# Rajalakshmi Engineering College

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Branch: REC

Department: I ECE FA

Batch: 2028

Degree: B.E - ECE



## NeoColab\_REC\_CS23231\_DATA STRUCTURES

REC\_DS using C\_Week 7\_MCQ\_Updated

Attempt : 1 Total Mark : 20

Marks Obtained: 17

Section 1: MCQ

1. What does a deleted slot in linear probing typically contain?

Answer

A special "deleted" marker

Status: Correct Marks: 1/1

2. Which of the following values of 'm' is recommended for the division method in hashing?

Answer

A prime number

Status: Correct Marks: 1/1

240	3. Which folding method of them, and then adds a <i>Answer</i>		equal parts, reverse	s some
	Folding reversal method			
	Status: Correct		ı	Marks : 1/1
	4. Which C statement is correct for finding the next index in linear probing?			
	Answer	2	^	۵^
	index = (index + 1) % size;	010,3	01000	2010;3
240	Status: Correct		14086	Marks: 1/1
	5. Which situation causes clustering in linear probing?			
	Answer			
	All the mentioned options			
	Status: Correct		ı	Marks : 1/1
	6. Which data structure	is primarily used in lin	ear probing?	201031
240	Answer	·	LAOC CONTRACTOR OF THE PROPERTY OF THE PROPERT	2400
	Array			
	Status: Correct		ı	Marks : 1/1
	7. What happens if we do not use modular arithmetic in linear probing?			
	Answer			
	Index goes out of bounds	^	^	^

Status: Correct

Marks: 1/1

8. Which of these hashing methods may result in more uniform distribution with small keys?

**Answer** 

Division

Status: Wrong Marks: 0/1

9. In C, how do you calculate the mid-square hash index for a key k, assuming we extract two middle digits and the table size is 100?

### Answer

((k \* k) / 10) % 100

Status: Wrong Marks: 0/1

10. What is the initial position for a key k in a linear probing hash table?

#### Answer

k % table\_size

Status: Correct Marks: 1/1

11. What is the worst-case time complexity for inserting an element in a hash table with linear probing?

**Answer** 

O(n)

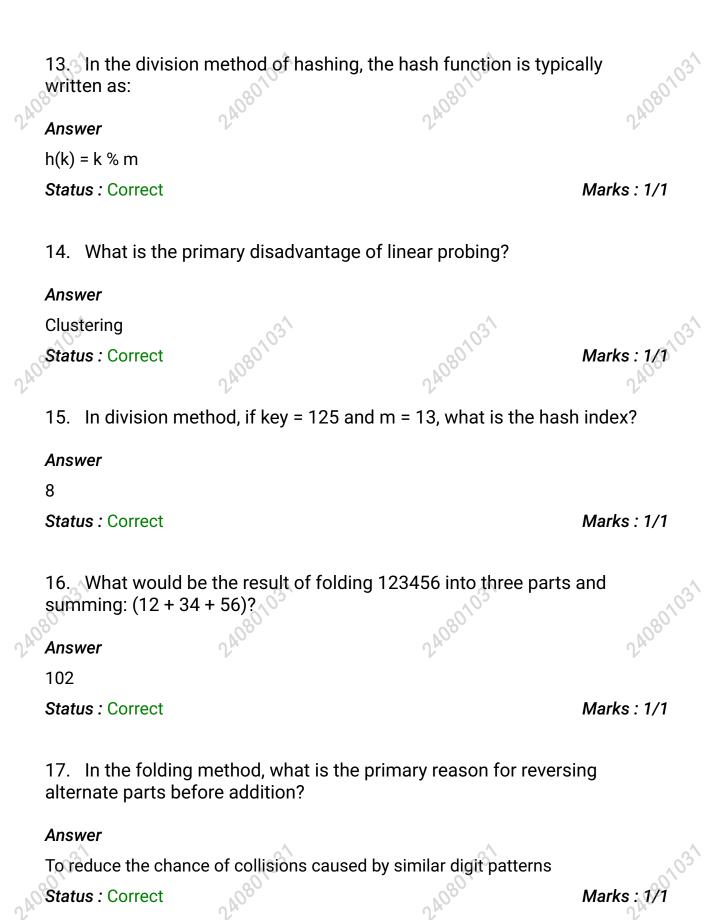
Status: Correct Marks: 1/1

12. Which of the following best describes linear probing in hashing?

#### Answer

Resolving collisions by linearly searching for the next free slot

Status: Correct Marks: 1/1



18. In linear probing, if a collision occurs at index i, what is the next index checked?

**Answer** 

(i + 1) % table\_size

Status: Correct Marks: 1/1

19. What is the output of the mid-square method for a key k = 123 if the hash table size is 10 and you extract the middle two digits of k \* k?

**Answer** 

2

Status: Wrong Marks: 0/1

20. Which of the following statements is TRUE regarding the folding method?

Answer

It divides the key into parts and adds them.

Status: Correct Marks: 1/1

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