v, vi)
Exercise No. 1.6	Page No. 25	S.T.B.B	Q. 1 (ii,viii) . Q. 3 (iii)

UNIT NO – 2 **LOGARITHMS**

<u>EXERCISE NO.</u>	<u>PAGE NO.</u>	<u>BOARD</u>	<u>QUESTIONS.</u>
Exercise No. 2.5	Page No. 45	S.T.B.B	Q. 1 (iii,iv, v)
Exercise No. 2.6	Page No. 49	S.T.B.B	Q. 1 (ii, v, vi, vii, viii, ix, x)

UNIT NO – 3 **ALGEBRAIC EXPRESSION AND FORMULAS.**

<u>EXERCISE NO.</u>	<u>PAGE NO.</u>	<u>BOARD</u>	<u>QUESTIONS.</u>
Exercise No. 3.1	Page No. 63	S.T.B.B	Q.2 (iv, vi), Q. 3 (iii,iv,v,vi) Q. 4 (iv, viii,x)
Exercise No. 3.2	Page No. 71	S.T.B.B	Q.6, Q. 14, Q.15, Q.16, Q.19 (i, ii)
Exercise No. 3.3	Page No. 75	S.T.B.B	Q.1 (vii, ix)
Exercise No. 3.4	Page No. 78	S.T.B.B	Q.1 (iv), Q.2 (v, vii), Q. 4(i,ii)

UNIT NO – 4 **FACTORIZATION.**

<u>EXERCISE NO.</u>	<u>PAGE NO.</u>	<u>BOARD</u>	<u>QUESTIONS.</u>
Exercise No. 4.1	Page No. 86	S.T.B.B	Q.1 (iv, v, vi) Q. 2 (i,ii,v) Q. 3 (i,iv,v) Q. 6 (v, vi)
Exercise No. 4.2	Page No. 90	S.T.B.B	Q. 5 (ii,iv) . Q. 6 (i,iii,iv)
Exercise No. 4.4	Page No. 93	S.T.B.B	Q. 2 (iv, v,vi, vii)
Exercise No. 4.7	Page No. 99	S.T.B.B	Q. 2, Q. 4, Q. 5

UNIT NO – 5**ALGEBRAIC MANIPULATION.**

EXERCISE NO.	PAGE NO.	BOARD	QUESTIONS.
Exercise No. 5.1	Page No. 113	S.T.B.B	Q.1 (ii,v) . Q. 2 (iv) Q.3 (iv,vi)
Exercise No. 5.3	Page No. 119	S.T.B.B	Q. 1 (v) Q. 2(iv)

UNIT NO – 6**LINEAR EQUATION AND INEQUALITIES.**

EXERCISE NO.	PAGE NO.	BOARD	QUESTIONS.
Exercise No. 6.3	Page No. 133	S.T.B.B	Q.1 (v,vi)

UNIT NO – 7**LINEAR GRAPHS AND THEIR APPLICATIONS.**

EXERCISE NO.	PAGE NO.	BOARD	QUESTIONS.
Exercise No. 7.1	Page No. 143	S.T.B.B	Q.7, Q. 8

UNIT NO – 8**QUADRATIC EQUATIONS.**

EXERCISE NO.	PAGE NO.	BOARD	QUESTIONS.
Exercise No. 8.2	Page No. 167	S.T.B.B	(i,ii,iii,x, xii)
Exercise No. 8.3	Page No. 174	S.T.B.B	Q. 4, Q. 5, Q. 6, Q.8, Q. 9
Exercise No. 8.4	Page No. 178	S.T.B.B	Q. 6

UNIT NO – 9**CONGRUENT TRIANGLES.**

EXERCISE NO.	PAGE NO.	BOARD	QUESTIONS.
Exercise No. 9.4	Page No. 190	S.T.B.B	Q. 2, Q. 4, Q. 5

UNIT NO – 10**PARALLELOGRAMS AND TRIANGLES.****NIL****UNIT NO – 11****LINE BISECTOR AND ANGLES BISECTORS.**

EXERCISE NO.	PAGE NO.	BOARD	QUESTIONS.
Exercise No. 11.1	Page No. 207	S.T.B.B	Q.2 , Q. 3, Q. 4
Exercise No. 11. 2	Page No. 208	S.T.B.B	Q.1 , Q. 2

EXTRA QUESTIONS:**SHORT QUESTIONS:**

1. If two sides of a triangle are unequal in length, the longer side has an angle of greater measure composite to it. Prove it.
2. Parallelograms on the same base and lying between the same parallel lines (or of the same altitude) are equal in area. Prove it.
3. Any point on the right bisector of a line segment is equidistant from its end points. Prove it.
4. If $\log 102 = 0.3010$ and $\log 103 = 0.4771$ then find the value of $\log 10 \sqrt[4]{3}$
5. Divide 4500 rupees among A, B and C in the ratio of $\frac{2}{3}$, $\frac{3}{5}$ and $\frac{5}{6}$ respectively.
6. A person paid 56500 rupees as Zakat in a year. Find his saving for the year.
7. A truck cover a distance of 72 kilometers in 4 hours. How much distance would in cover in 6 hours?
8. Simplify : $1112 - 102 - 1112$
9. Students obtained 48, 16, 10,45, 12,6, 45,32,18 marks respectively in Mathematics find their median.

DESCRIPTIVE ANSWER QUESTIONS.

30 MARKS

1. If in the correspondence of two right angled triangle, the hypotenuse and one side of one are congruent to the hypotenuse and the corresponding side of the other, then the triangle are congruent. Prove it.
2. The lines segment joining the mid-points of two sides of a triangle, is parallel to the third side and it is equal to one half of its length. Prove it.
3. In any triangle, the square on the side opposite to an acute angle is equal to sum of the squares on the sides containing that acute angle diminished y twice the rectangle contained by one of those sides and the projection on it of the other. Prove it.