Q11

|  |  |
| --- | --- |
| StringBuilder | StringBuffer |
| Mutable(cam be changed or modified | Mutable(cam be changed or modified |
| Not Thread safe non Synchronized | Synchronized and less efficient(Can't threat) |
| More efficient | Less efficient |

Q12

|  |  |
| --- | --- |
| **List** | Set |
| **List implementations: ArrayList, LinkedList** | mplementations: HashSet, LinkedHashSet, TreeSet |
| **List interface has one legacy class called Vector whereas Set interface does not have any legacy class.** | Set is an unordered collection, it doesn’t maintain any order |

Q13

|  |  |
| --- | --- |
| Array | ArrayList |
| Simple fixed sized | Dynamic sized arrays |
| can contain both primitives and objects | We cannot store primitives in ArrayList, it can only store objects |

Q14

|  |  |
| --- | --- |
| Set TreeSet | HashSet |
| TreeSet offers log(n) time cost for such operations. | gives better performance (faster) than TreeSet for the operations like add, remove |
| not hold duplicate elements | HashSet offers constant time cost |
|  | not hold duplicate elements |

Q16

|  |  |
| --- | --- |
| Comparable | Comparator |
| Comparable provides a single sorting sequence. In other words, we can sort the collection on the basis of a single element such as id, name, and price. | The Comparator provides multiple sorting sequences. In other words, we can sort the collection on the basis of multiple elements such as id, name, and price etc. |
| Comparable affects the original class, i.e., the actual class is modified. | We can sort the list elements of Comparator type by Collections.sort(List, Comparator) method. |
| Comparable provides compareTo() method to sort elements. | Comparator doesn't affect the original class, i.e., the actual class is not modified. |
| Comparable is present in java.lang package. | Comparator provides compare() method to sort elements. |
| We can sort the list elements of Comparable type by Collections.sort(List) method. | A Comparator is present in the java.util package. |