**Computer Science and Information Technology Department, UoB, Quetta**

**Course: Data Structures and Algorithm**

**Mid Term Exam 2018**

**BS-IT 3rd Semester Session: 2017-2021 Max marks: 30**

**Note: Attempt all questions. Every question is of 10 marks.**

**Question No 1-A: Write short answers**

1. Name the algorithm which cannot search an element if the given input is not already sorted?
2. Visiting each element of a data structure exactly once is called?
3. Complexity analysis of an algorithm involves which two factors?

**Question No 1-B: Calculate the following expressions**



**Question No 2: Given the following array, dry run bubble sort and count the number of comparisons and number of swaps.**

**Array: -1, -3, 0, 7, 2, 6**

**Question No 3: Dry run the following input using radix sort.**

**Input: 312, 247, 331, 168, 486, 572, 600, 129, 939,753**