

**INDIAN SCHOOL MUSCAT**  
**DEPARTMENT OF MATHEMATICS**  
**CLASS TEST – OMR FORMAT**

**CLASS: X**

**TOPIC: QUADRATIC EQUATIONS**

1.	Which of the following is not a quadratic equation?			
	A) $2(x-1)^2 = 4x^2 - 2x + 1$	B) $2x - x^2 = x^2 + 5$	C) $(\sqrt{2}x + \sqrt{3})^2 + x^2 = 3x^2 - 5x$	D) $(x^2 + 2x)^2 = x^4 + 3 + 4x^3$
2.	Which of the following equations has 2 as a root?			
	A) $x^2 - 4x + 5 = 0$	B) $x^2 + 3x - 12 = 0$	C) $2x^2 - 7x + 6 = 0$	D) $3x^2 - 6x - 2 = 0$
3.	If $\frac{1}{2}$ is a root of the given equation $x^2 + kx - \frac{5}{4} = 0$ , then the value of k is			
	A) 2	B) -2	C) $\frac{1}{4}$	D) $\frac{1}{2}$
4.	Which of the following equations has the sum of its roots as 3?			
	A) $2x^2 - 3x + 6 = 0$	B) $-x^2 + 3x - 3 = 0$	C) $\sqrt{2}x^2 - \frac{3}{\sqrt{2}}x + 1 = 0$	D) $3x^2 - 3x + 3 = 0$
5.	Value(s) of k for which the quadratic equation $2x^2 - kx + k = 0$ has equal roots is			
	A) 0 only	B) 4	C) 8 only	D) 0,8
6.	The quadratic equation $2x^2 - \sqrt{5}x + 1 = 0$ has			
	A) two distinct real roots	B) two equal real roots	C) no real roots	D) more than two real roots
7.	If $D = b^2 - 4ac > 0$ , then roots of the quadratic equation $ax^2 + bx + c = 0$ are			
	A) $\frac{-b \pm \sqrt{D}}{2a}$	B) $\frac{-b + \sqrt{D}}{2a}$	C) $\frac{-b - \sqrt{D}}{2a}$	D) $\frac{b \pm \sqrt{D}}{2a}$
8.	The discriminant of the equation $2x^2 + 3\sqrt{2}x - 4 = 0$ is			
	A) 50	B) -14	C) $3\sqrt{2} + 32$	D) $3\sqrt{2} - 32$
9.	The number of solutions for the equation $2^{2x^2-7x+5} = 1$ , is			
	A) 0	B) 1	C) 2	D) 4
10.	If the roots of the equation $12x^2 + mx + 5 = 0$ are in the ratio 3: 2, then the positive value of m equals			
	A) $\frac{1}{12}$	B) $\frac{5}{12}$	C) $5\sqrt{10}$	D) $\frac{5}{12}\sqrt{10}$
11.	If the roots of $ax^2 + bx + c = 0$ are equal in magnitude but opposite in sign, then			
	A) $a = 0$	B) $b = 0$	C) $c = 0$	D) None of these

12.	The number of real roots of the equation $(x - 1)^2 + (x - 2)^2 + (x - 3)^2 = 0$ is			
	A) 2	B) 1	C) 0	D) 3
13.	If $b^2 - 4ac$ is positive and a perfect square, then the roots are			
	A) real	B) real and distinct	C) real, different and rational	D) real, different and irrational
14.	The roots of the equations $ax^2 + 2bx + c = 0$ and $bx^2 + 2\sqrt{ac}x + b = 0$ are simultaneously real, then			
	A) $\frac{b}{a} = c$	B) $b = ac$	C) $b^2 = ac$	D) $abc = 1$
15.	Which among the following statements are true			
	A) Every quadratic equation has exactly one root	B) ) Every quadratic equation has at least one real root	C) ) Every quadratic equation has at least two roots	D) ) Every quadratic equation has at most two roots
16.	Which constant should be added to either side of the equation to solve the quadratic equation $x^2 + \sqrt{3}x - 5 = 0$ by the method of completion of squares?			
	A) $\frac{3}{4}$	B) $\frac{3}{16}$	C) $\frac{-3}{4}$	D) $\frac{-3}{16}$
17.	The roots of the equation reducible to quadratic form given by $x + \frac{1}{x} = 2$ ( $x \neq 0$ ) is			
	A) 2 and 1	B) 1 and -1	C) 1 and 1	D) -1 and -1
18.	What is the maximum number of roots for a Bi-quadratic equation?			
	A) 3	B) 4	C) 2	D) 5
19.	If the quadratic equation $mx^2 + 2x + m = 0$ has two equal roots, the values of m are			
	A) $\pm 1$	B) 0, 2	C) 0, 1	D) -1, 0
20.	The root(s) of the quadratic equation $x^2 + 16 = 0$ is (are)			
	A) non real roots	B) $\pm 4$	C) $-4$	D) 4