Q.1: Show that the limit \( \lim_{(x,y) \to (0,0)} \frac{x^2y}{x^4 + y^2} \) does not exist.

Q.2: Find \( \frac{\partial z}{\partial x} \) and \( \frac{\partial y}{\partial x} \) if \( xz + y \ln x - x^3yz = 10 \).

Q.3: Find linearization of \( f(x, y) = x \cos y - ye^x + 2 \) at \((0, 02)\). Using linearization, approximate \( f(0.01, -0.05) \).