Homework #5

Due : Monday October 14, 2013 at the beginning of class

(Most of these problems are short drill type problems)

1) Chapter 4, Problem 4.7 (Matlab)

2) Chapter 5, Problem 5.1

3) Chapter 5, Problem 5.2

4) Chapter 5, Problem 5.3

5) Chapter 5, Problem 5.4

6) Chapter 5, Problem 5.5

7) Chapter 5, Problem 5.6

8) Chapter 5, Problem 5.9

9) Chapter 5, problem 5.10

10) Chapter 5, Problem 5.18

11) Simplify the following integrals:

$$y(t) = \int_0^t e^{-(t-\lambda)} e^{-\lambda} d\lambda \quad y(t) = \int_{-1}^{t-1} e^{-3(t-\lambda)} e^{-\lambda} d\lambda \quad y(t) = \int_2^{t+1} e^{-2(t-\lambda)} \lambda e^{-2\lambda} d\lambda$$

Scrambled Answers:

$$y(t) = \frac{1}{2} \left[e^{-t-2} - e^{-3t-2} \right] u(t) \quad y(t) = te^{-t} u(t) \quad y(t) = \frac{1}{2} \left[t^2 + 2t - 3 \right] e^{-2t} u(t-1)$$