**Name:** _____

**Student ID:** _____

# Quiz 7

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.** §8.7#39 *(5 marks)*
Evaluate the following limit, using L'Hôpital's Rule if necessary:

$$\lim_{x \to \infty} x \sin\left(\frac{1}{x}\right)$$

**Question 2.** §8.8# *(5 marks)*
Evaluate the following improper integral if it converges:

$$\int_4^\infty \frac{1}{x(\ln x)^3}\, dx$$