## Reading Quiz 04 for Calculus A

Name: $\qquad$ Student ID \# : $\qquad$ Score : $\qquad$
Read section 9 of chapter 3 and section 1 of chapter 4 .

1. What is the lineariztion $L(x)$ of a function $f(x)$ at a point $x=a$ ? What is required of $f$ at $a$ for the lineariztion to exist? How are lineariztions used? Give example.
2. If $x$ moves from $a$ to nearby value $a+d x$, how do you estimate the corresponding change in the value of a differentiable function $f(x)$ ?
3. What can be said about the extreme values of a function that is continuous on a closed interval?
4. What does it mean for a function to have a local extreme value on a domain? An absolute extreme value? How are local and absolute extreme values related, if at all? Give examples.
5. How do you find the absolute extrema of a continuous function on a closed interval? Give examples.
