Data Structures and Algorithms- Quiz 7

Question 1

2 / 2 pts

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

How many different insertion sequences of the key values using the hash function **h(k) = k mod 10**and linear probing will result in the hash table shown above?

- (●) 30
- ( ) 10
- ( ) 20
- ( ) 40

Question 2

2 / 2 pts

Given the following input (4322, 1334, 1471, 9679, 1989, 6171, 6173, 4199) and the hash function x mod 10, which of the following statements are true?

i. 9679, 1989, 4199 hash to the same value
ii. 1471, 6171 hash to the same value
iii. All elements hash to the same value
iv. Each element hashes to a different value

- (●) i and ii only
- ( ) i only
- ( ) iii or iv
- ( ) ii only

Question 3

2 / 2 pts

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

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

Question 4

1 / 1 pts

What is a hash function?

- (selected) A function that computes the location of the key in the array
- A function that creates an array
- A function that computes the location of the values in the array
- A function has allocated memory to keys

Question 5

1 / 1 pts

What is the load factor?

- (selected) Average chain length
- Average array size
- Average key size
- Average hash table length

Question 6

2 / 2 pts

What is the data organization method used in Hash table

- (selected) Linked List
- Array
- Stack
- Queue