Practice Test: Data Structures -2

1. What is the advantage of dynamic allocation in linked lists?  
○ Fixed size  
○ Efficient memory usage  
○ Complex traversal  
○ Constant-time insertion

2. Which data structure follows the LIFO principle?  
○ Queue  
○ Linked List  
○ Stack  
○ Deque

3. What's a disadvantage of arrays compared to linked lists?  
○ Fixed size  
○ Slow traversal  
○ Dynamic memory management  
○ Complex implementation

4. What is the purpose of a deque?  
○ Fast insertion  
○ Fast retrieval  
○ Restricted access  
○ Both A and B

5. Which allocation uses memory from the heap?  
○ Static  
○ Dynamic  
○ Restricted  
○ Segmented

6. In a linked list, what holds the actual data?  
○ Pointers  
○ Nodes  
○ Keys  
○ Indices

7. Which data structure allows access from both ends with the option to remove elements?  
○ Stack  
○ Queue  
○ Deque  
○ Linked List

8. What’s the primary difference between a queue and a deque?  
○ Queue allows insertion at both ends  
○ Deque allows insertion at both ends  
○ Queue follows LIFO  
○ Deque follows FIFO

9. Which type of list is a stack an example of?  
○ Restricted List  
○ Linear List  
○ Sequential List  
○ Dynamic List

10. Which type of allocation is more memory-efficient?  
○ Static  
○ Dynamic  
○ Segmented  
○ Virtual

11. In a stack, which operation removes an element?  
○ Pop  
○ Push  
○ Peek  
○ Insert

12. What’s a common application of a queue?  
○ Undo functionality  
○ Web browser history  
○ Symbol table implementation  
○ Function call tracking

13. In linked lists, what’s an advantage of a singly linked list over a doubly linked list?  
○ Constant-time traversal  
○ Bidirectional traversal  
○ Faster insertion  
○ Lower memory usage

14. Which data structure is suitable for implementing a history feature in a text editor?  
○ Stack  
○ Queue  
○ Deque  
○ Linked List

15. Which type of allocation uses a memory pool?  
○ Static  
○ Dynamic  
○ Segmented  
○ Virtual