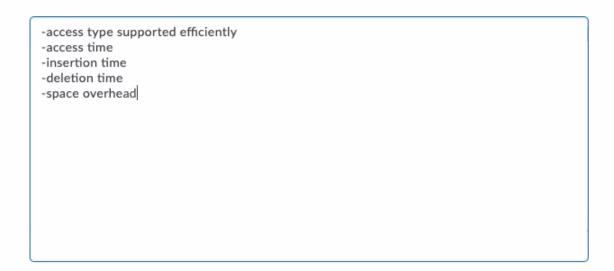
Next Page		Page 1 of 19
Question 1 (5	points)	
What are the	5 index evaluation metrics.	



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Question 2 (1 point)

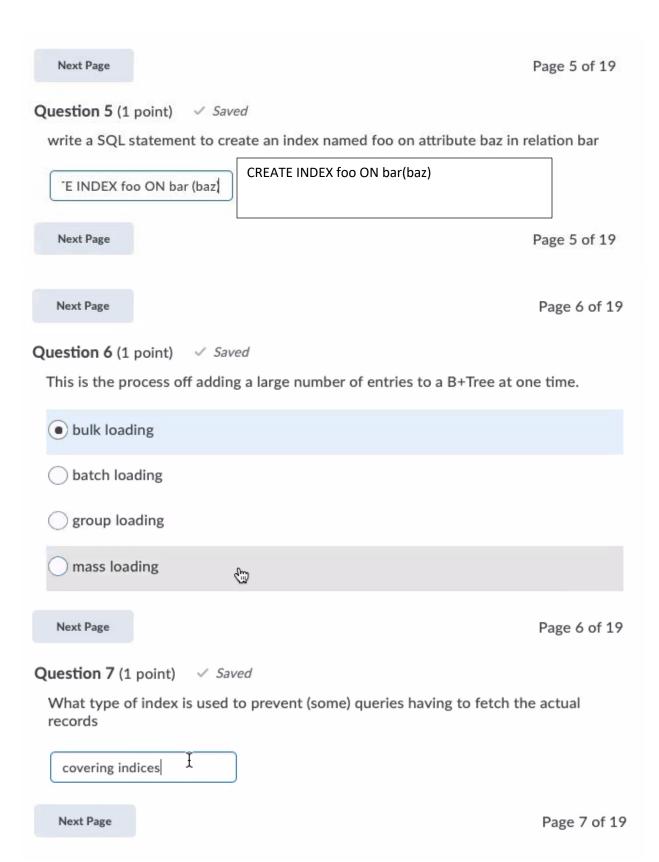
Saved

What are the two basic types of indices.

ordered indices

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Question 3 (1 point)	
A search-key can only contain one attribute.	
True	
False	
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Question 4 (1 point) Saving \$	
An index will typically improve which of the following	lowing?
Access time	
Access time Insertion time	
Insertion time	
Insertion time Deletion time	Page 4 of 19



Question 8 (1 point) Saving \$					
A secondary index must be dense					
True					
False					
Next Page	ge 8 of 19				
Question 9 (1 point)					
If an index does not fit in memory, we often create what, which contains an index in memory and a inner index on disk?	outer				
multi-level index					
k					
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Question 11 (1 point)					
This type of index requires every search-key to appear.					
complete					
○ total					
• dense					
spare					
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Question 12 (1 point)	
This type of index can be used to handle larger indices that do not fit	into memory.
dense	
hashed	
multilevel	
value	
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Question 13 (1 point) Saved	
A secondary index is also known as a clustering index.	
True	
False	
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Question 14 (1 point)	
An index file contains index entries that are search-key, pointer pairs.	
● T∰e	
False	
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Explain the process of finding a value in a B+Tree.

It would be similar to BFS. We check if the value smaller or greater than the root node first. If it smaller, we continue checking the left and disregard the right. If it is greater, we continue checking the right and disregard the left. We keep on checking our child nodes and repeat the same step until we found our value.

1

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Question 16 (2 points)

Saved

Explain how a B-Tree is different from a B+-Tree.

- In B tree, all of the keys and record are stroed in internal and leaf node. While in B+ tree, keys are indexes stored in inernal nodes and records stored in the leaf node.
- B tree cannot have duplicated keys while B+ tree can.
- B-tree have greater depth than B+ tree.

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Question 17 (1 point)					
In a B+Tree a leaf node that is not the root must have:					
ceiling((N-1)/2) and N values					
ceiling(N/2) and N values					
• ceiling((N-1)/2) and N-1 values					
ceiling((N)/2) and N-1 values					
Next Page	Page 17 of 19				
Question 18 (1 point)					
What type of index is used when we want to efficiently query multi array of bits	ple keys with an				
bitmap indices					
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Question 19 (1 point)					
In a B+Tree a internal node that is not a leaf or the root must have:					
between ceiling((N)/2) and N-1 children					
between ceiling((N-1)/2) and N children					
between ceiling(N/2) and N children					
 between ceiling(N/2) and N children between ceiling((N-1)/2) and N-1 children 					