

Name: _____
Student ID: _____

Quiz 8

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. (5 marks) §3.7 #25 Evaluate the limit.

$$\lim_{x \rightarrow \infty} x^3 e^{-x^2}$$

Question 2. (5 marks) §6.6 #19 Determine whether each integral is convergent or divergent. Evaluate those that are convergent.

$$\int_{-\infty}^{\infty} \cos(\pi t) dt$$

Question 3. (5 marks) §7.1 #19 Sketch the region enclosed by the given curves and find its area.

$$y = 1/x, y = x, y = \frac{1}{4}x, x > 0$$