Name: _____	**Subject:** Math	**Class:** 9th	**Time:** 60 minutes	Total Marks:	**30**
Unit Number: 6	**MJDexpert.com**			Obtained marks	

Q#1	**Circle the correct option**		**1×6=6**
1. We can find the square root of the expression p(x), if it can be expressed as a.....			
a) Root Value	b) Common Factor	c) Perfect Square	d) Division
2. H.C.F of $x - 2$ and $x^2 + x - 6$ is.....			
a) $x^2 + x - 6$	b) $x + 3$	c) $x - 2$	d) $x + 2$
3. L.C.M of $a^2 + b^2$ and $a^4 - b^4$ is....			
a) $a^2 + b^2$	b) $a^2 - b^2$	c) $a^4 - b^4$	d) $a-b$
4. The product of two algebraic expressions is equal to the..... of their H.C.F and L.C.M			
a) Sum	b) Difference	c) Product	d) Quotient
5. The square root of $a^2 - 2a + 1$ is.....			
a) $\pm (a + 1)$	b) $\pm (a - 1)$	c) $(a + 1)$	d) $(a - 1)$
6. L.C.M. of $15x^2$, $45xy$ and $30xyz$ is.....			
a) $90xyz$	b) $90x^2yz$	c) $15xyz$	d) $15x^2yz$

Q#2	**Attempt all the short questions**	**2×8=16**
i.	Find the H.C.F by factorization. $x^2 + 5x + 6$, $x^2 - 4x - 12$	
ii.	Find the L.C.M. of the expression.$102xy^2z$, $85x^2yz$ and $187xyz^2$	
iii.	A - $\frac{1}{A}$, where A = $\frac{a+1}{a-1}$.	
iv.	Find the value of k for which the expression will become a perfect square. $x^4 - 4x^3 + 10x^2 - kx + 9$.	
v.	Use factorization to find the square root of the expression$4x^2 - 12xy + 9y^2$	
vi.	Simplify into rational expression. $\frac{(x+2)(x+3)}{x^2-9} + \frac{(x+2)(2x^2-32)}{(x-4)(x^2-x-6)}$	
vii.	For what of k is $(x + 4)$ the H.C.F of $x^2 + x - (2k + 2)$ and $2x^2 + kx - 12$?	
viii.	Define H.C.F.	

Q#3	**Write detailed answer of the following questions**	**4×2=08**
a)	Use division method to find the square root of $\frac{x^2}{y^2} - 10\frac{x}{y} + 27 - 10\frac{y}{x} + \frac{y^2}{x^2}$.	
b)	Perform the indicated operation and simplify $\frac{x^4-8x}{2x^2+5x-3} \times \frac{2x-1}{x^2+2x+4} \times \frac{x+3}{x^2-2x}$.	