

Serial No.: _____ Student Name: _____ Student Number: _____

Instructor: M. Z. Abu-Sbeih

Math 102- Q2

Date: 20-3-2011

Problem 1: (15 Points) Evaluate the following integrals

(a) $\int \frac{\sqrt{1+\ln x}}{x} dx$

(b) $\int_0^{\frac{\pi}{2}} \frac{\cos x dx}{1+\sin^2 x}$

(c) $\int 2^{2x} 3^{1-x} dx$

Problem 2: (5 Points) Find the area of the region enclosed by the graphs of $x = 2 - y^2$ and $y = x$.

Problem 3: (5 Points) A particle moves along a line so that its velocity at time t is $v(t) = t^2 - t - 2$ meter/sec. Find the distance traveled during the period $0 \leq t \leq 4$.