Name: _____	**Subject:** Mathematics	**Class:** 10th	**Time:** 80 minutes	Total Marks:	**30**
Chapter No.07	**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#1	**Circle the correct option**	**1×6=6**

1. The union of two non-collinear rays, which have common end point is called…………

a) A degree	b) A radian	c) An Angle	d) A minute

2. $20° =$

a) $360'$	b) $630'$	c) $1200'$	d) $3600'$

3. $\frac{1}{2}cosec45° =$

a) $\frac{1}{2\sqrt{2}}$	b) $\frac{1}{\sqrt{2}}$	c) $\sqrt{2}$	d) $\frac{\sqrt{3}}{2}$

4. $\frac{1}{1+sin\theta} + \frac{1}{1-sin\theta}$

a) $2sec^2\theta$	b) $2cos^2\theta$	c) $sec^2\theta$	d) None

5. If $tan\theta = \sqrt{3}$, then θ is equal to:

a) $90°$	b) $45°$	c) $60°$	d) $30°$

6. The system of measure in which the angle is measured in radians is called…………

a) CGS System	b) GSK system	c) Sexagesimal System	d) Circular System

Q#2	**Attempt all the short questions**	**2×8=16**

i. How many minutes are there in two right angles?

ii. What is the Sexagesimal system of measurement of angles?

iii. Define radian

iv. Express the angle 315.18° into DMS form.

v. Express the angle into radian 225° .

vi. Prove that $\frac{Sin\theta+Cos\theta}{tan^2\theta-1} = \frac{Cos^2\theta}{Sin\theta-Cos\theta}$.

vii. Convert $\frac{\pi}{4}$ radians into degree measure.

viii. Find r when $l = 56cm$ and $\theta = 45°$.

Q#3	**Write detailed answer of the following questions**	**4×2=08**

a) Find all the trigonometric ratios if $cos\theta = \frac{9}{41}$ and terminal side of angle is in fourth quadrant.

b) Prove that $(Cot\theta + Cosec\theta)(tan\theta - sin\theta) = sec\theta - cos\theta$.