Name:
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MAC 2313.9722
Cyr

Quiz 5
You must show all work to receive full credit!!

Problem 1. (4 points) Given $f(x, y, z) = e^{xyz^2}$, evaluate $\dfrac{\partial^2 f}{\partial y \partial x} \Big|_{(2,1,2)}$.

Problem 2. (5 points) Find the limit of the following function, or show that it does not exist:
$$\lim_{(x,y)\to(0,0)} \frac{5y^4 \cos^2(x)}{x^4 + y^4}$$

Problem 3. (1 point) True or false: if $\lim_{(x,y)\to(a,b)} f(x,y) = L$ along infinitely many paths containing the point (a, b), then $\lim_{(x,y)\to(a,b)} f(x,y) = L$.