Math.2 Autumn 2016 Mid-Term Exam-2 Group1 20 Marks Time 1 Hour

- (1)State the definition of the straight line.
- (2)State the definition of the parabola.
- (3) Separate the lines and find the angle between them: $x^2 4xy + 3y^2 = 0$
- (4) Write the equation of circle where the points (2, -1), (1, 3) are ends of diameter.
- (5) Find the radical axis and the points of intersection of the circles:

$$x^2 + y^2 - 2x = 0$$
, $x^2 + y^2 - 4y = 0$.

- (6) Find vertex, focus and sketch the parabola: $y^2 8x 4y 12 = 0$.
- (7) Find center, vertices and sketch the ellipse : $x^2 + 4y^2 4x + 8y + 4 = 0$.

Dr. Mohamed Eid