King Fahd University of Petroleum and Minerals

Math 101 **Quiz # 3(a)** **Time: 20 minutes** **Date: 19-3-2015**

Name	ID #	Sr #	Sec. 12	Marks:

Q1. Find the derivative of $y = \frac{x^2+x-2}{x^3+6}$.

Q 2. Find the limit $\lim_{\theta \to \frac{\pi}{6}} \frac{\sin 2\theta - \frac{\sqrt{3}}{2}}{\theta - \frac{\pi}{6}}$.

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Math 101 Quiz # 3(b) Time: 20 minutes Date: 19-3-2015

Name	ID #	Sr #	Sec. 12	Marks:

Q1. Find an equation of the tangent line to the curve $y = \frac{e^x}{1+x^2}$ at the point $\left(1, \frac{e}{2}\right)$.

Q 2. The position of a body moving on coordinate line is given by $s = \frac{25}{t^2} - \frac{5}{t}$ with s in meters and t in seconds. Find the body's speed and acceleration at the end points of the interval $-4 \leq t \leq 0$.

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Math 101 Quiz # 3(c) Time: 20 minutes Date: 17-3-2015

Name	ID #	Sr #	Sec. 13	Marks:

Q1. Find an equation of the line that is tangent to the curve $y = x^3 - 6x^2 + 5x$ at the origin.

Q 2. Find the derivative of $y = \frac{\cos x}{1-\sin x}$.

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Math 101 Quiz # 3(d) Time: 20 minute Date: 17-3-2015

Name	ID #	Sr #	Sec. 13	Marks:

Q1. Find all points (x, y) on the graph of $f(x) = x^2$ with tangent lines passing through the point $(3,8)$.

Q 2. Find derivative of $y = \frac{\cos x}{x} + \frac{x}{\cos x}$.