Mid Semester Examination SFDV3004 – Data Structures II 14<sup>th</sup> March 2009/ 20 marks Instructor – Dr. Virendra Gawande

Question 1. Sort the following list using Radix sort (show all the steps),

170, 45, 75, 90, 2, 24, 802, 66

(4 marks)

Question2. Draw the bucketing structure produced by Bucket Sort when sorting the following data:

0.72, 0.23, 0.61, 0.26, 0.25, 0.31, 0.34

(4 marks)

Question3. Sort the following list using Quick sort (show all the steps),

3, 1, 4, 1, 5, 9, 2, 6, 5, 4

(4 marks)

(8 marks)

Question4. Hashing

 $h(k) = k \mod 13$ 

Insert the following keys: 18, 41, 22, 44, 59, 32, 31, 73

Using linear and quadratic probing, show both the results separately.

Good Luck!