Student Name;————————————	Roll No..............................	Date.................../.........…..../ ....
Class ➤ 2nd year	Subject : ➤ Mathematics	➤Chapter # 6
T–Marks : 30	➤ Time : 40 mints	Obtain Marks	

Q # 1	Circle the correct option	1x7=7	

1 The center of $\dfrac{x^2}{a^2} - \dfrac{y^2}{b^2} = 1$ *is* ;

a	$(0,0)$	b	$(a,0)$	c	$(-a,0)$	d	(a,a)

2 The focus of $y^2 = -4ax$ is ;

a	$(0,0)$	b	$(a,0)$	c	$(-a,0)$	d	(a,a)

3 The eccentricity of parabola is ;

a	0	b	1	c	*Less then one*	d	*Not define*

4 The parametric equations $x = aCos\theta$, $y = aSin\theta$ *represent eqution of* ;

a	*Circle*	b	*Ellipse*	c	*Hyperbola*	d	*Parabola*

5 Axis of parabola $x^2 = 4ay$ *is* ;

a	$x = 0$	b	$y = 0$	c	$y = x$	d	$x = -y$

6 The center of the circle $x^2 + y^2 - 6x + 4y + 13 = 0$

a	$(3,2)$	b	$(3,-2)$	c	$(2,3)$	d	$(-2,-3)$

7 The radius of the circle $x^2 + y^2 = 5$ is ;

a	25	b	$\sqrt{5}$	c	5	d	$(0,0)$

Q # 2	Write short answer of following question.	2x7=14	

i	Find the equation of circle with center at $\left(\sqrt{2}, -3\sqrt{2}\right)$ and radius $2\sqrt{2}$
ii	Find the vertex and directrix of parabola $x^2 = -16y$;
iii	Find the center and foci of $\dfrac{x^2}{4} - \dfrac{y^2}{9} = 1$
iv	Define circle and just write its standard equation;
v	Find the length of tangent drawn from point $P(-5,4)$ to the circle $5x^2 + 5y^2 - 10x + 15y - 131 = 0$;
vi	Define Parabola ;
vii	Find the radius of circle with center at $(5,-2)$ and radius 4;

Q # 3	Write detail answer of these questions.	4+5=9	

   a. Write an equation of a circle passing through the points A $(-7,7)$,$B(5,-1)$, $C(10,0)$

   b. Show that the line $2x + 3y - 13 = 0$ is tangent to the circle $x^2 + y^2 + 6x - 4y = 0$;