Last name	
First name	
Group	

Grade	

Algorithmics
Undergraduate 2^{nd} year - S3#
Midterm #3 (C3)
5 mars 2019 **-** 14 : 45
Answer Sheets

1	
2	
3	
4	
5	

Answers 1 **(Linear probing –** ***2 points*****)**

Present the collision resolution using the linear probing principle with an offset coefficient $d = 5$:

0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Answers 2 **(Some questions – *5 points*)**

1. Name three properties required of a hash function.

   (a) _____

   (b) _____

   (c) _____

2. With which collision resolution method do secondary collisions appear?

   _____

   _____

3. Which hashing method allows to solve the phenomenon of clustering generated by the linear probing?

   _____

   _____

4. Name two basic hashing methods.

   (a) Method 1: _____

   (b) Method 2: _____

5. Name a hashing method that uses a probe sequence function.

   _____

6. Which collision resolution method does not need a hash table whose size is greater or equal than the number of keys to be hashed?

   _____

Answers 3 **(Serialization – *5 points*)**

1. *Le vecteur de pères :*

0	1	2	3	4	5	6	7	8	9	10	11

2. *La fonction* `buildParentVect(T, n)` *:*

***Answers 4* (Ascending – *4 points*)**

Specifications:

`BtreeToList(`B`)` returns the list of the keys of the B-tree B in increasing order.

Answers 5 **(B-tree measures –** ***4 points*****)**

Specifications:

`occupation(`B`)` returns the list of the keys of the B-tree B in increasing order.