

King Fahd University of Petroleum and Minerals  
Department of Mathematics and Statistics  
Math-201 Semester-092 QUIZ I

NAME:

S.No.

ID:

Maximum Marks: 15

Section:01

Time Allowed: 25 minutes

(1) Find an equation of the tangent line to the parametric curve given by  $x = e^t, y = (t - 1)^2$  at  $(1,1)$ .

(2) Find the area of the curve  $x = a\cos^2\theta, y = a\sin^3\theta, 0 \leq \theta \leq \frac{\pi}{2}$ .

(3) Sketch the graph of the polar equation  $r = 1 + 2\cos\theta$ .