**Graded Coding Assignment 2**

**PART 1**

**Marks: 10 (2 marks each)**

\*\*Find the time complexity of the below functions in Θ form. Write NA if the function does not apply to any case.

**a) T (n) = 3T (n/2) + n**

Final Time Complexity:Θ(nlog23) [Θ(nlogba)].

**b) T (n) = 64T (n/8) − n^2(log n)**

Final Time Complexity: NA [f(n) is not positive]

**c) T (n) = 2nT (n/2) + n^n**

Final Time Complexity: NA [a is not a constant]

**d) T (n) = 3T (n/3) + n/2**

Final Time Complexity: Θ (nlogn)

**e) T (n) = 7T (n/3) + n^2**

Final Time Complexity: Θ (n^2)