Math 101-06 **Quiz#3** **November 9, 2017**

1. Use of cell phones is NOT allowed.
2. Answers without supporting work will NOT be given credit.
3. To have full credit, you must CIRCLE your choice.

Name:
Serial:

1. The equation of the tangent line to the curve $y = x\cos(3x)$ at $x = \pi$ is

   (a) $y = x$

   (b) $y = x + \pi$

   (c) $y = x - \pi$

   (d) $y = -x + 2\pi$

   (e) $y = -x$

2. $\lim_{t\to 0} \dfrac{\cos t + \sin(2t) - 1}{\tan t} =$

   (a) 2

   (b) -1

   (c) 3

   (d) -2

   (e) 1

3. If the tangent line to the curve $y = \dfrac{2}{1+e^{-x}}$ at the point (a, b) is perpendicular to the line $y = -2x+3$, then $a + b =$

   (a) 2

   (b) 1

   (c) -2

   (d) 3

   (e) 4

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The End.