DS MCQs: DAY-04

Q. Convert given infix expression into its equivalent postfix expression: **Infix expression is: (A*B)*(C/D)+E*F-G*H**
A. AB*CD/EF**+GH*-
B. AB*CD/*EF*+GH*-
C. ABCD*/*EF*+GH*-
D. AB*CD/*EF*GH+*-
Answer: B

Q. Convert given prefix expression into its equivalent postfix:
- + * / * a b c d / e f * hg
A. ab*c/d*ef/+h*g-
B. ab*c/d*ef/+hg*-
C. abc*/d*ef/+hg*-
D. ab*cd/*ef/+hg*-
Answer: B

Q. Queue works in _____ manner
A. First In Last Out
B. First In First Out
C. Last In First Out
D. Last In Last Out
E. Both B & D
Answer: E

Q. Double Ended Queue can be implemented by using
A. Doubly Circular Linked List
B. Array
C. Stack
D. All of the above
Answer: A

Q. What is the queue full condition in a circular queue?
A. rear == SIZE-1
B. rear == SIZE
C. front == rear % 1
D. front == (rear + 1) % SIZE
E. front = rear + 1
Answer: D

Q. Which of the following data structure in used to implement breadth first search traversal in a tree?
A. stack
B. array
C. queue
D. linked list
Answer: C

Q. Which of the following is true about linked list implementation of queue?
A. For enqueue operation if we used add_last() then for dequeue operation we have to use delete_first().
B. For enqueue operation if we used add_first() then for dequeue operation we have to use delete_last().
C. For enqueue operation if we used add_last() then for dequeue operation we have to use delete_last().
D. Both A & B
E. None of the above
Answer: D

Q. What is the time complexity of enqueue and dequeue operations
A. O(n)
B. O(log n)
C. O(1)
D. None of the above
Answer: C

Q. Which of the following data structure is used to implement breadth first search algorithm?
A. stack
B. queue
C. linked list
D. none of the above
Answer: B

Q. FCFS scheduling algorithm can be implemented by using ____
A. array
B. stack
C. linear queue
D. priority queue
Answer: C

Q. Which of the following statement is true about binary tree?
A. each node can have exactly two no. of child nodes
B. each node can have either 0 OR 1 OR 2 no. of child nodes
C. each node can have either 0 OR 2 no. of child nodes
D. all of the above
E. none of the above
Answer: B

Q. What is the time complexity of addition, deletion & searching operations in a binary search tree?
A. O(1)
B. O(n)
C. O(log n)
D. none of the above
Answer: C

Q. Which of the traversal prints data elements in a binary search tree in a sorted manner?
A. preorder
B. inorder
C. postorder
D. all of the above
E. none of the above
Answer: B

Q. The preorder traversal sequence of a binary search tree is 30, 20, 10, 15, 25, 23, 39, 35, 42. Which one of the following is the postorder traversal sequence of the same tree?
A. 10, 20, 15, 23, 25, 35, 42, 39, 30
B. 15, 10, 25, 23, 20, 42, 35, 39, 30
C. 15, 20, 10, 23, 25, 42, 35, 39, 30
D. 15, 10, 23, 25, 20, 35, 42, 39, 30
Answer: D
[Example is shared on DAY-04 images for your reference]

Q. In which of the following data structure data elements gets stored in an associative manner?
A. Tree
B. Binary Heap
C. Hash Table
D. All of the above
Answer: C

Q. What is the minimum height of a BST?
A. n
B. n-1
C. log n
D. None of the above
Answer: C