**Written Questions**

**Module-5**

1. What is the function of wait () and notify ()?

Ans : When synchronized(this) is used, you have to avoid to synchronizing invocations of other objects' methods. wait() tells the calling thread to give up the **monitor(**উপদেষ্টা**)** and go to sleep until some other thread enters the same **monitor** and calls notify( ). notify() wakes up the first thread that called wait() on the same object.

1. What is deadlock?

Ans : **Deadlock** describes a situation where two or more threads are blocked forever, waiting for each other. ... A **Java** multithreaded program may suffer from the**deadlock** condition because the synchronized keyword causes the executing thread to block while waiting for the lock, or monitor, associated with the specified object.

1. What is stream? How you classify them?

Ans : Stream In Java. Introduced in Java 8, the **Stream API** is used to process collections of objects. A stream is a sequence of objects that supports various methods which can be **pipelined** to produce the desired result. A stream is not a data structure instead it takes input from the Collections, Arrays or I/O channels.

1. What is collection? Write the type of collection.

Ans : **Java Collection** framework provides many interfaces (Set, List, Queue, Deque etc.) and classes (ArrayList, Vector, LinkedList, PriorityQueue, HashSet, LinkedHashSet, TreeSet etc). **Collections in java** is a framework that provides an architecture to store and manipulate the group of objects.

1. What is event handler?

Ans : The Java event model provides a low-level way to handle input events that originate in the underlying windowing system. When such an event occurs, it is passed to the **processEvent**() method of the Component on which it occurs. This method examines the type of event and invokes an appropriate method to handle the event

1. What is the advantages of adapter class? Write down three adapter class.

Ans : **Advantages** of an **Adapter Class**: If a **class** extends an **Adapter Class**, we can override some methods which is needed; It can simplify the creation of the Event handlers in certain situations; It provides an empty implementation of all methods in an EventListener Methods.

|  |  |
| --- | --- |
| WindowAdapter |  |
| KeyAdapter |  |
| MouseAdapter |  |

1. What is the feature of Swing?

Ans : **Swing** is a set of program component s for Java programmers that provide the ability to create graphical user interface ( GUI ) components, such as buttons and scroll bars, that are independent of the windowing system for specific operating system

1. What is layout manager?

Ans : The **java**.awt package provides five **layout managers**: FlowLayout, BorderLayout, GridLayout, CardLayout, and GridBagLayout.

Four additional **layouts** are provided in the sun.awt package: HorizBagLayout, VerticalBagLayout, OrientableFlowLayout, and VariableGridLayout.

1. What are the two ways of creating thread?

Ans : Implement the interface **java**.lang.Runnable and pass an instance of the class implementing it to the **Thread** constructor.

Extend **Thread** itself and override its run() **method**.

1. Write down the thread states diagram.

