Names:mostafa salah 120000348

**Sheet 3**

1- What is multithreaded programming?

a) It’s a process in which two different processes run simultaneously

2- Which of these statements is incorrect?

d) A thread can exist only in two states, running and blocked

3-What is the name of the thread in the following Java Program?

|  |
| --- |
| **class multithreaded\_programing**  {  public static void main(String args[])  {  Thread t = Thread.currentThread();  **System.out.print (“Name = “ +t.getName());**  **System.out.print (“Name = “ +t.getPriority());**  }  }  a) main 5 |

4- What requires fewer resources?

1. Thread

5- Deadlock is a situation when thread is waiting for other thread to release acquired object.

1. True

6- What is true about threading?

d) start() method creates new thread and calls code written in run() method

7- Which of the following methods is used to tell the calling thread to give up a resource until some other thread uses the same resource?

a) wait( )

8- Which of these method wakes up the first thread that called wait()?

b) notify( )

9- Differentiate between a thread and a process.

1) Thread is a subseT (part) oF The process.

2) process consisTs of multiple Threads.

3) Thread Can Comminication with other threads oF The Same process.

4) Aprocess can communication with other process by using inter-process communicaTion.

5) Threads have Control over The othe Threads of the same proess.

6) process has not control over the other processes.

10- State the advantages of a thread.

1) Threads are Campared to processes.

2) Threads share address space and there for can share data and code.

3) Thread allow differenT Tasks To be perfomed Cocurrently.

11- What are the states of a thread?

1)New 2)Runnable 3)Running-

4)Waiting 5)Dead

12- Describe **starvation** and **deadlock** situations in threads.

* Stavation occurs when athread has to wait indefinitely because other threads keep coming in and getting there quested resources before this thread does.
* Dead lock :occurs when athread is waiting for resources held by an in another thread.

13- Differentiate between **sleep()** and **wait()** methods.

Is that wait() releases the lock or monitor while sleep() doesn’t releases the lock or monitor while waiting

14- When do we use the **wait(), notify()** methods?

1) Wait() :method causes the current thread to wait until another thread invokes the notify() or notify all() methods for that object.

2) notify() :method wakes up a single thread that is waiting on that object’s monitor

15- What problem does the keyword **synchronized** handle? Give an example.

1) To prevenT Thread inter ference.

2) To prevenT consis tency porblem.