

King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics

Calculus I

Quiz No. 4

Thursday 5/11/2015

15 Minutes

Instructor: *Dr. Monjed H. Samuh*

Name:

Student ID:

Q1]... [4 points] Evaluate the following limits.

1. $\lim_{\theta \rightarrow 0} \frac{\cos \theta - 1}{\sin \theta}$.

2. $\lim_{x \rightarrow 1} \frac{\sin(x-1)}{x^2+x-2}$.

Q2]... [3 points] For what values of x does the graph of $f(x) = e^x \cos x$ have a horizontal tangent?

Q3]... [3 points] Find the derivative of the function

$$y = \left[x + (x + \sin^2 x)^3 \right]^4 .$$

GOOD LUCK