

Name: \_\_\_\_\_  
Student ID: \_\_\_\_\_

## Quiz 12

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.** (5 marks) §8.8 #7 Find the Taylor Polynomial of order 3 of  $f(x) = xe^{-2x}$  at  $x = 0$ .

**Question 2.** (5 marks) Evaluate the following integral:

$$\int_1^{\sqrt{2}} \frac{4 + 2\sqrt{x^2 - 1}}{x\sqrt{x^2 - 1}} dx$$