

Name: _____	Subject: Mathematics	Class: 10 th	Time: 80 minutes	Total Marks:	30
Chapter No.01	MJDexpert.com			Obtained marks	

Note: Please attempt any 10 short questions from Question 2. Also, attempt both parts of Question 3. Cutting and removal of any content is strictly prohibited.

Q.No.1 Choose the correct Answer. (6 × 1 = 06)

1. The name of the method to derive quadratic formula is:			
a) Factorization	b) Completing Square	c) Zero Method	d) Fraction
2. The solution set of the equation $5x^2 - 125 = 0$ is:			
a) {5}	b) {10}	c) {-5}	d) {±5}
3. The equation remains unchanged when x is replaced by $\frac{1}{x}$ is called:			
a) Quadratic Equation	b) Reciprocal Equation	c) Exponential Equation	d) Radical Equation
4. Two linear factors of $x^2 - 15x + 56$ are:			
a) $(x - 7)(x - 8)$	b) $(x - 7)(x + 8)$	c) $(x + 7)(x - 8)$	d) $(x + 7)(x + 8)$
5. The equation of the type $3^x - 3^{2x-6} - 6 = 0$ is a/an:			
a) Quadratic Equation	b) Reciprocal Equation	c) Exponential Equation	d) Radical Equation
6. If $y = 2^x$ and $8y = 1$ then $x =$ ____.			
a) 1	b) 3	c) -3	d) -1

Q.No.2: Give the Short Answers. (8 × 2 = 16)

i. Factorize to $3y^2 = y(y-5)$
ii. solve by Quadratic Formula $\sqrt{3}x^2 + x = 4\sqrt{3}$
iii. Solve $\sqrt{3}x + 18 = x$
iv. Solve: $\left(2x - \frac{1}{2}\right)^2 = \frac{9}{4}$
v. Define reciprocal equation.
vi. Factorize $5x^2 = 15x$.
vii. Define radical equation.
viii. Solve by completing square method $3x^2 + 7x = 0$.

Q.No.3: Give the long answers. (2 × 4 = 08)

a) Simplify $x^4 - 2x^3 - 2x^2 + 2x + 1 = 0$
b) Solve by completing square $x^2 - 2x - 195 = 0$.

"Simplicity is the ultimate sophistication"