**Dawson College**: **Calculus II**: 201-NYB-05-S3: Fall 2010

**Name:** _____
**Student ID:** _____

# Quiz 10

This quiz is graded out of 15 marks. No books, calculators, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

**Question 1.** §7.4 #23 *(5 marks)* Set up, but do not evaluate, an integral for the volume of the solid obtained by rotating the region bounded by the given curves about the specified line.

$y = x^4$, $y = \sin\left(\frac{\pi x}{2}\right)$ about $x = -1$

**Question 2.** §7.4 #9 *(5 marks)* Find the length of the curve.

$y = \ln(\sec x)$, $0 \leq x \leq \frac{\pi}{4}$

**Question 3.** *(5 marks)* Evaluate the indefinite integral:

$$\int \frac{t^2 - 3t - 5}{t^3 + 5t}\, dt$$