

5 Lecture - CS301

Important Mcqs

1. **What is a benefit of using a circular linked list?**
- a) It has a fixed size
 - b) It allows for efficient implementation of circular structures
 - c) It cannot be traversed multiple times
 - d) It is less efficient than a linear linked list

Answer: b

2. **What is a circular buffer?**
- a) A data structure that can only be accessed in a circular order
 - b) A data structure that can only be accessed in a linear order
 - c) A buffer that can be efficiently implemented using a circular linked list
 - d) A buffer that can only hold a fixed number of elements

Answer: c

3. **How can a circular linked list simplify insertion at the beginning or end?**
- a) It requires more memory than a linear linked list
 - b) It requires less memory than a linear linked list
 - c) It requires the same amount of memory as a linear linked list
 - d) It cannot simplify insertion at the beginning or end

Answer: b

4. **What is a disadvantage of using a circular linked list?**
- a) It is less efficient than a linear linked list
 - b) It cannot represent circular structures
 - c) It is more difficult to implement than a linear linked list
 - d) It has a fixed size

Answer: a

5. **Which algorithm can be efficiently implemented using a circular linked list?**
- a) Binary search
 - b) Depth-first search
 - c) Breadth-first search
 - d) Traversing the list multiple times

Answer: d

6. **What is a circular linked list?**
- a) A linked list where each node has a pointer to the previous node
 - b) A linked list where each node has a pointer to the next node and the previous node

- c) A linked list where the last node points to the first node
- d) A linked list where the first node points to the last node

Answer: c

7. What is a benefit of using a circular linked list for representing a clock?

- a) It is less efficient than a linear linked list
- b) It allows for efficient implementation of circular structures
- c) It requires more memory than a linear linked list
- d) It cannot represent circular structures

Answer: b

8. What is a circular linked list used for?

- a) Representing trees
- b) Implementing binary search
- c) Implementing circular buffering
- d) Storing fixed-size data

Answer: c

9. Can a circular linked list be traversed multiple times?

- a) Yes, but it is less efficient than a linear linked list
- b) No, it can only be traversed once
- c) Yes, and it is more efficient than a linear linked list
- d) Yes, but it requires more memory than a linear linked list

Answer: c

10. How is deletion at the end of a circular linked list implemented?

- a) The last node's pointer is set to NULL
- b) The last node's pointer is set to the first node
- c) The second to last node's pointer is set to NULL
- d) The second to last node's pointer is set to the first node

Answer: c