Name: _____

Student ID: _____

Quiz 11

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)* §28.1 #13 Integrate.

$$\int \frac{5\arctan 5x}{1+25x^2}\, sx$$

Question 2. *(4 marks)* §28.2 #19 Evaluate the given definite integral.

$$\int_1^3 \frac{1+x}{4x+2x^2}\, dx$$

Question 3. *(3 marks)* §28.3 #23 Integrate.

$$\int \frac{e^{\cos 3x}}{\csc 3x}\, dx$$

Question 4.[1] *(5 marks)* A standard soda can is roughly cylindrical and holds 355 cm^3 of liquid. What dimensions should the cylinder be to minimize the material needed to produce the can

[1]from APEX Calculus