Question - 1

SCORE: **5 points**

Question 1

If several elements are competing for the same bucket in the hash table, what is it called?

- Diffusion
- Replication
- Collision
- None of the mentioned

Question - 2

SCORE: **5 points**

Question 2

A hash table of length 10 uses open addressing with hash function h(k)=k mod 10, and linear probing. After inserting 6 values into an empty hash table, the table is as shown below. Which one of the following choices gives a possible order in which the key values could have been inserted in the table?

0	
1	
2	42
3	23
4	34
5	52
6	46
7	33
8	
9	

- 46, 42, 34, 52, 23, 33
- 46, 34, 42, 23, 52, 33
- 42, 46, 33, 23, 34, 52
- 34, 42, 23, 52, 33, 46

Question - 3

SCORE: **5 points**

Question 3

A hash table can store a maximum of 10 records, currently there are records in location 1, 3,4,6,7,8,9,10. The probability of a new record going

into location 2, with hash functions resolving collisions by linear probing is

- 0.1
- 0.7
- 0.2
- 0.6

Question - 4

SCORE: **5 points**

Question 4

An advantage of separate chaining as an implementation of a hash table over the linear probing scheme is:

- Space used is less
- Deletion is easier
- Worst case complexity of search operations is less
- None of the above

Question - 5

SCORE: **30 points**

Linear Probing Hash Table

Please implement the *put* and *get* methods for a linear probing hash table.