Name: _____
Student ID: _____

Quiz 4

This quiz is graded out of 10 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. *(3 marks)* §5.4 #9 Find the derivative of the function.

$$y = \int_3^{\sqrt{x}} \frac{\cos t}{t}\, dt$$

Question 2. *(2 marks)* §5.4 #18 Find the average value of the function on the given interval.

$$g(x) = \cos x \quad [0, \pi/2]$$

Question 3. *(2 marks)* §5.5 #47 Evaluate the definite integral.

$$\int_{-\pi/2}^{\pi/2} \frac{x^2 \sin x}{1+x^6}\, dx$$

Question 4. *(3 marks)* §5.5 #61 If f is continuous and $\int_0^4 f(x)\, dx = 10$, find $\int_0^2 f(2x)\, dx$