

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

# Quiz 1

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.** (1 mark each) Differentiate the following functions:

a.

$$f(x) = \frac{1}{x^{1/5}}$$

b.

$$f(x) = \sin x$$

c.

$$f(x) = \cot x$$

d.

$$f(x) = \ln x$$

e.

$$f(x) = \sec x$$

f.

$$f(x) = \operatorname{arcsec} x$$

**Question 2.** (2 marks each) Differentiate the following functions (*do not simplify*):

a.

$$f(x) = \arctan(\arcsin x)$$

b.

$$f(x) = e^{2x} \csc 3x$$