# Homework 2 Selection

1. Evaluate the following expressions, given that x = 5, y = 6, z = 7

 (a) (z >= y) AND (x >= y) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 (b) (y > x) OR (y > z) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [2]

2. An online bookstore gives free 2nd class mail delivery (code 2) for any order value greater than or equal to $15.00

 For order values less than $15, 2nd class mail delivery costs $3.50.

 For any value of order, a customer may choose to pay $5.00 for guaranteed next day delivery (code 1).

 (a) Write pseudocode for an algorithm which allows the user to enter the total value of their order. They are then asked whether they want to pay for guaranteed next day delivery. Depending on their answer, and the value of the order, the program displays the postage charge and the overall total charge. [6]

 (b) What will be the postage cost in each of the following cases?

 (i) Order value $10.00 Postage code 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 (ii) Order value $15.00 Postage code 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 (iii) Order value $30.00 Postage code 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [3]

3. Write pseudocode for one or more selection statements to decide whether a year is a Leap year. The rules are:

 A year is generally a Leap Year if it is divisible by 4, except that if the year is divisible by 100, it is not a Leap year, unless it is also divisible by 400. Thus 1900 was not a Leap Year, but 2000 was a Leap year. [4]

 [Total 15 marks]