Math 173 - Quiz 8
April 2, 2015

Name $\qquad$
Score $\qquad$

Show all work to receive full credit. Supply explanations when necessary.

1. (4 points) Let $f(x, y)=\sin (2 x y)+x e^{-2 x y}$. Find an equation of the plane tangent to the graph of $f$ at the point where $(x, y)=(\pi, 0)$. Use your equation to approximate $f(3,0.1)$.
2. (6 points) Find and classify the critical points of $f(x, y)=x^{3}+3 x y^{2}-15 x+y^{3}-15 y$.
