**Descriptive Question JEE/CCSL/55**

1. What is a priority queue?

**Ans:** PriorityQueues store objects that are processed in the order of their priorities.

A **priority queue** is a type of queue that arranges elements based on their priority values. Elements with higher priority values are typically retrieved before elements with lower priority values.

1. What is MVC?

**Ans:**The Model-View-Controller (MVC) is an architectural pattern that separates an application into three main logical components: the model, the view, and the controller. Each of these components are built to handle specific development aspects of an application.

* The model that stores the data that defines the component
* The view that creates the visual representation of the component from the data in the model
* The controller that deals with user interaction with the component and modifies the model and/or the view in response to a user action as necessary

1. What is an iterator?

**Ans**:An Iterator is an object that can be used to loop through collections, like ArrayList and HashSet.

In Java, an **iterator** is an interface that is used to traverse through a collection of objects one by one.

1. What is a greedy algorithm?

**Ans:**A greedy algorithm is an approach for solving a problem by selecting the best option available at the moment.

1. What is an AVL tree?

**Ans:** AVL Tree is a balanced binary search tree *where the difference between heights of left and right subtrees for any node cannot be more than one.*

1. What are data fields in the AVLTree class?

**Ans:** An AVLTreeNode contains the protected data fields element, height,

left, and right.

1. What is a hash code?

**Ans:** A hash code is an integer value that is associated with each object in Java. Its main purpose is to facilitate hashing in hash tables, which are used by data structures like HashMap.

1. What is a thread?

**Ans:**A thread is wrapper object for a runnable object for executing a runnable task.

1. What is a blocking queue?

**Ans:**A blocking queue causes a thread to block when you try to add an element to a full queue or to remove an element from an

empty queue

1. What is a deadlock?

**Ans:**Deadlock occurs in the case that two or more threads acquire locks on multiple objects and each has the lock on one object and is waiting for the lock on the other object. The resource ordering technique can be used to avoid deadlock.